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Anti-poverty Policy Initiatives for the United States

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Anti-poverty Policy Innovations: New Proposals for Addressing Poverty in the United States

LAWRENCE M. BERGER, MARIA CANCIAN, AND KATHERINE MAGNUSON

The 2016 presidential election has brought to the fore proposals to fundamentally restructure the U.S. anti-poverty safety net. Even though much of the current debate centers on shrinking or eliminating federal programs, we believe it is necessary and useful to explore alternatives that represent new approaches and significant innovations to existing policy and programs. This double issue of *RSF: The Russell Sage Foundation Journal of the Social Sciences* builds on and extends the scholarly conversation on the state of current U.S. anti-poverty policy by highlighting a collection of related innovative and specific policy proposals for the United States. Well before the election, the authors of the articles in this volume were explicitly tasked with proposing substantially new policies solidly grounded in social science evidence that have the potential to transform anti-poverty policy. Assuming the goal to be reducing poverty among the U.S. population, we asked what new ideas should be seriously considered. The authors responded with carefully crafted proposals that tackle poverty from a variety of perspectives. Some of these proposals are more of a departure from existing policies than others, some borrow from other countries or revive old ideas, some are narrow in focus and others much broader, but all seek to move anti-poverty efforts into new territory.

BACKGROUND

Just over fifty years ago, the War on Poverty marked a significant expansion of the scope and scale of anti-poverty programs, as well as a considerable change in their financing and

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administration. The federal government required, and fully or substantially funded, new entitlement programs—including Food Stamps and Medicaid—and a broad range of related programs and services such as Head Start, Legal Services, and Job Corps. From the 1960s until the mid-1990s, most changes to anti-poverty programs were arguably incremental, although there were notable exceptions including the establishment and major expansions of the Earned Income Tax Credit (EITC) and the development of the child support enforcement system. Passed in 1996, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), along with accompanying expansions in the EITC and childcare subsidies (administered through the Child Care Development Block Grant, CCDBG), represented a significant redirection for anti-poverty policy. Perhaps most notably, it eliminated the entitlement to cash assistance provided by Aid to Families with Dependent Children (AFDC) and replaced it with Temporary Assistance for Needy Families (TANF), a time-delimited benefit contingent on meeting work requirements. It also decoupled Food Stamps and Medicaid from cash welfare.

Advocates suggested that the 1996 welfare reform, by eliminating the entitlement to cash assistance and freeing states to substantially restructure their welfare program, would lead to fifty active laboratories of innovation—states experimenting with different approaches to helping low-income families, and the best models being disseminated and adopted. Although clearly variation in state program characteristics is greater under TANF than AFDC, the most striking result of the change in rules and funding may be the shrinking proportion of poor families who participate in TANF and the declining share of program funds spent on cash assistance and employment services, despite stubbornly persistent levels of poverty among vulnerable populations as assessed by the official poverty measure, which includes only pretax cash income. As we write this introduction in the first months of the Trump administration, attention has turned away from expansive proposals for new government programs toward greater reliance on market-oriented approaches to poverty, an approach embraced by the Clinton administration in the 1990s. The Republican-controlled Congress and recent cabinet appointees advocate dismantling the Affordable Care Act and are considering restrictions or block grants to replace the Supplemental Nutrition Assistance Program (SNAP, or Food Stamps), and Medicaid.

It is not only federal policy that shapes poverty policy. State- and local-level support for government anti-poverty programs and market-oriented interventions varies considerably. The variation across states in the character of many major programs is significant—from the expansion of Medicaid eligibility (Rose 2015; Courtemanche et al. 2017; Buettgens, Holahan, and Recht 2015), to the availability of a state EITC (Williams 2017; Cooper, Lutz, and Palumbo 2015), to variation in the scope and generosity of cash benefits under TANF (Schott, Pavetti, and Floyd 2015; Floyd 2017). Major increases in the minimum wage (Autor, Manning, and Smith 2016; Neumark 2015), as well as paid sick leave (Isaacs, Healy, and Peters 2017; Ahn 2016), and fair scheduling (National Women's Law Center 2017) continue to garner support in many states and localities. In addition, some states have invested more heavily in supporting low-income students who attend postsecondary education or training (Barr and Turner 2013; U.S. Department of Education 2016; McLendon and Perna 2014), as well as providing support for the youngest learners through universal or targeted prekindergarten programs (Bartik and Hershbein 2017; Friedman-Krauss, Barnett, and Nores 2016).

The fractious nature of national and state politics—reflecting stark differences in world views between the politicians in our major political parties—makes even modest policy changes that require legislative approval challenging. Nonetheless, given the clear need for better policy options, we believe that it is worthwhile—and, indeed, necessary—to propose, develop, and refine innovative anti-poverty policies. The early months of the Trump administration illustrate the challenges of major social policy innovation, even when one party controls the White House and both houses of Congress. On the other hand, signals are clear that states will be given more latitude, along with the risks and potential for innovation that im-

plies. For example, President Trump has ordered that all agencies consider "whether some or all of the functions of an agency . . . are appropriate for the federal government or would be better left to state or local governments or to the private sector" (White House 2017), and the administration has signaled enthusiasm for state waivers, for example, related to Medicaid.

The current political uncertainty makes it difficult to judge the scope and most likely context for potential change. We argue that this is an appropriate juncture to again consider innovations in anti-poverty policy that push beyond marginal changes to existing programs to consider new and different approaches to the major challenges that persist despite fifty years of focused anti-poverty policy. This is what the articles in this volume aim to do. Not even a double issue can hope to touch on all the critical components of a comprehensive anti-poverty strategy, and many issues—including issues related to immigration, incarceration, and health care, for example—are not systematically addressed here. A range of innovative policies addressing income support, employment, housing, and education and training, among other topics, are included, however. Before turning to the specific policy proposals, we provide context by reviewing current and expected poverty-related trends, evidence on the causes and consequences of poverty, and evidence on existing anti-poverty policies.

DEFINING POVERTY

The word *poverty* brings to mind many differing images, and has been used to describe a variety of contexts of scarcity. In public conversations, poverty typically refers to a lack of economic resources; sometimes, however, it is defined more broadly as social exclusion (particularly in the European context). For some, it evokes images of poor children and families from economically developing countries, who struggle to meet their most basic needs. Yet, even in a nation as wealthy as the United States, the word characterizes the living conditions of a substantial share of the population. The overall economic conditions in the United States have cycled between growth and recession, but even the extensive economic expansion of the past seventy-five years has failed to lift millions of citizens out of poverty.

Measuring poverty with economic resources is complicated because it requires defining both which types of resources should be counted and the minimum threshold below which individuals and families should be deemed to have insufficient resources. For poverty scholars, the term *poverty* in the United States has a very specific meaning. In the 1960s, the U.S. federal government developed a method for generating a dollar amount of pretax cash income that, if not exceeded, could be used to designate an individual or family as poor. The resulting poverty thresholds, which differ according to family size, are used for tracking trends in poverty rates. They also inform the poverty guidelines issued each year by the U.S. Department of Health and Human Services, which are used for determining social program eligibility. The poverty thresholds have been updated annually using the Consumer Price Index (CPI) to track inflation. In 2016, the official poverty guideline was just over $24,000 for a family of two parents and two children, and just under $12,000 for an individual adult living alone (U.S. Department of Health and Human Services 2016).

Concern that the official poverty measure (OPM) was outdated—because it fails to account for contemporary family expenses and in-kind public benefits and tax transfers, which have increasingly become the primary means of combatting poverty, and because it does not take into account geographic differences in the cost of living—led the Census Bureau to create a supplemental poverty measure (SPM). The SPM differs in several ways from the OPM, including the measure of resources, the measure of need, the household members whose resources and needs are considered, and adjustments for geographic differences (Renwick and Fox 2016). Perhaps most importantly for this discussion, the SPM considers post-tax income, and includes noncash benefits. Thus, unlike the official measure, the SPM accounts for income from the EITC and the Child Tax Credit, as well as the value of SNAP and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits, in addition to direct cash assistance (such as TANF and Social

Security). Especially for low-income families with children, who increasingly receive assistance from tax credits and SNAP rather than from TANF, the SPM provides a better indicator of poverty and the effectiveness of current policy—as well as of the potential effects of the proposals in this volume that center on tax credits and in-kind benefits. In addition, the SPM accounts for work-related expenses, out-of-pocket medical expenses, and child support paid to other households. It also takes into account the incomes of spouses and cohabiting partners, and considers all resident children regardless of their relationships to the household head or heads. It therefore provides a more complete accounting of household resources than the OPM. Moreover, it uses poverty thresholds that are updated to reflect the current cost of a basic set of necessities, with different thresholds for different living arrangements, for renters versus owners, and for different cost of living levels across geographic areas (Garner 2010; see also Fox et al., "Waging Wars," 2015; Wimer et al. 2016). Given these advantages, this double issue's final article by Christopher Wimer, Sophie Collyer, and Sara Kimberlin (2018), which estimates the effects of many of the proposals on poverty, relies principally on the SPM. However, here and in other articles, we also reference the OPM, given its continued prominence and importance for policy.

POVERTY TRENDS

The official poverty rate fell precipitously during the 1960s. Since the 1960s, it has fluctuated between about 11 percent and 15 percent, increasing during economic downturns, and decreasing during times of economic expansion. In 2015, about 43.1 million individuals (13.5 percent) lived in poverty, as measured by the OPM (Proctor, Semega, and Kollar 2016); this was a decline from the peak of the Great Recession in 2010 (15.1 percent). The supplemental poverty rate indicated that 45.7 million people were poor in 2015, a rate slightly higher than the official measure (14.3 percent), reflecting, among other things, that SPM thresholds are generally higher than the official poverty thresholds.

Average poverty rates, however, mask considerable variation in poverty across populations of interest. Reflecting historical and current experiences of oppression and discrimination, African Americans and Hispanics face considerably higher rates of poverty than non-Hispanic whites (26.2 percent and 23.1 percent, respectively, compared with 10.1 percent). Moreover, children have significantly higher rates of poverty (21.1 percent) than adults (13.5 percent) or the elderly (age sixty-five or older; 10.0 percent). Poverty also differs by nativity (14.2 percent for native born, 18.5 percent for foreign born), family structure (28.2 percent for single female-headed households compared with 6.2 percent for households headed by a married couple), and educational attainment (28.9 percent for those without a high school degree compared with 5.0 percent for those with at least a bachelor's degree) (Proctor, Semega, and Kollar 2016). Finally, official poverty rates differ by location. Poverty is higher in the South and West compared to the rest of the United States, and in urban and rural areas, compared to suburban areas.

Most individuals and families who experience poverty do so for a short time. Data from 2009 to 2012 suggest that more than 30 percent of the population experienced a spell of poverty lasting two or more months during this period (Proctor, Semega, and Kollar 2016). However, many poverty spells are short lived; less than 3 percent of the population experienced poverty in all forty-eight months of this period. Of course, persistence of poverty differs across sociodemographic groups too. For example, whereas only about 10 percent of all children experience persistent poverty throughout childhood (for half or more years from birth to age eighteen), 37 percent of African American children do (Ratcliffe and McKernan 2013).

Finally, some scholars and policymakers argue for more attention on those at the very bottom of the U.S. income distribution—the highly disadvantaged. This group received attention following welfare reform in the 1990s, with a focus on welfare-leaving families who did not find stable work and had limited public supports available to them. Since then, the highly disadvantaged groups of interest have broadened to include individuals and families in "deep poverty" (below 50 percent of the poverty line), as well as those experiencing "disconnection" from employment, schooling, and public

assistance, low food security, other forms of severe material hardship (such as housing instability, eviction), and the $2-a-day poor (Edin and Shaefer 2015). These populations may face economic hardship that is acute, compounded across dimensions, and persistent over the life course or even generations (Desmond 2015; Seefeldt 2016). Estimates of the size and growth of this population differ depending on the measures used (DeNavas-Walt and Proctor 2015; Sherman and Trisi 2015; Short 2015). However, the bulk of research suggests a growth in deep poverty in the past twenty years as measured by the official federal poverty measure (Fox et al., "Trends in Deep Poverty," 2015; Shaefer and Edin 2013; Shaefer, Edin, and Talbert 2015; but, for a substantially different conclusion, see also Winship 2016). Although additional research is required to refine estimates of the size of the highly disadvantaged population, it is clear that a significant number of Americans are living on very little cash income.

CAUSES AND CONSEQUENCES OF POVERTY

Two key institutions that shape economic fortunes—the labor market and the family—have dramatically changed over the last half-century in ways that leave large segments of the population increasingly vulnerable to poverty and its effects. The low-wage labor market has been characterized by stagnation with little growth in wages and few opportunities for advancement (Osterman 2014). At the same time, young adults with low levels of education have increasingly transitioned into parenthood in the context of unmarried romantic partnerships that often dissolve shortly after their child's birth. We discuss these important and related changes and what it means for the next generation of children born into vulnerable economic conditions.

For many, falling into or avoiding poverty largely turns on success in the labor market (Fox et al., "Trends in Deep Poverty," 2015; Shaefer, Edin, and Talbert 2015). Employment challenges faced by less-educated workers are both structural and cyclical (Autor 2010; Farber 2011). Changes in the structure of the economy have diminished the importance of the manufacturing sector, traditionally a source of relatively high-wage jobs for men with low levels of education (Autor 2010) and, more recently, the housing crisis during the Great Recession diminished the construction industry as a source of new jobs (Glaeser 2010). Globalization, skill-biased technical change, and changes in union influence have also reduced employment and wage-growth opportunities for less-educated workers. Job growth for workers without a college education is now concentrated in the low-wage personal service sector (Damme 2011). These changes have resulted in stagnant earnings for less-educated workers and limited their ability to earn their way out of poverty.

Between 1990 and 2005, poverty was characterized more by low wages than by joblessness, but the picture has changed since 2007 (Smeeding 2006). Although low wages are still an important factor, unemployment and unstable work are primary causes of non-elderly poverty today (Levy and Kochan 2012). In 1998, about 67 percent of the U.S. population sixteen years of age or older was participating in the labor force; this rate declined significantly during the Great Recession, and has not increased much since, rates remaining no higher than 63 percent since 2014. Furthermore, nearly 19 percent of adults between the ages of twenty-five and fifty-four were not participating in the labor force in 2016, again reflecting an incomplete recovery to levels prior to the Great Recession (Bureau of Labor Statistics 2017).

As is the case for poverty more generally, labor market experiences are crucial determinants of falling into or avoiding deep poverty (Fox et al., "Trends in Deep Poverty," 2015; Shaefer, Edin, and Talbert 2015). Notably, unstable employment, combined with low hours and wages, rather than a total disconnection from employment, appears to be driving deep poverty for many families (Shaefer, Edin, and Talbert 2015). Irregular or unpredictable hours, split shifts, and contingent labor arrangements leave many low-wage workers with variable and inadequate incomes (Lambert, Fugiel, and Henly 2014). The increase in precarious employment is characterized by decreased job tenure and increases in long-term unemployment, nonstandard work hours, and contingent employment in which workers are temporary or work on limited contracts (Lambert 2008; Kal-

leberg 2009). Low-skill workers have been especially affected by these trends, resulting in high levels of job insecurity (Kalleberg 2009; Lambert, Fugiel, and Henly 2014) and income instability (Morduch and Schneider 2017).

Challenges to sustained employment, including physical and mental illness and disability, addiction, and lack of transportation, are widespread in deep poor populations (Fox et al., "Trends in Deep Poverty," 2015; Turner, Danziger, and Seefeldt 2006). Whereas the majority of families in deep poverty are headed by a single parent, a substantial proportion of the deep poor (now nearly 40 percent) are unemployed working-age adults without dependent children (Fox et al., "Trends in Deep Poverty," 2015). Less-educated men, particularly those of color and who have criminal justice histories, are disproportionately likely to experience deep poverty as a result of low levels of labor force participation and high unemployment (Cuddy, Venator, and Reeves 2015; Holzer, Raphael, and Stoll 2006; Jacobs 2015; Council of Economic Advisers 2014) and limited access to income supports.

Whereas the economy is likely to continue to recover from the recession, and unemployment will decrease as a result, the fundamental polarization between high- and low-skill jobs is not expected to end (Autor 2010; Manyika et al. 2011). The wages received by those entering the formal labor market with modest levels of human capital are low. Although men continue to have higher earnings than women, less-educated men have seen much sharper declines in compensation than women (Blank 2009a; Bureau of Labor Statistics 2015). In addition, no evidence indicates that earnings growth alone will be enough to raise incomes above poverty for those with low human capital. Even with the exceptionally strong economy and rapid job creation in the 1990s, real wage growth among families leaving welfare was estimated to range between 2.0 percent and 4.5 percent per year (Card, Michalopoulos, and Robins 2001; Pavetti and Acs 2001). The challenge now is to support sustained labor market participation, increase opportunities for workers to improve skills, encourage earnings growth among all low-skilled workers, and effectively assist low-wage workers who remain poor.

Several determinants of labor market outcomes—related to the structure of employment opportunities as well as to workers' skills—are key to understanding the labor market. First, whereas higher returns to education are expected to spur less-educated workers to greater human capital investments, growth in educational attainment has been meager (Goldin and Katz 2008). As a result, too few young people, particularly males, are acquiring the degrees and skills required to succeed in the labor market. Demographic shifts in immigration patterns also affect the skill level of the workforce. Over the past forty years, legal immigrants have increasingly arrived from countries with lower levels of human capital and higher rates of poverty, such as Mexico, Central America, and Asia (Raphael and Smolensky 2009). Moreover, the population of undocumented immigrants, who have especially low levels of skills, has grown by more than 300 percent since 1990, though growth declined sharply after 2001 (Warren and Warren 2013).

Finally, incarceration is a key poverty-relevant issue. Nearly 1.6 million individuals were in a prison facility at the end of 2012, the majority of whom were black males younger than forty (Carson and Golinelli 2013). The substantial variation in imprisonment rates by race and gender has been well established. For example, in 2012, incarceration rates for black and white adult males were 2.84 percent and 0.46 percent, respectively, compared to 0.12 percent and 0.05 percent for black and white adult females (Carson and Golinelli 2013). Indeed, incarceration—and criminal justice involvement more generally—is particularly common for black males. Evidence suggests that about half of all black men will be arrested by age twenty-three (Brame et al. 2012; Brame et al. 2014) and that 68 percent of black men without a high school degree will experience incarceration between the ages of twenty and thirty-four, which is true for about 28 percent of white men without a high school degree and 21 percent of black men with a high school degree (Pettit 2012). High rates of incarceration raise important unresolved questions about the implications for labor market opportunities, both for those with incarceration histories and those in affected communities (Holzer, Raphael, and Stoll 2004). Evidence suggests that having a

criminal background creates substantial barriers to employment when individuals return to their communities. Criminal history has been identified as the biggest barrier to employment, even more so than failing to complete high school (Peterangelo and Henken 2016). Yet, recidivism is strongly related to whether former inmates get jobs quickly and maintain steady work (Council of Economic Advisers 2016).

Against this backdrop of a difficult labor market for low-skilled adults, major demographic transitions related to family formation have also occurred. First, young adults are now more likely to partner with individuals of comparable education, contributing to greater household income inequality by increasing the pairing of higher (and lower) earners (Schwartz 2013). Second, whereas marriage rates have stabilized for more educated adults, they have declined among the less educated. Of particular consequence, unmarried births among disadvantaged families are now common, representing 57 percent of births to women with less than a high school degree, but only 9 percent of births to women with at least a bachelor's degree (Shattuck and Kreider 2013). Moreover, nearly three-quarters of unmarried births are unplanned (Sawhill 2014).

The so-called drift into parenthood by low-income young adults (Sawhill 2014) is particularly problematic because their romantic and parental relationships are often short lived. The majority of cohabiting parents break up within a few years of their child's birth. Many low-income children are then raised with limited involvement with and financial support from their fathers. Whereas child support contributions from noncustodial parents (NCPs) have the potential to reduce poverty, a large proportion of low-income custodial parents receive only partial or no support, often because NCPs have low incomes themselves (Cancian, Meyer, and Han 2011; Smeeding, Garfinkel, and Mincy 2011). Over time, mothers and fathers repartner and have additional children, creating *complex families* that are likely to remain socially and economically disadvantaged. Children in complex families are then disproportionately likely to experience ongoing family instability, low income, and poverty; moreover, public benefit programs are challenged in designing supports and services that meet the needs of these complex families (Carlson and Meyer 2014).

Addressing the increasing divergence in the fortunes and life trajectories of advantaged and disadvantaged groups (defined by socioeconomic factors such as education, income, race, and wealth) is a fundamental challenge. Sara McLanahan describes the resulting "diverging destinies" as especially consequential for individual well-being and economic mobility (2004; see also McLanahan and Jacobsen 2015). Higher-income individuals have advantages in nearly every relevant institution—the family, neighborhoods, schools, and the labor market (where they encounter primarily other higher-income individuals)—whereas low-income individuals face compounding disadvantages in all of these domains. Economic resources and parental investments are increasing for advantaged children and youths, whereas their disadvantaged counterparts experience comparatively fewer investments.

Parents' economic disadvantage plays a formative role in shaping children's opportunities for success and acquisition of skills. The degree of intergenerational transmission of poverty and inequality varies across studies, but the correlation between parent and child income is typically estimated to be about 0.5 (Corak 2006; Jäntti 2009; for recent estimates suggesting higher persistence, see Mitnik et al. 2015). Such persistence in economic positions across generations, coupled with strong theory about why poor children fare worse than their more advantaged peers and accumulating empirical evidence about how poverty affects families and children's daily experiences, implies that poverty may be determinative in children's life chances.

Theoretical models of how poverty affects children encompass both what money can buy and how poverty harms relationships. Economic models view families with greater economic resources as being better able to purchase or produce important "inputs" into their children's development, such as books and educational materials at home, high-quality childcare settings and schools, and safe neighborhoods (Becker 1991). Economically disadvantaged parents may also have less time to invest in children, owing to higher rates of sin-

gle parenthood, nonstandard work hours, and less flexible work schedules (Smolensky and Gootman 2003). Psychologists and sociologists point to the quality of family relationships and stress to explain poverty's detrimental effects on children. These theoretical models posit that higher income may improve parents' psychological well-being and family processes, in particular the quality of parents' interactions with their children. A long line of research has found that low income is associated with more punitive and less nurturing, stimulating, and responsive parenting. Finally, sources of everyday stress that poor children encounter outside of their family relationships, such as violent or polluted neighborhoods, may also have far-reaching negative consequences in their development (Evans 2001, 2004).

Research on the effects of poverty have focused largely on children's academic achievement and educational attainment, perhaps because these are strong predictors of subsequent economic well-being. Income gaps and associated socioeconomic status-based gradients in academic skills are present when children enter school and persist through adolescence (Magnuson, Waldfogel, and Washbrook 2012). Poor children complete a year less of schooling than those who have family incomes between one and two times the federal poverty line, and two years less than those who have family incomes more than twice the federal line (Duncan, Ziol-Guest, and Kalil 2010). As described, far too many young adults are entering the labor market without the skills needed to secure stable employment at wages high enough to keep themselves and their family out of poverty.

Despite debate about whether and how much of the estimated associations between poverty and achievement outcomes are causal, several quasi-experimental studies point to substantively meaningful effects (Akee et al. 2010; Dahl and Lochner 2012; Morris, Duncan, and Rodrigues 2011; Milligan and Stabile 2011; see also Duncan, Magnuson, and Votruba-Drzal 2015). Deep and early poverty is particularly strongly associated with lower levels of educational achievement and attainment, holding constant other family advantages (Brooks-Gunn and Duncan 1997). Emerging research in neuroscience and developmental psychology suggests that poverty early in a child's life may be particularly harmful (Miller and Chen 2013). Not only does the astonishingly rapid development of young children's brains leave them sensitive (and vulnerable) to environmental conditions, but the family context (as opposed to schools or peers) dominates their everyday lives.

Increasingly, scholars have recognized the importance of appropriate behavior, self-regulation, and mental health in determining labor market and other important adult outcomes, such as criminal activity (Cunha et al. 2006). Many of the same environmental factors and resource constraints that contribute to differential educational attainment may also limit social and emotional development. Low-income children demonstrate less self-regulation, poorer mental health, and more problem behaviors than their higher-income counterparts in childhood and throughout adolescence (Magnuson and Votruba-Drzal 2009). These factors may contribute to criminal activity and incarceration, further compounding lower levels of education and job skills, thus limiting low-income children's later labor market prospects (Cunha et al. 2006).

In short, a myriad of factors, including changes in labor market opportunities that disadvantage less-skilled workers, demographic trends that increase disparities in the family resources available to children of more- and less-advantaged parents, and changes in public policy, have converged in ways that are creating and exacerbating inequality in many aspects of contemporary American life. These factors have widespread implications with respect to both the current causes and consequences of poverty and for the intergenerational transmission thereof. They suggest the need to review current policies and consider new alternatives that are responsive to the twin challenges of poverty and inequality. In the following section, we review the effectiveness of current policies to provide context for the innovations developed in the articles that follow.

THE EFFECTIVENESS OF CURRENT ANTI-POVERTY POLICIES

Over the past twenty-five years, anti-poverty policies and related social welfare benefits have

largely shifted from a system of guaranteed income support to a work-based safety net. These changes were solidified in PRWORA, which reflected a long-standing debate about the adverse effects of income transfers and the effectiveness of job training programs and work supports, as well as a shift toward a cultural norm of parental employment, even for mothers of young children. In addition to emphasizing work, PRWORA also included provisions to encourage marriage and bolster child support enforcement. The shift during the 1990s to work-conditioned benefits reallocated public benefits from nonworking to working households. Those with the lowest market incomes (less than 50 percent of the poverty line) once received substantially more in benefits than those with higher incomes (Moffitt 2015). This, however, is no longer the case: for single-parent families under 50 percent of the poverty line, increases in earnings now result in larger public benefit transfers; moreover, families that are near or just above the poverty line receive substantially larger transfers than in the past (Scholz, Moffitt, and Cowan 2009). Whereas low-income working families have benefited, the shift has left families increasingly vulnerable to periodic unemployment; it also coincides with an increase in the proportion of families that experience very little cash income, deep poverty, or high rates of material hardship—because families without income from formal employment are ineligible for many forms of public assistance, and cash assistance in particular (Sherman and Trisi 2014; Ziliak 2016).

State policies regarding work requirements, lifetime limits on program participation, family caps, and time-limited cash benefits, as well as diversionary tactics for applicants, appear to have affected rates of deep poverty (Hetling, Kwon, and Saunders 2015) or, at the very least, resulted in a considerable segment of the poor population having very little access to cash income (Shaefer and Edin 2013; Shaefer, Edin, and Talbert 2015). At the same time, funding for work supports, such as childcare subsidies, subsidized health insurance, nutrition assistance, and wage supplements (in the form of the EITC) grew extensively. Income support programs thus now function as complements to, rather than substitutes for, formal employment.

The policy changes associated with the 1996 welfare reform have been studied extensively, although much of the evidence was collected during a period of economic expansion. On the whole, welfare "reform generally raised earnings, although not by amounts that are likely to raise many poor families out of poverty" (Grogger and Karoly 2005, 153). Specific aspects of TANF's work-based safety net have also been evaluated and generally been found to be associated with anticipated labor market effects, though effects on poverty are less evident. For example, mandatory work requirements (or requirements to participate in work-related activities) are associated with reduced welfare use and increased employment (Blank 2002, 2009b; Grogger, Karoly, and Klerman 2002), as are family caps, sanctions, and time limits. More generous childcare subsidies have also been found to promote maternal employment (Dunifon 2010; Grogger and Karoly 2005).

Although, on average, employment increased and there were limited improvements in economic well-being in the wake of welfare reform, as noted above, limited cash support may have increased economic hardship and deepened poverty for those who were not able to find steady work. Moreover, welfare sanctions and reduced access to cash welfare were associated with other negative outcomes, including child welfare involvement (Slack, Lee, and Berger 2007). There are also concerns that the end of the entitlement to cash assistance has contributed to disparities in access to economic support, for example, by race and ethnicity (Fording, Soss, and Schram 2011). Finally, the limited effectiveness of TANF as a safety net program was made clear during the Great Recession, when unemployment rates rose sharply, but TANF participation did not. As a result, trends in poverty and especially deep poverty are now more closely aligned with the business cycle than in the past (Bitler and Hoynes 2016).

Of course, patterns of public program participation look very different today than they did twenty years ago. Specifically, TANF has become much less salient, whereas SNAP, subsidized health insurance, and the EITC have

grown dramatically in importance. Indeed, the largest social welfare expenditures today are for means-tested entitlements from Medicaid and SNAP, as well as the EITC. In 2015, the EITC program paid approximately $67 billion (U.S. Department of the Treasury 2017) and SNAP paid over $74 billion (U.S. Department of Agriculture 2017) in benefits to low-income families, versus total spending of $29 billion for TANF and its related childcare components, including state maintenance of effort spending (U.S. Department of Health and Human Services 2017, table A1). Whereas TANF caseloads dropped considerably in the wake of welfare reform and saw limited growth during the Great Recession, SNAP participation expanded significantly, real expenditures increasing over 200 percent between 1980 and 2010. SNAP also assisted the poor much more than TANF during the Great Recession. If counted as an income equivalent, SNAP benefits have reduced the depth and severity of poverty substantially over the last two decades (Shaefer and Edin 2013; Tiehen, Jolliffe, and Smeeding 2016). Likewise, EITC participation and expenditures have grown dramatically over the past several decades and were instrumental for working families during the Great Recession. Liana Fox and her colleagues estimate that the EITC and SNAP reduced child poverty by approximately 8 percentage points, leading them to argue that anti-poverty programs have been more effective in reducing poverty than previously thought ("Waging War," 2015). Finally, Medicaid and subsidies for health insurance expanded for children as a result of federal funding for State Child Health Insurance Program beginning in 1997, and for adults significantly as a result of state options to expand Medicaid under the Affordable Care Act of 2010.

As first conceived, work-based welfare benefits were created as a way to push (and pull) welfare-dependent single mothers into the labor market. Yet, the increasingly apparent limitations and volatility of the low-wage labor market raise the question of how a work-based safety net can effectively bolster the employment and economic well-being of all workers, both those with and without families to support. Of additional concern, many disadvantaged men, who have in recent decades all but lost their earnings advantage relative to women, often do not have co-resident dependent children and are therefore ineligible for programs limited to resident parents. Disadvantaged nonresident fathers may have few connections to agencies outside of the penal and child support systems, suggesting that reforms to leverage these systems to increase employment and responsible fatherhood may hold promise. Policymakers continue to confront questions about the right mix of policies to increase the availability of family-supporting employment, enable low-wage workers to support their families when working, encourage reemployment when work is scarce, and provide an adequate safety net for those not currently able to work.

WHY INNOVATE NOW?

The challenges are clear. The United States has experienced significant economic growth, yet the fruits of productivity and labor market participation are not being experienced by a large proportion of our population. Inter- and intragenerational inequalities in both opportunities and outcomes by socioeconomic status and race-ethnicity are significant across a wide range of social institutions, spanning neighborhoods, housing, education, the labor market, and the criminal justice system. Less-educated workers face low (and stagnant) wages, instability in employment and hours, minimal employer-provided benefits, and limited opportunities for advancement. The large population of disadvantaged individuals with criminal justice histories—particularly black men—faces substantial labor market barriers and has little access to public benefits. Assortative mating and differences in family formation, fertility, and stability between advantaged and disadvantaged groups have contributed to diverging patterns of family life, with striking implications for the next generation. In particular, children born to disadvantaged parents are highly likely to spend time in a single-mother household and to experience parental multi-partner fertility and associated family instability and fluidity. Low-income children continue to experience lower-quality neighborhoods, housing, and schools. Within this context, anti-poverty policy has increasingly offered work-conditioned benefits and, particularly for

nonworking individuals and families, has increasingly offered in-kind rather than cash assistance. Thus, a considerable portion of the low-income population relies on little cash income. Taken together, these factors suggest that anti-poverty innovations are warranted.

The current political divides may undercut the potential for bipartisan initiatives to address poverty. And, the early days of the Trump administration suggest more support for limiting or dismantling programs designed to address poverty, than for expanding their reach. On the other hand, class divides have received new attention, and there remains some bipartisan support for evidence-based policy change. Social science scholars have developed a significant base of research to inform what more could be done and what the effects of new innovations might be. Social science theory and empirical evidence have continued to accumulate and point to key ways in which policy innovations could better support the current generations of workers, both those who struggle to find steady employment and earn a family-sustaining wage, as well as those completing their education, starting to work and, often, also starting their families. Such evidence further points to how to help the younger generation—the children of low-income adults—who may be harmed by the experience of deep and persistent economic hardship, and who often miss out on experiences they will need to thrive later in their lives. Finally, it points to innovative ways to build on the current safety net to better assist low-income individuals and families, both those who are strongly and those who are weakly attached to the labor market.

INNOVATIVE ANTI-POVERTY APPROACHES

With policymakers' need for evidence-based solutions in mind, each article in this volume focuses on a specific social problem or population and presents a detailed, actionable response. The articles leverage the best available theoretical and empirical social science research to present evidence-based arguments for implementing a set of novel and potentially transformational policy innovations. The proposals span a wide range of policy domains, including cash transfers, employment-related policies, postsecondary education, housing support, food security, family planning, and two-generation human capital development. Despite this range, the proposals do not explicitly address several important policy topics: for example, immigration, incarceration, childcare, child welfare, transportation, subsidized health care, and Medicaid.

As Wimer, Collyer, and Kimberlin discuss in detail in the last article in this double issue (2018), the costs and impact of these proposals vary widely. So do the scale and ambition of the innovations, and the authors' attention to details of policy implementation and the organizational contexts of programmatic implementation. Some call for wholesale transformation of programs or institutions, such as establishing a universal child allowance (Bitler, Hines, and Page 2018; Shaefer et al. 2018), or guaranteeing universal access to an above-poverty wage job (Paul et al. 2018). Others leverage existing programs to address key challenges facing the poor, for example, a minimum benefit to reduce elderly poverty (Herd et al. 2018), and a renter's tax credit (Kimberlin, Tach, and Wimer 2018) to address housing costs. Others advocate for expanding investments to improve education and training—whether for children and their parents (Sommer et al. 2018), or adult workers (Holzer 2018; Strumbos, Linderman, and Hicks 2018). Many of the proposals respond to the needs of families with children, or to the particular vulnerability of children in single-parent families. However, only Lawrence Wu and Nicholas D. E. Mark (2018) consider an effort to directly alter family structure. They review evidence on the potential for improved access to contraception—specifically long-acting reversible contraceptives (LARCs)—to reduce unintended and nonmarital pregnancy and improve economic and social well-being. In contrast to most of the other articles in this double issue, Wu and Mark call for a pilot to test the impact of their proposal.

Whereas all the proposals address concerns with poverty, they vary substantially in their proximate goals, and at least implicitly, in their theory of poverty or anti-poverty policy. Mark Paul and his colleagues (2018), who propose a federal job guarantee whereby all American adults would be assured of full-time employ-

ment in a "public works" job with above-poverty wages and benefits, is the most costly, and also the most transformative. By assuring employment—with adequate wages and benefits—the authors argue that the need for many other programs would be eliminated. The proposal may have limited policy relevance, but it provides an important counterpoint to other articles in this double issue, which implicitly assume the current structure of the labor market, with a low minimum wage and limited required benefits.

A number of the proposals aim to reduce the proportion of workers relying on low-wage jobs by improving education and training in an effort to provide access to better jobs. Teresa Eckrich Sommer and her colleagues (2018) propose redesigning the Head Start program to more fully serve the needs of both parents and children by combining parental education, training, and employment opportunities with the existing early childhood education components of the program. Diana Strumbos, Donna Linderman, and Carson C. Hicks (2018) argue for a national community college model based on the CUNY ASAP model, which provides students with extensive advising, academic, career, and financial supports while requiring full-time enrollment in a highly structured degree program. Harry Holzer (2018) lays out a competitive grant program to states to implement performance-based community college programs to improve academic and employment outcomes for disadvantaged populations. Indivar Dutta-Gupta and his colleagues (2018) argue for a national on-the-job training and subsidized employment program for low-skilled workers.

Other proposals aim to supplement the earnings of low-wage workers in ways that generally improve the returns to work, and target particular challenges. For example, Jennifer Romich and Heather Hill (2018) describe a plan to "couple" minimum wage hikes with changes in existing benefit programs to avoid high marginal tax rates and benefit cliffs and, thereby, to offer a package of increased wages and sustained benefit (particularly SNAP and EITC) receipt. Sarah Halpern-Meekin and colleagues (2018) propose enabling workers to defer 20 percent of their EITC refund—with a 50 percent savings match—for a six-month period to encourage emergency saving among low-wage workers.

In contrast, this issue also includes a range of proposals to directly support individuals and families with insufficient resources, regardless of work status. Three proposals target families with children through new cash transfer mechanisms: both Marianne Bitler, Annie Laurie Hines, and Marianne Page (2018) and H. Luke Shaefer and his colleagues (2018) propose an unconditional child allowance, albeit in very different forms; Maria Cancian and Daniel Meyer (2018) propose a public guarantee of private child support payments available to all children not living with both parents. Sara Kimberlin, Laura Tach, and Christopher Wimer (2018) also propose a new transfer program that would provide a refundable renter's tax credit for families facing high rental costs relative to their income; Pamela Herd and her colleagues (2018) argue for a targeted minimum benefit plan that would provide a guaranteed benefit through the Social Security system to bring the income of poor elderly individuals to the poverty threshold, regardless of their work history. Other proposals build off and expand existing programs. For example, Craig Gundersen, Brent Kreider, and John V. Pepper (2018) present a plan to change the SNAP benefit formula to increase benefits and substantially reduce food insecurity among SNAP recipients.

In short, the proposals highlighted in this double issue all aim to reduce poverty, but they offer markedly different solutions, in many ways solving different problems. If the problem is insufficient resources, the solution may be to make more money available to families with limited earnings, though the authors here have very different ideas about who should get what, and under what conditions. A few would not require work, but would provide support only to resident parents with children (child allowance proposals of Bitler, Hines, and Page 2018 and of Shaefer et al. 2018), or with children living apart from a parent (child support assurance proposal of Cancian and Meyer 2018). These authors highlight the needs of children and the returns to public investments to reduce their vulnerability to poverty. The child allowance proposals offer a universal benefit. The

child support assurance proposal emphasizes the need to support nonresident parents' contributions—children receive government support not when their custodial parent (usually their mother) is poor, but when their nonresident parent (usually their father) has inadequate earnings or otherwise is unable or unwilling to meet parental obligations.

Other proposals target the inadequacy of work and earnings—but the various proposals are based on very different assumptions about the nature of the problem. If work is not available, and earnings are the preferred resource, then providing jobs is a logical solution. But, should there be a universal and unlimited guarantee of government work at above-poverty wages, as Paul and colleagues (2018) propose, or time-limited, targeted subsidized jobs, paying minimum wages and often provided by private-sector employers, as Dutta-Gupta and colleagues (2018) propose? The answer depends in part on whether low wages reflect the structure of the labor market and of workers in today's economy—which argues for a job guarantee to change workers' options—or a skills mismatch that can be addressed with investment in human capital, at least in the medium to long run.

The articles in this double issue respond to a call for innovative policy proposals intended to reduce poverty and improve economic well-being. The individual responses differ across many dimensions and, as Wimer, Collyer, and Kimberlin (2018) stress in the final article, these differences can make comparisons challenging. At the same time, the range of approaches is instructive in highlighting the scope and diversity of potential innovations. In the face of continued high rates of poverty, growing inequality, and significant dissatisfaction with current efforts, there are reasons to substantially broaden the range of policies under discussion. The proposals that follow offer an important set of options to seed the debate.

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PART II

Employment, Education, and Family Planning

Coupling a Federal Minimum Wage Hike with Public Investments to Make Work Pay and Reduce Poverty

JENNIFER ROMICH AND HEATHER D. HILL

For more than a century, advocates have promoted minimum wage laws to protect workers and their families from poverty. Opponents counter that the policy has, at best, small poverty-reducing effects. We summarize the evidence and describe three factors that might dampen the policy's effects on poverty: imperfect targeting, heterogeneous labor market effects, and interactions with income support programs. To boost the poverty-reducing effects of the minimum wage, we propose increasing the federal minimum wage to $12 per hour and temporarily expanding an existing employer tax credit. This is a cost-saving proposal because it relies on regulation and creates no new administrative functions. We recommend using those savings to "make work pay" and improve upward mobility for low-income workers through lower marginal tax rates.

Keywords: minimum wage, income support, poverty

The first decade and a half of the twenty-first century have seen considerable changes in state and local minimum wages alongside calls for parallel changes at the federal level. Well over half the population now lives in areas subject to wage floors above the federal minimum of $7.25 per hour (author calculations). Because almost 60 percent of poor households headed by adults age eighteen to sixty-four include at least one employed person, higher wage man-

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dates are designed to lower poverty and close the poverty gap among the working poor (U.S. Census Bureau 2015a). Indeed, minimum wage advocates argue for higher wages in part based on anti-poverty effects. Despite the seeming promise of anti-poverty effects, scholarly evidence suggests a modest effect of minimum wage increases on poverty rates. In this article, we set out to understand how the goals of the minimum wage—to reduce poverty and make work pay—might be better realized.

We begin with a brief history of the minimum wage in the United States, review what is known about its impact on poverty, and describe several explanations for relatively modest estimates of the effects of minimum wage laws on poverty. As others have noted, the minimum wage is imperfectly targeted to benefit poor or near-poor workers, which may dampen the effects of the policy on poverty. In addition, evidence suggests some offsetting effects of the minimum wage on earnings and employment (see, for example, Neumark and Wascher 2007; Belman and Wolfson 2014). We introduce a third explanation for muted effects on poverty: Interactions between work earnings and a set of income support programs—including the Supplemental Nutrition Assistance Program (SNAP), the Earned Income Tax Credit (EITC), and housing and childcare subsidies—for low-income workers.

To boost the poverty-reducing effects of the minimum wage, we propose an increase of the federal minimum wage to $12 per hour combined with a temporary expansion of an existing employer tax credit program, the Work Opportunity Tax Credit (WOTC), designed to reduce disemployment effects of the minimum wage. This combination is intended to lift workers and their dependents out of poverty. We also suggest that the cost savings of this proposal be invested in reducing marginal tax rates for low-income workers to promote work and upward mobility.

THE EVOLUTION OF U.S. MINIMUM WAGE LAWS

Modern American minimum wage laws have their roots in the Fair Labor Standards Act of 1938 (FLSA). Following the Great Depression, the FLSA was a key part of President Roosevelt's agenda. The secretary of labor, Frances Perkins, carefully crafted the law to withstand Supreme Court scrutiny, which had previously blocked state and federal wage regulation measures (Grossman 1978). Passed by a reluctant Congress on the basis of strong public support, the FLSA established minimum wages ($0.25 per hour at passage, rising to $0.40 over the seven years after passage), capped work hours (forty-four hours per week decreasing to forty hours over three years), and abolished most child labor.

Source documents suggest that the intent of the FLSA was to better the well-being of workers, making it an important complement to the social insurance programs created a few years earlier by the Social Security Act (Armstrong 1932). In light of concerns over "wage slavery" and "sweatshops," on the eve of signing the FLSA, Roosevelt remarked, "Except perhaps for the Social Security Act, [the FLSA] is the most far-reaching, the most far-sighted program for the benefit of workers ever adopted" (as quoted in Grossman 1978, 22). The preamble to the FLSA established its purpose as addressing "labor conditions detrimental to the maintenance of the minimum standard of living necessary for health, efficiency, and general well-being of workers" (U.S. Department of Labor 2011).

Racialized policies of the time tempered this liberal promise, however. As with other Progressive Era policy advances, exclusions in the FLSA reinforced native-born white economic interests at the expense of other groups (Fox 2012; Katz 1986). Like the Social Security Act, the original FLSA excluded agricultural and domestic work, sectors dominated by African American workers, particularly in the South (Davies and Derthick 1997; Palmer 1995). In establishing a higher minimum wage, the FLSA protected the wages of U.S.-born white men who would otherwise face wage-lowering competition from immigrants and other races (Leonard 2005). These exclusionary policies persisted a half century until substantially remedied during the Civil Rights era by modifications of the FLSA and court decisions.

The basic structure of the federal minimum wage established by the FLSA continued throughout the twentieth century with periodic increases in the wage and gradually more work-

ers gaining coverage. At the time of its passage, the FLSA covered roughly one-fifth of the U.S. workforce; major industries, including railroads and most retailers, were exempt from some or all requirements (Grossman 1978). Amendments in the 1960s and 1970s extended coverage to major retailers, domestic workers, and many farm and service-sector employees (U.S. Department of Labor 2009b). More recent estimates indicate that more than 80 percent of workers are covered (Bureau of Labor Statistics 2010; U.S. Department of Labor 2009a). The federal minimum was also increased over a dozen times over the twentieth and early twenty-first centuries, to a nominal level of $7.25 by 2010. The real value of the minimum wage has declined since 1968, when increases in the minimum wage stopped keeping pace with inflation.

The FLSA sets a floor for covered workers' wages but does not preempt higher state or local wage requirements. From the FLSA's earliest days, a handful of states had minimum wage laws that set a wage rate higher than the FLSA stipulated, and the number has grown over time. In 1980, for instance, the federal minimum wage was $3.10 and three states had rates between $3.20 and $3.50. By 2010, the federal rate was $7.25 and thirteen states had rates ranging from $7.40 to $8.55. Until recently, the difference between the federal and state rates was relatively modest: in 2010, higher state rates were an average of 8.4 percent higher than $7.25 (U.S. Department of Labor 2014).

Beginning in the 2012, a groundswell of state and local policy action on minimum wages created two innovations. First, states increased their wage rates to much higher levels, in terms of absolute value and relative to the federal wage rate, than ever before. By 2016, thirty states and District of Columbia mandated super-federal minimum wages, ranging from $7.50 to $10.50, and averaging 21 percent above the federal minimum of $7.25 (U.S. Department of Labor 2014). Second, for the first time, cities and counties have created local minimum wages above their state minimum wages. Since 2012, at least forty-six localities have passed minimum wage laws calling for wage standards as high as $15 per hour. Overall, using population estimates from the U.S. Census Bureau (2015a), we estimate that 61 percent of the U.S. population now lives in a state, county, or city subject to a higher-than-federal minimum wage, and more increases seem likely over the next few years.

The scope and extent of increases to minimum wage laws at various levels suggest that this is an important area of policy change affecting the working poor. Local and state legislation, and the movement behind them, are now ahead of and putting pressure on national policymakers to increase the federal minimum wage. In part because of a vocal movement among fast food workers, $15 per hour has become a rallying cry and a policy goal. Just as the early advocates for the FLSA highlighted its potential to improve the economic circumstances of workers, the current advocates focus on the potential of minimum wages to reduce poverty and inequality.[1]

EVIDENCE ON MINIMUM WAGE EFFECTS ON POVERTY

Existing research on the poverty-reducing effects of the minimum wage is mixed, but generally concludes that minimum wage increases are associated with neutral or modest negative (lowering) effects on poverty rates. Arindrajit Dube's summary of twelve studies on this question concludes that, on average, a 10 percent increase in the minimum wage leads to a 1.5 percent reduction in the poverty rate (2017). This elasticity is about the same anti-poverty effect of the federal disability insurance program and slightly higher than that of unemployment insurance or the EITC (Ben-Shalom, Moffitt, and Scholz 2012). Critics call Dube's conclusion optimistic, raising concerns that methodological choices in the underlying studies and that the studies reviewed focus on the experiences of subgroups most likely to be affected bias the conclusion (Sabia 2014). In addition, some evidence suggests that short-term reductions in poverty fade away or reverse in the long term (Neumark and

1. Importantly, these are not the only arguments in favor of a minimum wage, but they are the arguments that motivate our consideration of the anti-poverty effects of the policy.

Wascher 2002). Importantly, the evidence relies on relatively modest state variation prior to 2010; the more substantial state and local increases of late should soon yield new findings.

Choices about measuring income and the poverty line may also cloud findings across studies. Of the studies that Dube reviewed, as well as his own analysis (2017), eight use the official poverty measure (OPM) or something akin to it (Addison and Blackburn 1999; Burkhauser and Sabia 2007; Morgan and Kickham 2001; Neumark, Schweitzer, and Wascher 2005; Sabia 2008; Sabia and Burkhauser 2010; Stevans and Sessions 2001). Two additional studies do not include taxes or transfer income (Card and Krueger 1994; Neumark and Wascher 2011), and another two use one or the other, but not both (Gundersen and Ziliak 2004; Sabia and Nielsen 2015). Only one, Robert DeFina's cross-state analysis of minimum wage rates and child poverty, includes cash transfers as well as both net taxes and in-kind transfers (2008).

The editors of this double issue outline the limits of the OPM in an earlier article (Berger, Cancian, and Magnuson 2018). These limitations, namely the exclusion of SNAP and EITC, mean that the OPM fails to capture some anti-poverty effects associated with wage increases. Although differences in samples and subgroups preclude drawing any easy conclusions about the relationship between measurement and findings about poverty, that research has estimated the impacts on poverty largely without considering major anti-poverty income support programs is striking. In effect, researchers and advocates may be setting the bar for the minimum wage unreasonably high: to reduce official poverty rates, the policy would have to increase wages enough that *earnings alone* bring families above the poverty line.[2]

Beyond measurement issues, we believe three interrelated factors, covered in turn in the following section, explain the modest poverty-reducing effects of the minimum wage: imperfect targeting, the heterogeneity of labor market outcomes, and interactions with income support programs.

IMPERFECT TARGETING

Although minimum wages aim to reduce poverty, they do not target the poor or near-poor population as well as many means-tested transfer programs. Opponents of the minimum wage have long argued that minimum wage workers are disproportionately young and working part time. Proponents of the minimum wage counter that, relative to all workers, minimum wage workers are also disproportionately female, African American, and Hispanic, groups that have traditionally been disadvantaged in the labor force and who have higher rates of poverty. Both characterizations are factually correct: Just 3 percent of all employed persons are sixteen to nineteen years old, but 19 percent of those working at or below the minimum wage are that age. Similarly, 50 percent of minimum wage workers work part-time hours, compared to 15 percent of all those employed. Fifty-nine percent of workers at or below the federal minimum wage are female; 21 percent are Hispanic; and 13 percent are black, versus 47, 15, and 11 percent among adult workers, respectively (Belman, Wolfson, and Nawakitphaitoon 2015).

There is less evidence of the joint distribu-

2. In addition, because of heterogeneous labor market effects and the phase-out issues noted later, failing to include the most common means-tested benefits would likely bias the estimates of the minimum wage's impacts on poor- and near-poor families' income. The bias could be upward, if marginal tax rates are very high and offset increased earnings, or if those who lose jobs or hours rely more on income support than they would have otherwise. The bias could also be downward, if the poverty-reducing effects of the minimum wage are entirely among those who combine higher earnings and income support (for example, families on the upward slope of the EITC schedule). To illustrate this point, consider the part-time and full-time worker scenarios depicted in panel B of figure 2. A part-time minimum wage worker moving from $7.25 to $12.00 per hour would still be poor under the OPM, but at the higher wage level, the household's disposable income would be above the poverty line. In this case, analysis using the OPM would understate the anti-poverty effect. On the other hand, earnings plus SNAP and tax benefits raise a full-time worker above the poverty line at either $7.25 or $12.00 per hour, but only at $12.00 per hour would earnings alone do it. In this case, using the OPM would overstate the anti-poverty effect.

Table 1. Income Relative to Poverty Among Adults

	Below 100	100 to 150	Above 150
Adults	12.5	7.6	79.9
Employed	6.23	5.78	87.99
Column percent	33.09	50.44	74.02
Paid hourly	8.47	8.02	83.51
Column percent	78.94	79.87	54.03
Wage Rate			
<=$7.25	14.3	7.45	78.25
Column percent	13.43	9.52	4.39
$7.26–$10.15	16.89	13.6	69.51
Column percent	55.62	47.05	23.93
$10.16–$12.00	7.01	10.9	82.09
Column percent	10.59	16.82	12.39
$12.01–$15.00	5.01	6.26	88.73
Column percent	10.14	14.4	18.28
$15.00+	2.36	2.56	95.08
Column percent	10.22	12.21	41

Source: Authors' calculations based on the CPS (Flood et al. 2017).
Note: All estimates are weighted by either the ASEC weight (poverty rates) or the earner study weight (wages). Employment status, hourly pay, and wage rate were asked for the week prior to the survey. Poverty rate is based on the prior year's annual income, family size, and the Federal Poverty Guidelines.

tion of poverty and minimum wages. The two published analyses of the characteristics of minimum wage workers use the Current Population Survey (CPS) Outgoing Rotation Groups (ORGs), which do not include family income or poverty measures (Belman, Wolfson, and Nawakitphaitoon 2015; Bureau of Labor Statistics 2010). To describe the prevalence of poverty and near poverty among workers by wage, and the wage distribution among working poor and near-poor adults, we linked four CPS ORGs from March to June 2010 to the CPS Annual Social and Economic Supplement, which includes family income and poverty measures.[3] Table 1 presents the percentage poor, near poor, and neither for all adults, all working adults, all hourly workers, and then by hourly wage rate. The national poverty rate for all adults is 12.5 percent, but that includes many adults who are not working due to unemployment, disability, or retirement. Among working adults, the poverty rate is much lower, 6.23 percent. An additional 5.78 percent of all adults and 7.6 percent of all working adults are in near-poor families with incomes between 100 and 150 percent of the federal poverty line.

Not surprisingly, the poverty and near poverty rates are higher among hourly workers than among all working adults, 8.47 and 8.02 percent, respectively. As we look across the wage distribution, poverty rates are highest among those hourly workers with wages between $7.26 and $10.15: 16.89 percent are poor and another 13.6 percent are near poor. Importantly, this group has higher poverty rates than the workers earning at or below the federal minimum wage (14.3 percent) and higher rates than those for all adults (12.5 percent; a group that includes unemployed, disabled, and retired individuals). For workers with wages between $10.16 and $12 per hour, the poverty rates are lower than the rates for workers at the current federal minimum wage rate, but the near poverty rates are higher (10.9 percent versus 7.45 percent). At wages above $12 per hour, poverty and near poverty rates are all comparable to the rates of all employed adults.

Table 1 also shows the wage distribution

3. The linking was made possible by the data resources and documentation of the IPUMS-CPS at the Minnesota Population Center and the University of Minnesota (Ruggles et al. 2015; Flood et al. 2017).

Table 2. Heterogeneous Effects of Increased Minimum Wage on Earnings

Possible Employment and Earnings Outcomes	Likely Change in Earnings-to-Poverty Ratio
Employed, earnings increase	Up
Employed, earnings flat	Unchanged
Employed, earnings down	Down
Unemployed	Down

Source: Authors' calculations.

among adults who are poor, near poor, and neither (column percentages as indicated). Among poor adults, about one-third were working in the week before the survey. Of those, the vast majority (80 percent) are paid hourly. Among those paid hourly, 80 percent earn a wage below $12 per hour. Near-poor adults are more likely to be working (50 percent) than poor adults are, but equally likely to be paid by the hour, conditional on working. Most (73 percent) near-poor workers paid hourly are making less than $12 per hour.

In sum, although the minimum wage imperfectly targets poor and near-poor families, it does disproportionately benefit disadvantaged workers, including women and persons of color. In addition, increasing the minimum wage as high as $12 per hour would improve the targeting of this policy toward reducing poverty.

HETEROGENEOUS LABOR MARKET OUTCOMES

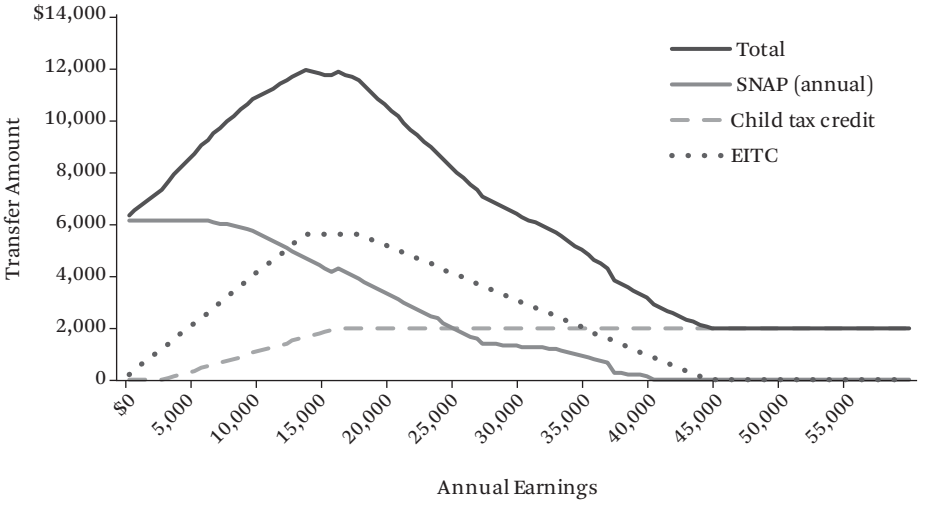
Pretend for a moment that earnings are the only source of income for workers. For minimum wage workers who maintain employment, higher wage mandates result in mechanical increases in hourly cash pay. However, the overall effects of minimum wage increases on earnings (wage times hours worked) are more complex. Reductions in hours may offset, partially or fully, increased wages. Workers who lose their jobs (or are unable to find jobs) may experience flat or even lower earnings.

As summarized in table 2, relative to a counterfactual of a lower minimum wage, we can imagine then a higher minimum wage causing four possible employment and earnings outcomes: first, increased earnings for employed workers when the increased wage rate times hours worked is greater than any loss in hours worked; second, flat earnings when decreases in hours offset increased hourly pay; third, reduced earnings in the event that reductions in hours exceed the value of a new higher hourly pay; or, fourth, unemployment. These four possible outcomes are mutually exclusive for a given jobholder at one point in time, but almost certainly co-occur across a population, within two-worker families, and within workers over time.

The extant literature has paid most attention to the average population-level disemployment effects of state difference in minimum wage or in federal minimum wage increases. These studies primarily focus on teenagers and young adults, and on relatively small differences in minimum wage. One comprehensive review concludes that the majority of studies finds small but non-negligible disemployment effects (Neumark and Wascher 2007). A more recent meta-analysis concludes that raising the minimum wage 10 percent would lead to negative impacts on employment and hours in the range of 0 (null) to 2.6 percent (Belman and Wolfson 2014), a range consistent with other studies not included in the meta-analysis (for example, Neumark, Salas, and Wascher 2014). We know far less about the effects of recent state and local minimum wages, which are often much larger increases than those studied previously. Consistent with prior literature, early results from the evaluation of Seattle's minimum wage ordinance suggest wage increases, small reductions in jobs, and a null to small increase in earnings depending on the comparison group (Seattle Minimum Wage Study Team 2016b).

Any net effect of a higher minimum wage on poverty depends not only on the distribution of affected workers across these four categories in table 2, but also on the distribution of labor market effects for workers with family income near the poverty line. Poverty rates

Figure 1. Annual Values of Income Support Transfers



Source: Authors' calculations (see online appendix for details).

should decrease if group one (with increased earnings) is made up of workers at or below the poverty line, but that benefit could be reduced or completely offset by workers above the poverty line falling into groups two or three (with decreased earnings). David Neumark and William Wascher find that the poverty-reducing benefits were reduced over time in this exact fashion (2002).

INTERACTIONS WITH INCOME SUPPORTS

In reality, earnings are not the only source of income. Low-income workers and their dependent children qualify for and receive public assistance in the form of cash transfers, commonly through the tax system; benefits with cash-like values, such as food assistance; and in-kind subsidies for goods and services such as housing and childcare. On average, the lowest income families in the United States receive 34 percent of overall income from government income support programs, versus 14 percent, on average, among all families (Congressional Budget Office 2016). Figure 1 shows the annual value of three common income supports—the EITC, the Child Tax Credit (CTC), and SNAP—for an exemplar family consisting of one adult and two dependent children at different earnings levels. We include these three federally funded programs because everyone who qualifies is entitled to benefits, they have high take-up rates, and they provide substantial benefits with little to no variation between different states. Figure A1 displays the same information but adds two common local- and state-administered programs, subsidized housing and childcare, highly valuable benefits that are subject to rationing.

SNAP provides the greatest benefits at low-income levels—more than $6,000 for a family of three in 2016—and phases out as earnings rise. The EITC phases in over low income levels, reaches a plateau maximum of $5,572 for a single earner with two children and $6,269 for joint filers with three children in 2016. Finally, the CTC, which adds to the value of the tax refund for low-income families and offsets taxes owed for most nonwealthy families, phases in as earnings rise to a maximum value of $1,000 per child. Together, these three transfers can total up well above $10,000 per year at earnings levels that correspond with part- or full-time work at the current federal minimum wage of $7.25 per hour. Publicly funded childcare and housing supplements—as shown in figure A1—can add an additional $15,000 or more of in-kind value, due largely to the high market cost of these goods. Unlike tax credits and SNAP, however, childcare and housing subsidy slots

are limited. Approximately one in four eligible households receives federal housing subsidies; fewer than one in six potentially eligible children have care funded through the Child Care Development Block Grant; and presumably much lower fractions of eligible families receive both benefits (Chien 2015; Congressional Budget Office 2015).

The phase-out of the combined benefits, beginning around $15,000 of annual earnings, shows that households will experience partially offsetting declines in transfer payments or in-kind assistance as incomes rise. These interactions between earnings and means-tested income supports—known as implicit marginal tax rates (MTRs)—are the result of the eligibility and benefit rules necessary to target assistance to economically disadvantaged families (Romich 2006). Moderate to high MTRs are likely to lessen or even thwart the well-being enhancing effects of the minimum wage. Of course, replacing transfer income with earned income likely appeals to both policymakers—who generally want to restrict public expenditures—and workers. For workers, cash earnings are more flexible than SNAP benefits because they can be spent on anything, and earnings are more immediate and intuitive than tax credits, which arrive in a lump sum only once per year. Finally, earned income rather than transfers may enhance dignity and reduce stigma, although recipients report little stigma from the substantial EITC and CTC payments that come in the form of tax refunds (Levin et al. 2015).

The limited literature on the impacts of higher minimum wages on means-tested benefit use largely parallels the poverty findings of modest to no effects and is consistent with the phase-out pattern noted here. Michael Reich and Rachel West find that higher minimum wages reduced SNAP enrollment (2015). They estimate an increase in the federal minimum wage from the current $7.25 to $10.10 would decrease total SNAP enrollment by about 8 percent. Preliminary work from Joseph Sabia and Thanh Nguyen examines SNAP, energy assistance and Medicaid, and finds null to modestly negative impacts of higher minimum wages on program receipt (2015). Importantly, these studies are not examining whether the overall economic well-being of the family has improved, declined, or stayed the same relative to the counterfactual.[4]

In service of a more robust understanding of interactions between minimum wage levels and means-tested benefits, we calculated family disposable income relative to the official poverty threshold for eight family types at four different minimum wage levels (table 3). The family types are one parent and zero to three children, and two parents and zero to three children. The four wages are the current federal rate of $7.25; the current federal rate for federal contractors of $10.15; and $12 and $15, which have been proposed or established in some states and cities. Full- and part-time work consist of two thousand and one thousand hours per year, respectively.

While we are using the OPM threshold, we combine income sources to get closer to the Supplemental Poverty Measure's definition of income.[5] We start with earnings only, add taxes and SNAP, and finally add childcare and housing subsidies. We consider the "earnings plus taxes and SNAP" income to be the best measure of income for workers earning low wages because of the high take-up rates of both the EITC and SNAP. Although fewer workers receive childcare and housing subsidies, they are substantial income supports for recipients. Importantly, these are static models, in which we as-

4. Neumark and Wascher's work on the EITC is an important exception (2011). Using state-level variations in the EITC and minimum wages, they find that higher minimum wage rates combined with larger EITC supplement rates raise the labor supply of low-skilled mothers and lower the proportion of female-headed households with market earnings below the poverty line.

5. Although we believe the SPM provides a better measurement of disposable income, using the SPM requires either using the general measure published by the U.S. Census Bureau, which is functionally a multiple of the OPM, or making additional assumptions about geographic location, medical out-of-pocket expenses, and work expenses. We believe the former approach adds little and the latter would complicate rather than clarify our analysis.

Table 3. Income to Poverty Ratios, One-Adult Households

	One Part-Time Worker				One Full-Time Worker			
Hourly Wage	7.25	10.15	12	15	7.25	10.15	12	15
No children								
Annual earnings	0.59	0.82	0.97	1.22	1.18	1.65	1.95	2.43
+ Taxes	0.58	0.79	0.9	1.09	1.05	1.44	1.67	2.05
+ SNAP	0.76	0.93	1.01	1.14	1.11	1.45	1.67	2.05
+ Housing and childcare subsidies	1.48	1.58	1.61	1.67	1.65	1.85	1.98	2.21
One child								
Annual earnings	0.44	0.62	0.73	0.92	0.89	1.24	1.47	1.84
+ Taxes	0.6	0.84	0.95	1.12	1.09	1.39	1.56	1.82
+ SNAP	0.86	1.08	1.15	1.29	1.27	1.48	1.62	1.84
+ Housing and childcare subsidies	1.75	1.92	1.96	2.01	2.11	2.23	2.24	2.19
Two children								
Annual earnings	0.38	0.53	0.63	0.79	0.76	1.06	1.26	1.57
+ Taxes	0.54	0.76	0.9	1.11	1.08	1.35	1.49	1.7
+ SNAP	0.85	1.06	1.17	1.34	1.32	1.53	1.62	1.77
+ Housing and childcare subsidies	1.81	1.97	2.06	2.18	2.33	2.42	2.45	2.47
Three children								
Annual earnings	0.3	0.42	0.5	0.62	0.6	0.84	1	1.24
+ Taxes	0.44	0.62	0.74	0.91	0.89	1.13	1.25	1.42
+ SNAP	0.76	0.93	1.03	1.16	1.15	1.33	1.42	1.52
+ Housing and childcare subsidies	1.66	1.79	1.86	1.96	2.13	2.22	2.26	2.29

Source: Authors' calculations using 2015 Poverty Thresholds (U.S. Census Bureau 2017).
Note: Ratios are earnings plus taxes and income support transfers at different minimum wage levels. Thresholds vary by household size and number of children as follows: $12,331 (one adult), $16,337 (one adult, one child), $19,096 (one adult, two children), $24,120 (one adult, three children), $15,871 (two adults), $19,078 (two adults, one child), $24,036 (two adults, two children), $28,286 (two adults, three children).

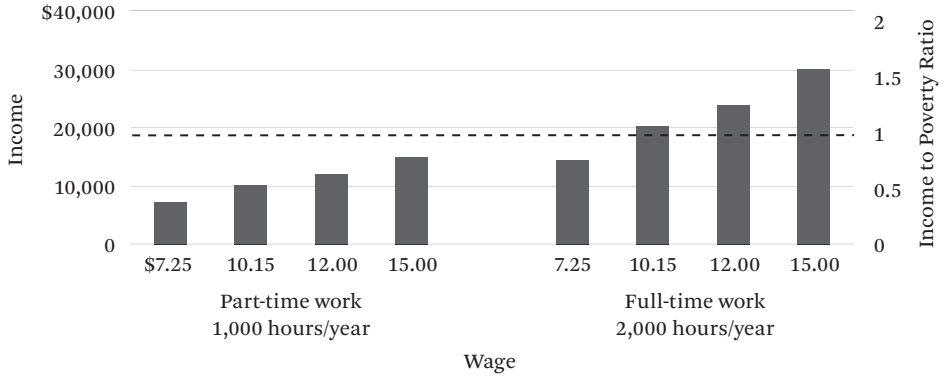
sume no disemployment effects. Tables A1 and A2 display the income values (instead of income relative to poverty) and the online appendix details our assumptions for these calculations.

Figures 2, 3, and 4 display the results graphically for the exemplar household of a single adult with two children under age seventeen. Two important aspects of this discussion are displayed in figures 2 through 4: the extent to which minimum wage earnings—alone or in conjunction with means-tested benefits—raise families above the official poverty line; and the extent to which part-time versus full-time work effort and minimum wage increases pay off, that is, does income increase proportionally to earnings? The key findings from this figure are generally true for all the family types shown in tables 3 and 4.

In figure 2, earnings alone raise the family above the poverty line only when full-time work is paired with a wage around $12 per hour. Even at $15 per hour (the highest minimum wage currently under widespread consideration), half-time work does not raise the family above poverty. When we consider earnings alone, full-time work pays more than half-time work, and earnings clearly rise with increases in the minimum wage. These are mechanical effects, as the top panel does not include any explicit or implicit taxes.

The combination of higher minimum wages with the two major income support programs (EITC and SNAP) is what successfully raises

Figure 2. Earnings



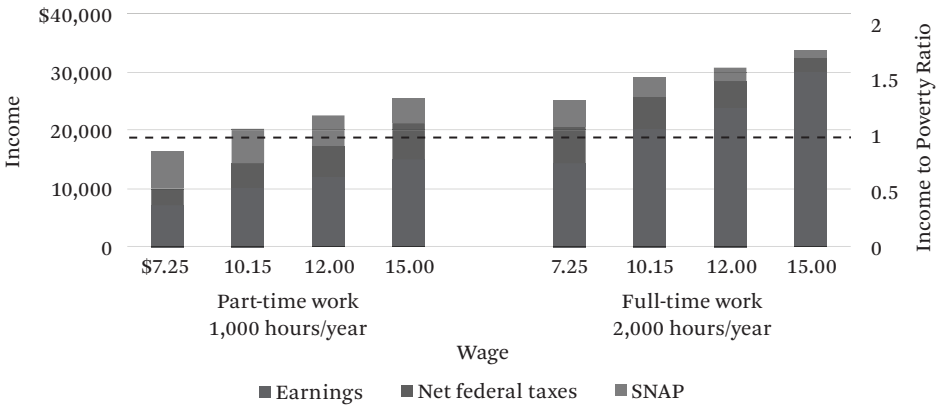
Source: Authors' calculations (see online appendix for details).

Table 4. Income to Poverty Ratios, Two-Adult Households

	One Full-Time Worker				One Full-Time + One Part-Time Worker			
Hourly Wage	7.25	10.15	12	15	7.25	10.15	12	15
No children								
Annual earnings	0.91	1.28	1.51	1.89	1.37	1.92	2.27	2.84
+ Taxes	0.87	1.18	1.38	1.69	1.26	1.71	2	2.45
+ SNAP	1.04	1.25	1.4	1.69	1.31	1.71	2	2.45
+ Housing and childcare subsidies	1.46	1.56	1.64	1.82	1.59	1.83	2.01	2.45
One child								
Annual earnings	0.76	1.06	1.26	1.57	1.14	1.6	1.89	2.36
+ Taxes	0.93	1.21	1.39	1.6	1.28	1.62	1.81	2.12
+ SNAP	1.17	1.37	1.49	1.63	1.44	1.69	1.87	2.12
+ Housing and childcare subsidies	1.53	1.65	1.72	1.77	1.95	2.01	2.01	2.12
Two children								
Annual earnings	0.6	0.84	1	1.25	0.9	1.27	1.5	1.87
+ Taxes	0.86	1.09	1.23	1.41	1.15	1.42	1.56	1.79
+ SNAP	1.12	1.29	1.39	1.5	1.34	1.52	1.63	1.82
+ Housing and childcare subsidies	1.41	1.51	1.56	1.59	1.91	1.97	1.97	1.93
Three children								
Annual earnings	0.51	0.72	0.85	1.06	0.77	1.08	1.27	1.59
+ Taxes	0.76	0.98	1.11	1.26	1.03	1.27	1.4	1.6
+ SNAP	1.03	1.2	1.3	1.39	1.25	1.41	1.49	1.65
+ Housing and childcare subsidies	1.28	1.39	1.45	1.48	1.85	1.92	1.94	1.96

Source: Authors' calculations using 2015 Poverty Thresholds (U.S. Census Bureau 2017).
Note: Ratios are earnings plus taxes and income support transfers at different minimum wage levels. Thresholds vary by household size and number of children as follows: $12,331 (one adult), $16,337 (one adult, one child), $19,096 (one adult, two children), $24,120 (one adult, three children), $15,871 (two adults), $19,078 (two adults, one child), $24,036 (two adults, two children), $28,286 (two adults, three children).

Figure 3. Earnings, Net Federal Taxes, SNAP



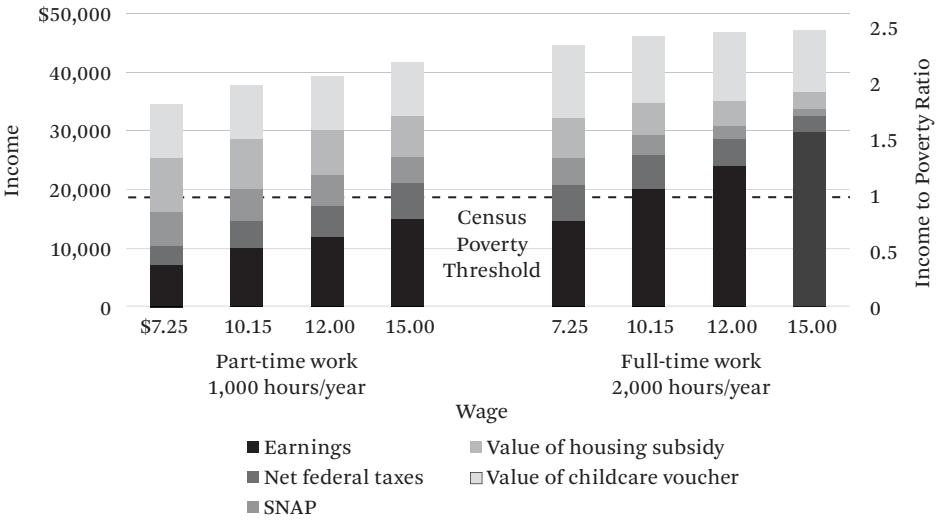
Source: Authors' calculations (see online appendix for details).
Note: Figures are earnings plus taxes and income support transfers at different minimum wage levels; one adult, two-child household, 2016 tax and benefit amounts. Net federal taxes include Earned Income Tax Credit, Child Tax Credit, income tax liability and worker's nominal portion of FICA payroll tax. Supplemental Nutrition Assistance Program (SNAP) benefits calculated based on average of calculators for three states. The Poverty Threshold (2015) is calculated by the census and published each year.

family resources above the poverty line. Figure 3 shows earnings plus SNAP benefits and net taxes, which includes the EITC and CTC minus the employee portion of payroll taxes and any federal income tax liability. When the value of SNAP and tax credits are figured in, full-time minimum wage work at the current federal rate of $7.25 raises one or two adult families with up to three children above the poverty line, as does half-time work at the $10.15 rate or above. Figure 3 displays the addition of publicly funded childcare and housing assistance, two locally administered, federally funded programs subject to rationing. For families who qualify for and receive these two benefits, full- or part-time work at any level would raise them above the poverty line.

In addition, the middle and bottom panels show the flattening of income (post-tax and transfer income) with each wage step because of increasing marginal tax rates. MTRs are the combination of payroll and income tax rates, as well as the implicit tax rates associated with means-tested benefit reductions. Tables A2 and A3 summarize the MTRs for each family type, for part- and full-time workers, and for two combinations of income supports when moving from one wage level to the next. Depending on the family size, wage rate, and income supports received, marginal tax rates can range from –41 percent to nearly 100 percent.

Two primary factors are associated with marginal tax rates over 50 percent: full-time hours and receiving the combination of EITC, SNAP, housing subsidies, and childcare subsidies. Overall, part-time work hours produce low or even negative marginal tax rates, particularly for families with children. This is the result of these families still being on the phase-in portion of the EITC schedule, which means that each additional $1 earned results in $1.30 to $1.45 of income. The MTRs are not as low for part-time workers *without children* because the phase-in for the childless EITC is only a 7 percent wage subsidy. In contrast, full-time hours place most families in the phase-out portion of the EITC schedule, meaning that the benefit falls with every additional dollar earned. SNAP benefits phase out as well, leading to MTRs of 22 to 41 percent for full-time workers moving from $7.25 to $10.15, depending on the number of children. The MTRs for full-time workers increase to as much as 60 percent for those moving to the $12 and $15 level. Each additional dollar earned with minimum wage increase would still raise dispos-

Figure 4. Earnings, Net Federal Taxes, SNAP, Housing, and Childcare Assistance



Source: Authors' calculations (see online appendix for details).
Note: Figures are earnings plus taxes and income support transfers at different minimum wage levels; one adult, two-child household, 2016 tax and benefit amounts. Net federal taxes include Earned Income Tax Credit, Child Tax Credit, income tax liability and worker's nominal portion of FICA payroll tax. Supplemental Nutrition Assistance Program (SNAP) benefits calculated based on average of calculators for three states. Housing subsidy calculated from U.S. Department of Housing and Urban Development rules for Section 8 program, assuming median U.S. rent of $920 per month. Childcare voucher calculated from Child Care Aware data on costs of childcare in the United States and Washington State child subsidy co-pays. Because part-time workers are unlikely to qualify for full-time care, assumed costs of childcare are 0.75 of full value. The Poverty Threshold (2015) is calculated by the census and published each year.

able income, but by far less than earnings increase.

The combined phase-out of EITC, SNAP, housing, and childcare yields especially high MTRs. For full-time workers, moving from $7.25 per hour to $10.15 per hour would result in an effective MTR of 69.3 percent, and the earnings increase from $12 to $15 per hour would yield almost no effective increase in disposable income, with an MTR of 94.9 percent.[6] Such low yield from an additional dollar in earnings stands in opposition to the "work pays" social contract of the late twentieth and early twenty-first century. This can be seen most clearly in figure 4, where working full-time hours at $15 per hour produces roughly the same annual income as working part-time hours at that same wage rate. High MTRs can create a disincentive to work more hours or at better wages, which could stifle upward mobility. Moreover, qualitative studies find that families subject to high MTRs find them demoralizing and destabilizing (Romich 2006).

THE PROPOSAL: A $12 FEDERAL MINIMUM WAGE PLUS TARGETED PUBLIC INVESTMENTS

It is our belief that full-time work hours should raise individuals and families above poverty, and that part-time work hours combined with SNAP and EITC should do the same. In addition, low-income families should not have wage

6. Reports from low-wage working parents subject to the Seattle Minimum Wage show that workers are aware of these effects. Respondents reported worrying about the loss of income supports associated with increased hourly wages (Seattle Minimum Wage Study 2016a).

increases offset entirely by explicit or implicit taxes. In other words, work should pay. To achieve these goals, we propose to raise the federal minimum wage to $12 and index it to inflation, and to expand temporarily the Work Opportunity Tax Credit to mitigate disemployment effects during the transition to the higher wage. This is a cost-saving proposal because it relies largely on regulation and does not create new programs or administrative structures. We recommend using the savings to adjust payroll tax rates and the phase-outs of income supports to keep marginal tax rates at 50 percent or lower up to 200 percent of the poverty line. In the following sections, we describe and support each part of the proposal.

Minimum Wage Increase

We propose raising the federal minimum wage to $12 per hour, with a two-year phase-in, and to index it to inflation moving forward. As our simulations show, at this wage level, a full-time worker with a spouse and two children will earn enough to be above the poverty line (the same is true if both spouses work part-time hours that sum to full-time work). When combined with SNAP and federal tax credits net of payroll taxes, a half-time single worker with three or fewer children will be nonpoor as well. We believe that half-time work is an appropriate expectation for low-wage workers whose jobs disproportionately feature irregular and unpredictable hours (Tilly 1991; Lambert, Fugiel, and Henly 2014), particularly parents who must balance market work and family caregiving. Indeed, Luke Shaefer estimates that 36 percent of all part-time workers are primary earners for their families (2009).

Indexing the federal minimum wage to the cost of living is critical to its success. In fact, the decline in the real value of the minimum wage over time has greatly exacerbated concerns about disemployment. With a minimum wage designed to increase proportionally with changing costs or wages in this country, we would not face the need to increase the wage by such a large amount in future years. Several states have recently passed laws or voter initiatives that index the state minimum wage to inflation.

We recommend that the increase from $7.25 to $12 take effect over two years without mandated steps. This time and flexibility will maximize employers' ability to make decisions about when and how much to increase wages as to best absorb the increased personnel costs. Some recent local and state laws mandate structured steps across many years, but we worry that this approach is overly complicated and might make enforcement more difficult.[7]

The size of this increase relative to current minimum wages would vary considerably by state and even city. By our calculation, the increase would be below some city-level wage mandates but up to 60 percent above the current laws across the country. The larger increases in places that adhere to the federal minimum wage are beyond any recent experience or evidence. As we describe in the following section, some of the public investments that accompany the minimum wage increase could be targeted directly to states and localities facing particularly large increases.

Temporary Expansion of the Work Opportunity Tax Credit

From our perspective, there is enough evidence on modest state and federal minimum wage increases to suggest that higher state minimum wages can lead to small reductions in employment. Targeted public investments could shore

7. We make these claims based on our experience evaluating the Seattle Minimum Wage Ordinance. Although it may seem counterintuitive that employers would raise wages in advance of a mandate taking effect, we observed this with both survey and administrative data in Seattle (Seattle Minimum Wage Study Team 2016a, 2016b). In interviews, some employers explained they raised wages earlier than they had to because of ongoing practices (for instance, giving raises on employees' anniversaries) or to stay ahead of market forces (Seattle Minimum Wage Study Team 2017). We believe confusion also plays a role: when asked what minimum wage applied to their firms, 21 percent of small firms responded incorrectly, most commonly over-estimating (Seattle Minimum Wage Study Team 2016a). Close to 10 percent of the surveyed employers thought that they had to pay $15 per hour as of April 1, 2015, even though that amount would not phase in for at least two more years.

up employment in the private, nonprofit, and public sectors. Although the debate about the minimum wage often focuses entirely on the reaction of employers in the private sector, public and nonprofit organizations may be most vulnerable (Allard 2016). Both nonprofits and public organizations do not have profit margins to dip into to shift wages up, they are often underfunded as it is, and many serve exactly the population that the minimum wage is designed to benefit.

We propose offering temporary subsidies to employers of low-wage workers to support their absorption of higher personnel costs in the transition period. This could be done at reasonably low cost through the existing Work Opportunity Tax Credit, a $1 billion program, offering tax credits between $1,200 and $9,600 per year for each worker hired from a target group, including veterans, SNAP recipients, and ex-felons. The program is also available to nonprofits through offsets to the employer portion of payroll taxes. We recommend a two-year expansion of the WOTC program with these four parameters:

- Double the overall size of the budget available to $2 billion for each of the two years of the transition period to the higher minimum wage.
- Allow the credit to be claimed for not only hiring, but also retaining employees at a higher wage.
- Maintain the current target groups, but add an additional group (temporarily) of workers making at or less than $15 per hour.
- Increase the maximum credit per employee for employers from *maximally affected* industries or geographic locations. Maximally affected would be defined as nonprofit, small businesses, and any business in a location experiencing a minimum wage increase of 25 percent or more.

The limited research evidence on WOTC suggests that it boosts worker earnings but reduces job tenure in the short term (Hamersma and Heinrich 2007). Some researchers have argued that it is a windfall for employers who would have hired the targeted employees without the subsidy (Lower-Basch 2011). Acknowledging these limitations, we still contend that WOTC is an effective way of supporting employers during the transition to a higher minimum wage. The temporary support would allow employers to take a longer, strategic view of how to shift their wage distribution without cutting jobs or hours. Subsidized employment (Dutta-Gupta et al. 2018) or a federal job guarantee (Paul et al. 2018) could achieve similar results while also developing human capital for those who might struggle in the private labor market, but both approaches are costlier than employer tax credits.

COST AND EFFECT ESTIMATES OF THE PROPOSAL

This proposal for a $12.00 minimum wage combined with a temporary expansion of the WOTC is included in the common cross-chapter simulations described elsewhere in this double issue (Wimer, Collyer, and Kimberlin 2018). For the purposes of the cross-chapter simulation exercise, we stop short of a full dynamic model and examine only two outcomes: earnings and disemployment. For simulation purposes, we posit that 6.5 percent of workers making below the new minimum will become unemployed and that the remainder will receive raises. This amounts to a labor demand elasticity of about –0.1 relative to the 66 percent increase that $12 represents to the current federal minimum wage (although the actual increase would be lower in the many states that already have higher rates). This is within the range of disemployment effects predicted in the literature and a larger disemployment effect than assumed in prior simulations (Sawhill and Karpilow 2014; Congressional Budget Office 2014).[8] Because we also model a substantial increase in the WOTC designed to support labor demand, we think this is a reasonable and conservative assumption. The simulation also ac-

8. In comparison, Isabel Sawhill and Quentin Karpilow (2014) assume no disemployment effects in their model of a $10.10 minimum wage and the Congressional Budget Office (2014) estimates a 1.5 percent disemployment effect on a minimum wage increase of 39.3 percent, an effective labor demand elasticity of –0.039.

counts for changes in SNAP eligibility and federal tax liability and credits (as outlined in Wimer, Collyer, and Kimberlin 2018).

Simulation results suggest that a federal $12 minimum wage will lead to a 16.1 percent drop in poverty when measured by the SPM, from 14.3 percent to 12.0 percent. In elasticity terms, this means a 10 percent increase in the minimum wage leads to a 2.5 percent decrease in poverty, a figure that is 1 percentage point higher than found in Dube's cross-study analysis based on prior, smaller increases (2017). Consistent with our observations on measurement, results using the OPM are slightly more modest. Increasing the minimum wage will also lead to net savings of $19.3 billion for the federal government, largely driven by increases in FICA revenue and net federal taxes, including a $4.4 billion decrease in EITC outlays.

REDUCING MARGINAL TAX RATES FOR LOW-INCOME WORKERS

Although the changes modeled for the simulation exercise focus mainly on poverty reduction, additional investments could help stabilize low-income working families and make work pay as earnings increase. The net cost savings of the minimum wage increase and WOTC expansion means these investments can be made and still achieve a revenue-neutral intervention. These investments would be targeted at families with one or more workers and family income in the lower- and middle-income quintiles. They are designed to provide paths out of poverty and in to the middle class and to remove barriers to upward mobility.

As noted, relying on means-tested benefits and wages at or around the $12 per hour level creates high effective marginal tax rates for workers with dependent children. Reducing MTRs requires a tailored approach for each means-tested income support program by family size and other factors. Space limitations prohibit a fully specified proposal here, but we offer a few possible directions. One option to address the MTRs caused by the EITC phase-out would be to reduce the EITC phase-out rate below the current 40 percent, or to alter some other parameter of the tax system to achieve a similar result. Recent proposals to expand the EITC or CTC for certain groups range in cost from $10 to $25 billion per year. Changes to the EITC could increase its anti-poverty effect (Sawhill and Karpilow 2014). Increasing the CTC would target benefits to families in the lower- and middle-income quintiles, offsetting high MTRs (Maag 2016). Changing the withholding system or creating a periodic payment structure to deliver a portion of the credit to families throughout the year rather than just at tax time could further enhance well-being.

Alternatively, these funds could be used to expand key in-kind supports. Housing and childcare programs provide critical supports to the families that receive them, but they are both heavily rationed and have some of the steepest phase-out rates of any income support programs. Although both housing and childcare fill crucial needs, concerns about total cost and dependency are less with childcare, which serves a dual purpose of transfer and human development and has a natural sunset point when children age out of the need for paid care. In recent years, the federal government and states combined have spent $8.5 billion to serve 1.41 million children eligible for childcare subsidies via the Childcare and Development Block Grant (CCDBG) program (Administration for Children and Families 2017) but this is a fraction of eligible potential recipients. Recent estimates suggest that CCDBG funds reach less than 15 percent of eligible children (Chien 2015). Offsetting federal savings from a higher minimum wage by tripling the size of CCDBG with federal funds could serve many more families. With less rationing, states could direct more funds to families above the poverty line but below the CCDBG cap of 85 percent of state median income, the families who would face the highest combined effective marginal tax rates due to the phase-out of the EITC and SNAP.

CONCLUSION

Minimum wage policies and income support programs emerged during the New Deal from the same impetus: protecting workers from economic deprivation. A wave of recent and proposed state and local minimum wage increases more explicitly aim to reduce poverty and inequality. We believe that a higher minimum wage can stand alongside other anti-

poverty measures and have proposed a $12 federal minimum wage augmented by temporary public investments to reduce disemployment and marginal tax rates. Increasing the wage to $12 ensures that earnings alone lift a full-time worker and their family above poverty, and that earnings combined with the EITC and SNAP will do the same for part-time workers. In addition, a minimum wage of $12 better targets poor workers than our current minimum wage. We propose that the modest disemployment effects associated with minimum wage increases can be reduced through an employer tax credit for hiring and retaining workers at or near the minimum wage. The existing WOTC program is ideally suited to this purpose and could be further modified to direct these resources to employers who are particularly exposed to increased costs.

Symbolically, a higher minimum wage aligns strongly with a "work pays" ideal, encouraging employment as the primary means of avoiding poverty. Our calculations, however, point to the fact that just above the poverty line workers receiving higher wages and major income support, such as EITC and SNAP, experience high marginal tax rates. Workers that also receive childcare and housing subsidies can end up with marginal tax rates close to 90 percent, such that they keep only $0.10 of each additional $1.00 increase in wage. These high marginal tax rates do not affect poverty per se, but they reduce the return to working, cause frustration and demoralization, and create a potential barrier to upward mobility. We recommend using the cost savings from the minimum wage proposal to lower marginal rates below 50 percent for all low-income families through changes to federal taxes or means-tested income supports.

The racialized history of early minimum wage efforts make it important to explicitly consider the likely effects of this policy proposal on persons of color. Blacks and Hispanics are overrepresented among workers making the minimum wage or just above it (Belman, Wolfson, and Nawakitphaitoon 2015), suggesting that these workers will experience disproportionate benefit or harm from this policy. The Wimer and colleagues simulation results show that a $12 minimum wage will produce proportionally greater reductions in black and Hispanic poverty relative to white poverty (2018). Disemployment effects, however, may also hit these populations more acutely, particularly in light of documented racial discrimination in hiring (Pager, Western, and Bonikowski 2009).

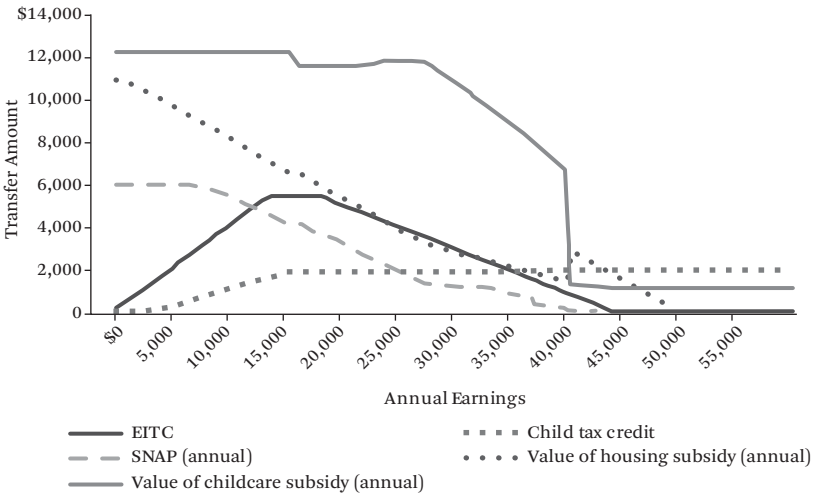
The effects on families with children also merit particular attention. Raising the minimum wage can increase the proportion of poor and near-poor families' incomes that is earnings rather than transfer income. Earnings may be more volatile than transfer income, which typically does not change other than during annual recertification periods, and income instability can be harmful for child development (Gennetian et al. 2015; Hardy 2014; Romich and Hill 2017). Alternatively, the high MTRs associated with benefit phase-out makes part-time work almost as lucrative as full-time work, possibly altering parents' labor supply decisions. Part-time employment may help parents balance work and family responsibilities, and has been shown in national data to benefit children, relative to no work or full-time work, in the first year of life (Brooks-Gunn, Han, and Waldfogel 2010; Buehler and O'Brien 2011). Finally, because the childcare sector relies on low-wage workers, families who pay for childcare fully out-of-pocket may face increased costs.

This policy proposal entails some key tradeoffs. Higher wages will do nothing to improve the lot of nonworkers, and even modest decreases in labor demand could increase the rate of economic disconnection, not being employed or on public assistance, although our simulation shows deep poverty lessening slightly. It is important that the increase we propose, and many of the local and state increases under way, are much larger percentage increases in the wage floor than any research has tested. We are in largely unknown territory as to the effects of 25 percent or larger wage increases on employment, earnings, income, and poverty. Politically, minimum wage increases garner strong opposition from organized business groups, particularly the restaurant industry and other sectors with large low-wage labor forces. However, they also have the political advantage of shoring up income without direct public expenditure.

The real value of the federal minimum wage has fallen too far below the cost of living, exacerbating poverty and inequality in the United States. Many states and cities have responded by passing minimum wages above the federal rate. These local laws will cover many workers, but they do not establish, symbolically or actually, a floor below which we, as a country, believe wages should not fall. The increase we propose can reset that federal floor and keep it from falling in the future. In addition, a higher federal minimum wage coupled with public investments will better target poverty than our current rate, and disproportionately benefit workers disadvantaged by race, gender, or geographic location. In sum, coupling a federal minimum wage increase with targeted public investments is an essential next step to reducing poverty and making work pay.

APPENDIX

Figure A1. Five Common Income Support Transfers, One-Adult, Two-Child Household



Source: Authors' calculations.

Note: Net federal taxes include Earned Income Tax Credit, Child Tax Credit, income tax liability and worker's nominal portion of FICA payroll tax. Supplemental Nutrition Assistance Program (SNAP) benefits calculated based on average of calculators for three states. Housing subsidy calulated from U.S. Department of Housing and Urban Development rules for Section 8 program, assuming median U.S. rent of $920 per month. Childcare voucher calculated from Child Care Aware data on costs of childcare in the United States and Washington State child subsidy co-pays. Because part-time workers are unlikely to qualify for full-time care, assumed costs of childcare are 0.75 of full value. The Poverty Threshold (2015) is calculated by the Census and published each year.

Table A1. Income to Poverty Ratios, One-Adult Households

	One Part-Time Worker				One Full-Time Worker			
Hourly Wage	7.25	10.15	12	15	7.25	10.15	12	15
No children								
Annual earnings	0.59	0.82	0.97	1.22	1.18	1.65	1.95	2.43
+ Taxes	0.58	0.79	0.9	1.09	1.05	1.44	1.67	2.05
+ SNAP	0.76	0.93	1.01	1.14	1.11	1.45	1.67	2.05
+ Housing and childcare assistance	1.48	1.58	1.61	1.67	1.65	1.85	1.98	2.21
One child								
Annual earnings	0.44	0.62	0.73	0.92	0.89	1.24	1.47	1.84
+ Taxes	0.6	0.84	0.95	1.12	1.09	1.39	1.56	1.82
+ SNAP	0.86	1.08	1.15	1.29	1.27	1.48	1.62	1.84
+ Housing and childcare assistance	1.75	1.92	1.96	2.01	2.11	2.23	2.24	2.19
Two children								
Annual earnings	0.38	0.53	0.63	0.79	0.76	1.06	1.26	1.57
+ Taxes	0.54	0.76	0.9	1.11	1.08	1.35	1.49	1.7
+ SNAP	0.85	1.06	1.17	1.34	1.32	1.53	1.62	1.77
+ Housing and childcare assistance	1.81	1.97	2.06	2.18	2.33	2.42	2.45	2.47
Three children								
Annual earnings	0.3	0.42	0.5	0.62	0.6	0.84	1	1.24
+ Taxes	0.44	0.62	0.74	0.91	0.89	1.13	1.25	1.42
+ SNAP	0.76	0.93	1.03	1.16	1.15	1.33	1.42	1.52
+ Housing and childcare assistance	1.66	1.79	1.86	1.96	2.13	2.22	2.26	2.29

Source: Authors' calculations.

Note: 2015 Official Poverty Thresholds, which vary by household size and number of children, are as follows: $12,331 (1 adult), $16,337 (1 adult, 1 child), $19,096 (1 adult, 2 children), $24,120 (1 adult, 3 children), $15,871 (2 adults), $19,078 (2 adults, 1 child), $24,036 (2 adults, 2 children), $28,286 (2 adults, 3 children).

Table A2. Income to Poverty Ratios, Two-Adult Households

	One Full-Time Worker				One Full-Time + One Part-Time Worker			
Hourly Wage	7.25	10.15	12	15	7.25	10.15	12	15
No children								
Annual earnings	0.91	1.28	1.51	1.89	1.37	1.92	2.27	2.84
+ Taxes	0.87	1.18	1.38	1.69	1.26	1.71	2	2.45
+ SNAP	1.04	1.25	1.4	1.69	1.31	1.71	2	2.45
+ Housing and childcare assistance	1.46	1.56	1.64	1.82	1.59	1.83	2.01	2.45
One child								
Annual earnings	0.76	1.06	1.26	1.57	1.14	1.6	1.89	2.36
+ Taxes	0.93	1.21	1.39	1.6	1.28	1.62	1.81	2.12
+ SNAP	1.17	1.37	1.49	1.63	1.44	1.69	1.87	2.12
+ Housing and childcare assistance	1.53	1.65	1.72	1.77	1.95	2.01	2.01	2.12
Two children								
Annual earnings	0.6	0.84	1	1.25	0.9	1.27	1.5	1.87
+ Taxes	0.86	1.09	1.23	1.41	1.15	1.42	1.56	1.79
+ SNAP	1.12	1.29	1.39	1.5	1.34	1.52	1.63	1.82
+ Housing and childcare assistance	1.41	1.51	1.56	1.59	1.91	1.97	1.97	1.93
Three children								
Annual earnings	0.51	0.72	0.85	1.06	0.77	1.08	1.27	1.59
+ Taxes	0.76	0.98	1.11	1.26	1.03	1.27	1.4	1.6
+ SNAP	1.03	1.2	1.3	1.39	1.25	1.41	1.49	1.65
+ Housing and childcare assistance	1.28	1.39	1.45	1.48	1.85	1.92	1.94	1.96

Source: Authors' calculations.
Note: 2015 Official Poverty Thresholds, which vary by household size and number of children, are as follows: $12,331 (1 adult), $16,337 (1 adult, 1 child), $19,096 (1 adult, 2 children), $24,120 (1 adult, 3 children), $15,871 (2 adults), $19,078 (2 adults, 1 child), $24,036 (2 adults, 2 children), $28,286 (2 adults, 3 children).

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A Path to Ending Poverty by Way of Ending Unemployment: A Federal Job Guarantee

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Poverty in the United States, one of the world's most wealthy and prosperous nations, is persistently high. Despite a complex array of social insurance programs in place, 43.1 million people remain in poverty. Because unemployment is a strong predictor of poverty, we propose a permanent federal job guarantee for all Americans. The program would provide full-time employment for any American over eighteen, offering at least nonpoverty wages plus benefits. Such a program will constitute a direct route to producing full employment by eradicating involuntary unemployment. It also will substantially increase worker bargaining power by removing the employer threat of unemployment. To make the case that the federal job guarantee is viable, this paper includes responses to five common criticisms lodged against programs of this type.

Keywords: job guarantee, employment, poverty, human rights, second Bill of Rights

Poverty in the United States is persistently high even though the nation is one of the world's wealthiest and most prosperous. Because an estimated 43.1 million Americans still live in poverty, some 13.5 percent of the population, conditions demand that the country take fresh action (Proctor, Semega, and Kollar 2016).[1] Tools to alleviate the unnecessary suffering ex-

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 Paul, Mark, William Darity Jr., Darrick Hamilton, and Khaing Zaw. 2018. "A Path to Ending Poverty by Way of Ending Unemployment: A Federal Job Guarantee." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 4(3): 44–63. DOI: 10.7758/RSF.2018.4.3.03. Direct correspondence to: Mark Paul at mark.paul@duke.edu, Samuel DuBois Cook Center on Social Equity, Duke University, 2024 West Main St., Campus Box 104407, Durham, NC 27705; William Darity Jr. at william.darity@duke.edu, Samuel DuBois Cook Center on Social Equity, Duke University, 2024 West Main St., Campus Box 104407, Durham, NC 27705; Darrick Hamilton at hamiltod@newschool.edu, The Milano School of International Affairs, Management and Urban Policy, The New School, 72 Fifth Ave., Room 707, New York, NY 10011; and Khaing Zaw at khai.zaw@duke.edu, Samuel DuBois Cook Center on Social Equity, Duke University, 2024 West Main St., Campus Box 104407, Durham, NC 27705.

1. The aggregation of the national poverty rate is too general to describe the scope of poverty for certain groups. For instance, the black poverty rate of 24.1 percent is more than twice the white poverty rate of 11.6 percent.

ist, but they need to be activated (DeNavas-Walt and Proctor 2014). The United States does have a complicated array of social insurance programs in place that reach some of those in need: among them unemployment insurance, the Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), and disability benefits—both Supplementary Security Income and Social Security Disability Income.

Fighting poverty as a national priority is not a recent development. Fifty-two years ago, President Lyndon B. Johnson declared his War on Poverty, proclaiming that "many Americans live on the outskirts of hope—some because of their poverty, and some because of their color, and all too many because of both. Our task is to help replace their despair with opportunity" (1964). On the fiftieth anniversary of his declaration, the Council of Economic Advisors issued a progress report. The conclusion was that far too many Americans still experience poverty, in part because of "unemployment . . . inequality, wage stagnation, and a declining minimum wage" (2014).

The current social insurance regime has cut poverty rates nearly in half—reducing them from an estimated 27.3 percent for persons without government assistance to 15.3 percent after the programs mentioned are taken into account (Greenstein 2015). These programs certainly have reduced poverty, but the social insurance regime has shifted to a "work-based safety net," providing the majority of assistance to the working poor—a group that would not exist under our proposed program in the first place. The changes in social insurance programs implemented under the Personal Responsibility and Work Opportunity Reconciliation Act (the 1996 welfare reform) resulted in a significant decline in government programs that provide benefits to people without earnings, contributing substantially to the increase in "deep poverty."[2]

During the Great Recession, one of the largest holes in the current safety net became highly visible—the lack of support for the jobless. At the height of the crisis, conservative measures of the level of unemployment indicated that more than fifteen million Americans (10 percent of the labor force) were out of work (U.S. Bureau of Labor Statistics 2017).[3] They were unable to make a contribution to traditional measures of economic productivity and economic growth, and they were struggling desperately to provide for themselves and their families. Broader measures of unemployment, such as U6, that better capture hardship during economic downturns indicate that 17.1 percent of workers were unemployed or working part time, despite wanting full-time employment.[4]

Figure 1 demonstrates just how large the gap became between the number of those seeking jobs and the number of jobs offered during the Great Recession. No amount of individual effort — hard work nor "pull yourself up by your own bootstraps" drive—could overcome the dramatic shortage of jobs available during the cyclical decline.

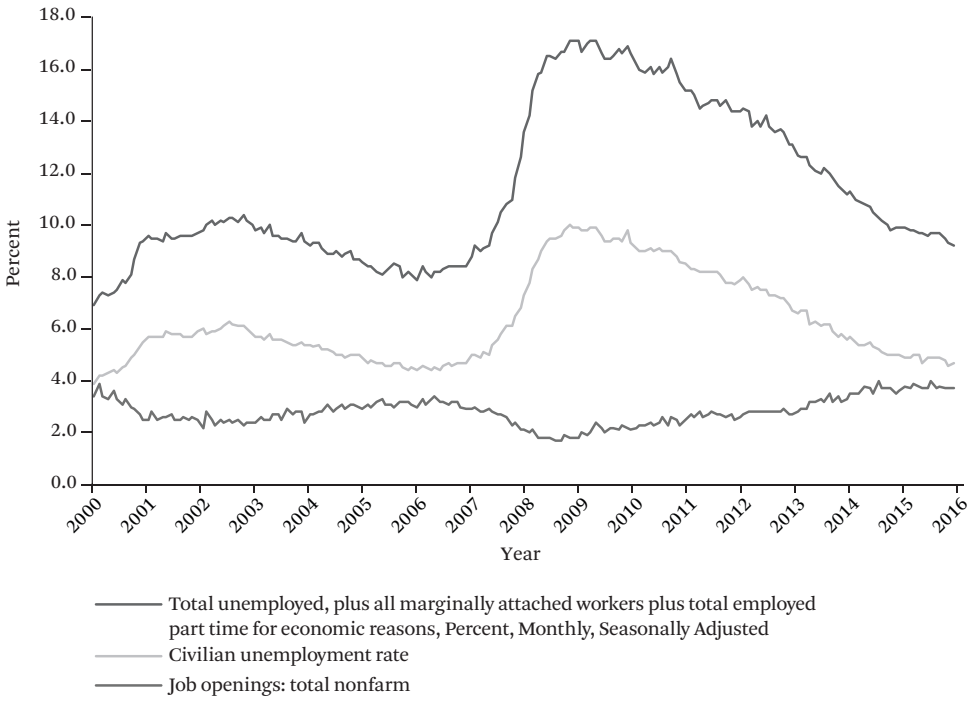
Moreover, unemployment is one of the strongest predictors of poverty, households whose usual breadwinners are out of work being three times more likely to be poor than working households (Achiron 2009, 13). But working households are not immune from the plague of poverty; a job in and of itself is not a sufficient condition to escape poverty. Given that at least 25 percent of workers earn wages below the poverty line (Mishel et al. 2012), and 44 percent of homeless individuals report having taken on paid employment in the past month (Burt et al. 1999), nonpoverty wages

2. Deep poverty is defined as an individual or household with income that is below half of the poverty line (for further discussion on changes in extreme poverty following the 1996 welfare reform, see Shaefer and Edin 2013).

3. U3 is the International Labour Organization official unemployment rate that includes individuals that are unemployed and have actively looked for work within the past four weeks.

4. U6 is a broader unemployment, or underemployment rate, which, in addition to U3, includes "discouraged workers," or those who have stopped looking for work due to current economic conditions; other marginally attached workers who are willing and able to work but have not actively sought employment in the past four weeks; and part-time workers who seek but cannot attain full-time employment.

Figure 1. Job Openings and Unemployment Rate



Source: U.S. Bureau of Labor Statistics 2017.

need to be an essential component of reducing poverty.

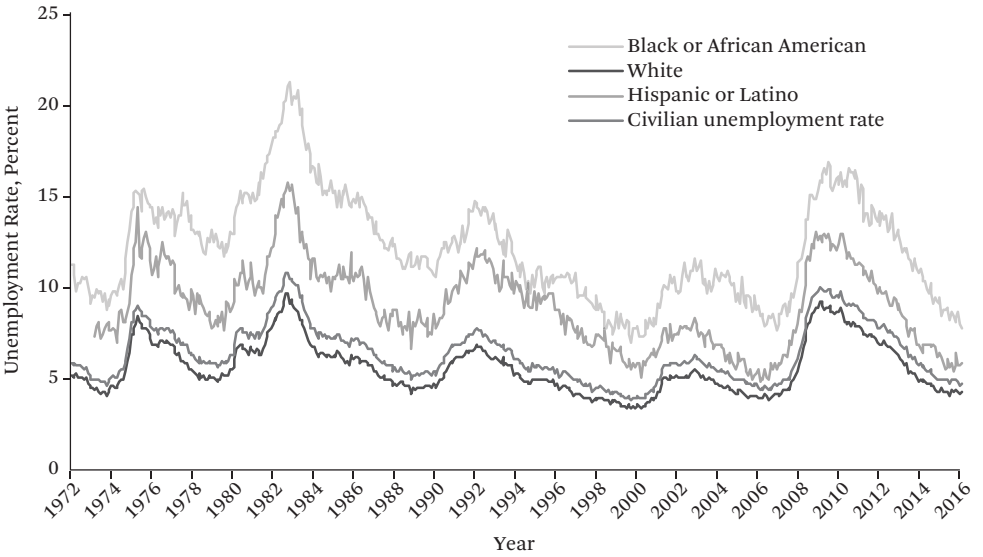
Furthermore, the costs associated with unemployment go far beyond poverty. The nature of the harms from unemployment or underemployment are well documented. In addition to inflicting lasting damage on an individual's labor market prospects, unemployment is associated with increased rates of physical and mental illness, alcohol and drug abuse, child and spouse abuse, failed relationships, suicide and attempted suicide, and a host of other personal and social ills (Goldsmith, Veum, and Darity 1997; Darity 2003).

Unemployment does not affect all groups equally; it varies greatly by race, as demonstrated in figure 2. Historical data indicate that unemployment rates for black workers are consistently twice those of white workers. This gap persists among groups with more education as well, with recent black college graduate unemployment at 9.4 percent, versus 3.7 percent among their white counterparts in 2016 (Bivens 2016).

In fact, the differential is so pronounced that there are many months when the Bureau of Labor Statistics reports that blacks with some college education have a higher unemployment rate than whites who never finished high school. Even when black students complete degrees in a statistics, technology, engineering, and mathematics (STEM) field, ostensibly fields in high demand by the labor market, they still experience markedly higher rates of unemployment. They also are more likely to end up in jobs that do not require a STEM degree (Jones and Schmitt 2014). Since 1972, unemployment has averaged double digits for black workers but has never fallen below 7 percent—a level reached only during times of economic crisis—for white workers.

But the ills of unemployment and poverty can be resolved by direct government action. In his 1944 State of the Union address, Franklin Delano Roosevelt introduced what he called an Economic Bill of Rights. The first "article" was a *right to employment*. In the absence of the provision of adequate opportunities for work by the private sector, demonstrated by the jobs gap

Figure 2. National Unemployment Rates by Race



Source: U.S. Bureau of Labor Statistics 2017.

in figure 1, Roosevelt envisioned the maintenance of a public-sector option for employment for all. However, Roosevelt's bold aim has not been realized, even if its ambition is embodied in the Full Employment and Balanced Growth Act of 1978.

This is unfortunate because a well-designed federal job guarantee (FJG) program would be a direct route to full employment and simultaneously eliminate involuntary unemployment and poverty in America.[5] Such a program could be informed by and modeled after Great Depression–era projects such as the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC), as well as Argentina's Jefes y Jefas and India's National Rural Employment Guarantee (for Argentina, see Tcherneva and Wray 2005; for India, see Muralidharan, Niehaus, and Sukjtankar 2017). Any American wanting a job, at any time, would be able to obtain one through the public employment program.

The FJG would reach persons in the workforce who are subject to persistent exclusion from work, ensuring their capacity to secure employment. Groups continuously subjected to higher odds of joblessness, including ex-offenders, recent military veterans, and racial-ethnic groups who experience discrimination, would be assured decent work at nonpoverty wages (Schmitt and Warner 2010; Loughran 2014; Darity 2003).[6] These are the same groups subject to stubbornly high rates of poverty, in part because of their weaker job prospects (Proctor, Semega, and Kollar 2016; Western and Pettit 2010). The persistent racial unemployment gap, as discussed, would effectively be eliminated by the FJG.

By establishing a condition whereby the lowest paid job in the FJG program offers nonpoverty wages *and* benefits, including health insurance for the worker and their family, the federal job guarantee would set a new economy-wide floor on the level of compensation that the private sector would need to offer to attract workers. Minimum wage laws and living wage stan-

5. Although many economists have abandoned the notion of full employment, we follow Keynes's definition—the elimination of involuntary unemployment. Under the FJG, the full employment unemployment rate would near 1.5 percent, representing short-term frictional unemployment.

6. The nonpoverty wage examined in this paper is $11.56 an hour, equal to the poverty line for a family of four. The choice of this rate as the base wage is elaborated on later in this article.

dards are effective only to the extent that employees actually have jobs. A FJG, on the other hand, would combine an assurance of employment with an assurance of decent compensation.

The FJG also will function as an automatic stabilizer, its numbers of participants expanding during economic downturns and contracting during more prosperous times. Other articles in this double issue make important contributions on how best to improve and expand the existing system of social insurance. Our proposal offers a bold, yet historically grounded, alternative. The FJG fundamentally would alter the nature of poverty and the structure of the labor market by mandating a full employment economy achieved by the government taking the function of direct job creation.

Some of the authors have been advocates of a FJG for several years (Darity 2010, 2012; Darity and Hamilton 2012), but a number of issues and criticisms have been advanced about the FJG policy. Our objective is to provide a comprehensive design for a FJG that explicitly addresses these central criticisms and to further explore the impact of a FJG on poverty.[7]

THE PROPOSAL

We propose passage of legislation guaranteeing every American over the age of eighteen a job provided by the government via the formation of a National Investment Employment Corps (NIEC) (Darity 2010; Aja et al. 2013). The permanent establishment of the NIEC would eliminate persistent unemployment and poverty, ensuring that the United States is able to achieve full employment, as outlined by the Full Employment and Balanced Growth Act of 1978. Related legislation has already been introduced by U.S. Representative John Conyers (D-MI) in House Resolution 1000 (H.R. 1000).

This proposal moves beyond the incremental changes typically advanced as policy solutions for major social problems. Our proposal, decidedly non-incremental, aims to bring about pronounced structural change in the American economy. The FJG could simultaneously achieve the goals outlined in other proposals in this double issue (see Romich and Hill 2018; Dutta-Gupta et al. 2018). Rather than potentially operating de facto to subsidize low-quality jobs, our proposal effectively eliminates poverty for those willing and able to work by providing a guaranteed job at nonpoverty wages. This will set a floor for a decent standard of compensation in the labor market and fulfill the Humphrey-Hawkins full employment mandate.[8] The proposal is predicated on the view that there is an absolute shortage of decent jobs, rather than there being insufficiently skilled workers to fill vacant positions in the private sector, as we demonstrated in figure 1.

Unlike other proposals in this double issue, many of which require people to first be exposed to poverty prior to gaining access to the benefits of the social safety net, our proposal is intended to preempt exposure to poverty altogether. Under the FJG, all workers seeking employment would be employed at the local, state, or federal level by the NIEC. The program would provide meaningful and remunerative employment across an array of public works projects addressing both the nation's human and physical infrastructure needs.[9]

To simultaneously provide full employment and rid the United States of working poverty, workers would be paid at least $11.56 an hour. This wage rate would yield a salary of $24,036 a year at forty hours per week of year-round employment, equal to the poverty line for a family of four (DeNavas-Walt and Proctor 2014).[10] This wage rate represents a minimum

7. For a historical overview of the job guarantee in the U.S. context, see Darity and Hamilton 2017.

8. The Humphrey-Hawkins Act, also known as the 1978 Full Employment and Balanced Growth Act (PL 523. Full Employment and Balanced Growth Act of 1978, 95th Cong., 1978), established the full employment portion of the Federal Reserve's dual mandate.

9. The inclusion of human infrastructure refers to services such as child care, elder care, and other services that facilitate improving of people's life quality and personal development.

10. Rather than setting a wage that is means-tested or linked to household size, the program sets an absolute minimum wage based on an above poverty threshold for a family of four. The program does not presume that

entry level wage, but the program would be designed to enable workers to achieve promotion—and higher wages. We estimate a mean wage income for all employees of approximately $32,500.

In addition to wages, workers would be guaranteed a benefits package.[11] We estimate that an additional $10,000 will be spent per worker per year to provide adequate health insurance and standard retirement benefits. This insurance would be comparable to current health insurance programs offered to federal employees and members of Congress. Beyond health insurance and retirement, employees would be guaranteed other benefits, including paid family and sick leave and one week paid vacation per three months worked. Again, we emphasize that compensation and benefits package will set a new floor in the labor market—compelling employers to provide competitive compensation packages, or risk losing workers to the FJG program.

Projects and employment under the program will be coordinated across the various levels of government—local, state, and federal—as well as the Indian Nations.[12] At the federal level, we anticipate a wide array of major public investment activities, which may include fostering a transition to a green energy economy, extending access to high-speed rail, improvements in our public park service, revival and product diversification for the postal service, and an increase in general services across the economy.[13]

At the state level, we anticipate the states to undertake major infrastructure investment projects, as well as projects to improve the services they offer to their citizens. At the local level, we expect communities to undertake community development projects, provide universal daycare, maintain and upgrade their public school facilities, and improve and expand the services provided by their libraries.

In table 1, we provide three cost estimates for the proposal. Each estimate assumes the economy reaches full employment, by which we mean the elimination of both cyclical and structural unemployment. We assume U6 would be brought down to 1.5 percent.[14] In col-

all families will have one working adult. Such an approach does not directly link wages to household size or composition. In some cases, there may be some families with one adult working in the private sector and another under the auspices of the federal job guarantee. Our anchor on a family of four is consistent with the prevailing social norms regarding family size (see Gao 2015).

The job guarantee is a guarantee per adult, not per family, and hence a family of four with two adults working in the program would have a wage commensurate with twice the poverty line. We recognize that the minimum wage would not be adequate to lift every family above the poverty line. For instance, the wage would not lift a single-headed family with four children above poverty.

11. If the United States were to pass a public option for health insurance, such as a Medicare-for-All type program, the cost of the FJG would be reduced substantially.

12. Coordination between government entities would be necessary to achieve successful implementation of the program. We recommend a similar structure to that undertaken by the WPA. In additional to direct federal hiring, the secretary of labor could administer "employment grants" enabling eligible entities to also engage in direct employment projects. These projects should be designed to address community needs and provide socially beneficial goods and services to communities and society at large. There would be an oversight board at the national level to ensure local capacity (available workers, knowledge, staff, and funding for materials) could successfully implement the proposed project. In addition, we recommend that secretary of labor work with federal agencies to identify areas of needed investment in the U.S. economy that would not displace work planned by existing government agencies. If projects at the local, county, or state level are not enough to maintain full employment in the region the secretary of labor will intervene in the locality to provide adequate employment opportunities.

13. Robert Pollin and his co-authors at the Political Economy Research Institute estimate that a transition to a green energy economy would amount to an estimated $200 billion annually. This largely could be undertaken by workers in the FJG program (2014).

14. From 1943 to 1945 the United States operated at full employment with an average unemployment rate of 1.7 percent. Our estimate is therefore a conservative estimate (Bureau of the Census 1975).

Table 1. Federal Job Guarantee Expenditure and Uptake Estimates

	Peak Great Recession Case Scenario	July, 2016 Modest Uptake	July, 2016 High Uptake
Uptake			
Unemployment (U3)	10.1%	4.9%	4.9%
Unemployment (U6)	17.0%	9.7%	9.7%
Total number of unemployed over the age of 18 (U6)	26,423,432	15,623,402	15,623,402
Number of unemployed if U6 were at a full employment rate of 1.5%	24,091,953	13,207,412	13,207,412
Number of full-time equivalent (FTE) jobs demanded	21,803,217	11,952,708	38,252,798
Expenditures			
Average annual wage	$32,500	$32,500	$32,500
Average spending on supplies and capital goods per FTE	$10,833	$10,833	$10,833
Employer's share of FICA taxes	$2,486	$2,486	$2,486
Average spending on benefits	$10,000	$10,000	$10,000
Average cost per job	$55,820	$55,820	$55,820
Total cost	$1,194,159,144,294	$654,648,131,050	$2,135,255,241,508

Source: Author's calculations using the Labor Force Statistics from the Current Population Survey and BLS May 2016 National Occupational Employment and Wage Estimates.
Note: Full-time equivalent positions demanded based on 81 percent demand for full-time employment (40 hours) and 19 percent demanding part-time (20 hours). FICA rate is 7.65 percent. We assume only full-time employees receive benefits. Average spending on supplies and capital goods assumes that $1 on this category is spent per $3 spent on wages. This is the same ratio observed under the WPA (see Harvey 1989). The modest uptake estimate assumes that workers counted under U6 engage in employment with the NIEC until U6 is brought down to 1.5 percent. The high uptake estimate assumes that all workers currently earning below the base wage offered by the NEIC (about 1/4 of all employed workers according to BLS data) plus workers counted under U5 (until it is reduced to the full-employment level of 1.5 percent) will engage in employment with the NEIC.

umn one, we provide a snapshot of the FJG program's costs drawing on experiences from the recent Great Recession. According to the Bureau of Labor and Statistics, the official peak unemployment rate during the Great Recession was 10 percent (15.3 million Americans).

We believe these figures grossly underestimate the numbers of workers in need during the Great Recession. Considering a broader measure of unemployment (U6) provides us with a more reasonable estimate for the number of workers that may seek employment through the FJG. During the peak of the crisis, U6 reached 17.1 percent. Removing those under the age of eighteen, since minors would not qualify for the program, we find that an estimated 24.1 million workers might have sought employment under the program. However, this might be an unrealistically high estimate of expenses, if the FJG has been in place prior to the recession. Due to its buffer stock mechanism, employment shocks would have been moderated and full employment would have been maintained.

Next, we also estimate two scenarios under recent economic conditions using July 2016 employment data. The first scenario assumes modest uptake under the FJG, on the assumption that all workers currently counted in U6 engage in employment through the National Investment Employment Corps (NEIC). In this case, 13.2 million workers may seek employment, demanding 11.9 million full-time equivalent jobs. The gross cost of the program, in-

cluding benefits and materials, would be $654.6 billion.

The second case based on recent labor market conditions estimates program uptake and expenditures assuming workers earning wages below the minimum offered by the NEIC also would partake in the FJG. Although we believe U6 provides a reasonable approximation of program uptake, we recognize that the establishment of a FJG will transform much of the labor market. In turn, we analyze a third estimate that represents an upper bound for uptake and cost under a FJG. This estimate assumes that all workers currently earning below the base wage offered by the NEIC (about one-quarter of all employed workers according to Bureau of Labor Statistics data), plus workers counted under U5, will seek employment with the NEIC.[15] Under this scenario, program costs would increase sizably.[16]

Although these are large initial employment and cost projections, the macroeconomic stimulus effects from such a program would be substantial, generating significant employment in the private sector, thereby mitigating workers' demand for public-sector employment—and contributing to cost containment. Philip Harvey estimated the indirect job creation effect of a government direct jobs program, similar to the FJG, and calculated that, for every directly created job by the government, 0.26 indirect jobs would be created through the private sector (2011).[17]

Costs associated with the FJG only represent half of the equation. The initial cost of the FJG would be offset by significant cost savings through reducing enrollment in many existing federal and state social insurance programs, by maintaining state and municipal tax bases, by increasing the growth rate of gross domestic product (GDP), and by substantial productivity and capacity gains in the U.S. economy.

The Congressional Budget Office's baseline projections provide cost estimates for the major social insurance programs over the next decade, from 2016–2026, which we present in table 2 (Congressional Budget Office 2016). Following the successful rollout of the FJG, the number of beneficiaries eligible for SNAP is likely to fall substantially. Unemployment insurance, which peaked at $162.5 billion in 2010, would be reduced significantly because workers would have an option to obtain employment through the FJG (see Congressional Budget Office 2012).[18] TANF also could be nearly eliminated

15. Similarly, this estimate brings the unemployment rate down to 1.5 percent. We use the U5 unemployment rate in this calculation because we do not want to double count workers who are currently in part-time employment.

16. Note that similar to the findings of the extensive literature on the minimum wage, we do not anticipate that setting a reasonable floor in the labor market will result in complete private-sector crowding out.

17. A classic concern with the FJG is that a substantial exodus from the private sector will occur (for example, private-sector employment crowding). A few points are notable. First, the private sector jobs that are most vulnerable to competition from a FJG are generally the least desirable to workers, offering them the lowest wages and benefits package. Second, the minimum level of compensation offered in our proposal is not out of line with historic minimum wages once inflation and productivity increases are taken into account. In fact, if the minimum wage increased with inflation and productivity from its peak in 1968, it would have been $18.70 per hour in 2016 (Cooper 2015). Minimum wage studies have not uncovered evidence of mass layoffs in low-wage sectors following substantial minimum wage hikes. In part, the change in the floor of minimum compensation induced by a FJG would redistribute some income from profits to wages. This will likely lead to higher prices in some sectors, and to some firms exiting from industries that offer the lowest wages and compensation packages (for a review of the magnitude of potential price increases under a $15 minimum wage in the United States for the fast-food industry, see Pollin and Wicks-Lim 2016).

18. Once the FJG is established and running at full capacity, the government may decide to reduce the duration of unemployment insurance. When the Committee on Economic Security provided its report to President Roosevelt on unemployment insurance and a job guarantee, the committee suggested unemployment insurance be capped at fourteen or fifteen weeks (Committee on Economic Security 1935). Such an adjustment seems reasonable.

Table 2. Current Costs for Social Insurance Programs

SNAP	$71.2–75.1
Unemployment insurance	30.1–54.9
TANF	16.33–16.73
EITC	70.24
CHIP	2.5–5.8
Medicaid	350–624

Source: Authors' calculations based on the Congressional Budget Office's Baseline Projections for Selected Programs, ten-year budget projections (2016–2026), available at: https://www.cbo.gov/about/products/baseline-projections-selected-programs (accessed November 17, 2017). EITC based on CBO 2013 figures.
Note: Figures in billions. 2016 dollars.

because the FJG would fill the gap for those in need.[19]

In addition, fewer families would likely qualify for the existing Earned Income Tax Credit (EITC) plan.[20] For instance, those working without dependents would no longer be eligible, as their income exceeds the threshold to qualify for the EITC. Those with dependents would likely see a decrease in their EITC because the level of compensation under the FJG will place most households beyond peak benefits. Through the reduction of these programs, coupled with the economic returns from investment under the program such as green energy and infrastructure, we believe a substantial portion of the costs of the FJG will be offset; hence, the net additional expenditures required for the program would be considerably less than the total costs estimates reported in table 1.[21]

On a per-dollar basis, the FJG would be more effective in creating jobs than the indirect incentive effects of stimulus measures, like those pursued under the American Recovery and Reinvestment Act (ARRA) of 2009. The ARRA came to the tune of $787 billion. The Economic Stimulus Act of 2008 added another $170 billion. Alan S. Blinder and Mark Zandi add the total bill for fiscal stimulus in the government's attempt to curb the recession, estimating a grand total of $1.067 trillion (2010).[22] The indirect job creation costs through the ARRA is estimated at $100,000 spent for each full-time job year (Dube, Kaplan, and Zipperer 2014), which is

19. The FJG effectively eliminates the notion of the working poor. Thus, if a single parent with one or two dependents were working full time under the FJG, which would be possible in part due to low-cost childcare under the program, the household's income would be above the poverty line, and above the TANF eligibility criteria.

20. Some individuals previously unemployed or outside the labor force may receive EITC benefits once employed through the FJG. Anyone employed in the FJG full time would be in the phase-out stage of EITC benefits due to the nonpoverty wage. As pointed out to us by an anonymous referee, all childless workers and two-earner families with one child that are working full-time under the program would not receive any EITC benefits. However, previously unemployed families with one earner and children would receive EITC benefits. Also, families with two full-time earners and multiple children, who had previously been unemployed, would also receive EITC benefits. In addition, as the anonymous referee pointed out, many part-time minimum and low-wage workers who had been on the phase-in range of the EITC would move to higher EITC payments on the FJG.

On net, whether the FJG will induce higher or lower EITC costs depends on whether the cost reductions from previous recipients phasing out of EITC exceeds or falls below the additional EITC costs associated with the uptake from previously unemployed single workers with children, two-earner families with multiple children (newly eligible EITC families), and from part-time and low-wage workers whose FJG participation could yield higher EITC benefits. Nonetheless, as mentioned, the FJG would be consistent with federal fiscal cost savings from reductions in unemployment compensation expenses, and in other federal anti-poverty programs such as TANF and SNAP, due to FJG participation.

21. Congress also could enact tax reform to address cost concerns. A modest financial transaction tax could generate $340 billion per year alone (Pollin, Heintz, and Herndon 2016). Other taxes, such as a tax on carbon, modest estate and gift taxes, tax reform on capital income, and a reasonable minimum tax on foreign earnings could also be enacted.

22. Their estimate does not include the additional stimulus measures undertaken by the Federal Reserve.

substantially higher than the costs we estimate for direct job creation, which also would generate indirect job creation stimulus (for an in-depth discussion of the job efficiency of direct government job finance as opposed to other forms of government stimulus, see Harvey 2011).

Under the FJG, the money would primarily flow into the hands of those in need. This was not necessarily the case under the responses to the Great Recession. For example, Juan Montecino and Gerald Epstein find that quantitative easing actually exacerbated income inequality through equity price appreciation (2015). In contrast, the FJG affords a direct countercyclical approach to smooth business cycles, eliminate poverty-wage employment, and boost long-term growth.

Although benefits effectively will disproportionately aid the poor and those struggling to find private-sector employment, the private sector could see a boost as well. Because the poor have a high marginal propensity to consume, aggregate demand would be maintained—or even rise, leading to increased demand for private-sector goods. Plus, the countercyclical effects of the FJG will help maintain aggregate demand during future recessions. Also, the improved physical and human infrastructure efficiency resulting from the program will facilitate productivity gains for the private sector as well.

Workers under the NIEC will be able to acquire the necessary skills, opportunities for advancement, on-the-job training, and professional experience to aid in long-term career development. These advantages to workers will be provided in part through a training provision under the FJG. As shown by the CCC, the WPA, Argentina's *Plan Jefes,* and India's National Rural Employment Guarantee, even low-skilled workers can be assigned to valuable work in a relatively short time. Although some jobs in the FJG will rely on basic labor, others will require workers with additional skills. Through a federally maintained jobs bank, projects will be matched with the skills of the local workers in need of employment. This is similar to the content of Representative Conyers' bill (H.R. 1000) and will minimize any potential skills mismatch issues.

Because workers have the option to freely enter or exit the FJG, employers who pay below the nonpoverty wage established by the FJG and fail to offer competitive benefits will not be able to attract employees, except perhaps those interested in part-time or temporary work, or motivated to work in such jobs for less pecuniary reasons. Therefore, the FJG acts as an effective wage floor, reducing economic inequality, especially at the low end of the income distribution.

The transformative nature of this proposal on the labor market should not be underestimated. Productivity and the real minimum wage once rose in tandem, but have diverged since the 1970s (Cooper 2015). By functioning as an employer of last resort, the government greatly improves the bargaining power and fallback position of workers in general by removing the threat of unemployment and effectively eliminating involuntary unemployment.

By providing a job guarantee, the proposal has the added advantage of greatly reducing the unemployment, underemployment, and poverty of permanently stigmatized groups, which are subject to discriminatory exclusion from employment opportunities. For instance, field experiments conducted by Devah Pager in Milwaukee, Wisconsin, and in New York City reveal that among males of comparable ages and levels of education, white males with criminal records were more likely to get callbacks for jobs than black males with no criminal record (Pager 2008). It is noteworthy that the use of criminal background checks is outlawed for most jobs in Milwaukee; nonetheless, Pager finds that workers signaling prior incarceration were still substantially less likely to receive callbacks there.

DEBUNKING COMMON CRITICISMS

The FJG is one of many potential poverty alleviation programs; however, we believe the FJG offers unique payoffs by working toward building a just and inclusive economy through a full employment economy. To ensure that the FJG is a viable program, in this section we respond to five of the common criticisms lodged against programs of this type. What type of work will people actually do? Why not just adopt a universal basic income guarantee (UBI)? How do

we elicit effort if people cannot be fired? Would such a program be prohibitively expensive? Would the program hurt small businesses? Each of these is addressed in turn.

What Type of Work Will People Actually Do?

What type of socially useful work could the members of the NIEC engage in? During the Great Depression, the WPA, created by Executive Order 7034 by President Franklin Roosevelt, employed more than 8.5 million workers from 1935 to 1943. In November 1938, at peak program size, it employed 3.3 million Americans, an estimated 6.5 percent of the nation's labor force (Hansan 2013). The program assisted these hardworking Americans during times of distress, providing them with the dignity of work and the ability to put food on the table and meet necessary bills. How much did these workers accomplish? Just to name a few: 650,000 miles of new or improved roads; 124,000 new or improved bridges; 39,000 schools built, improved, or repaired; 85,000 public buildings built, improved, or repaired (excluding schools); 8,000 new or improved parks; 4,000 new or improved utility plants; 16,000 miles of water lines installed; 950 airports or airfields built, improved, or repaired; 1,500 nursery schools operated; 2,300 personal accounts of slavery gathered; 225,000 concerts performed.

Similar to their counterparts in the WPA, workers in the NIEC could repair, maintain, and build the nation's deteriorating infrastructure, retrofit our buildings—aiding in a green energy transition, saving homeowners and renters money, reducing our carbon footprint—provide free or low-cost, high-quality preschool and after-school services, function as teacher's assistants in the classroom, engage in community development projects, reinvest in our nation's parks, rejuvenate our defunded postal service, as well as perform other socially and economically rewarding tasks.

In 2013, the American Society of Civil Engineers released their Report Card for America's Infrastructure, giving the country's crumbling infrastructure a D+ grade (ASCE 2013). More recently, the ASCE reported that the U.S. economy needs $3.32 trillion in funding to address its infrastructure gap and ameliorate public safety concerns, $1.44 trillion of which is not currently funded. They project that failure to act on America's crumbling infrastructure would result in $7 trillion in lost business sales by 2025 (ASCE 2016). Furthermore, they estimate that if the infrastructure gap is not closed, between 2016 and 2025 it could cost the U.S. economy $3.9 trillion in lost GDP, $7 trillion in lost business sales, and 2.5 million jobs. Overall, they conclude that the average household will lose $3,400 in disposable income *per year* if the deficiency remains unaddressed.

Economists have expressed concern about the slowdown in the growth of productivity in our economy (Syverson 2016), yet we know that large-scale investment in infrastructure—both physical and human—can have a measurable impact on capacity by increasing available resources and enhancing the productivity of existing resources (Munnell 1992; Heintz, Pollin, and Garrett-Peltier 2009). The FJG would be able to adequately address these needs and more, alleviating these costly and unnecessary shortcomings in the economy.

To make the best use of the labor available through the FJG program, states, counties, and municipalities can conduct an inventory of their needs and develop a jobs bank. The program could give priority to the most urgent projects to aid the most distressed communities. Although we highlight some investment opportunities that are needed now—such as retrofitting our buildings and heavily investing in our infrastructure—the jobs bank, managed through the NIEC, would function as a constantly updating dynamic entity, shifting with local, state, and federal needs.[23]

Under the FJG, many additional services would be provided to Americans, resulting in an increase in discretionary income and improvements in quality of life. Some of those services will address the nation's human infrastructure needs. These will include the provi-

23. Some have questioned the government's ability to manage such a program, but if history is a guide such concern is overstated. For instance, the Civil Works Administration, which ran from 1933 to 1934, was fully functional within two months and employed more than 8 percent of the U.S. workforce (Harvey 1989).

sion for childcare and eldercare.[24] Some care providers will be trained to deliver services to persons with special needs. The current exorbitant cost of childcare is a major obstacle for many parents, restricting their access to the labor market and greatly exacerbating inequality in access and opportunity for children. A recent report from the Economic Policy Institute, found that childcare is more expensive than a college education in many states (Bivens 2016). Robert Lynch and Kavya Vaghul estimate that universal high-quality pre–K education would yield an estimated $10 billion annually in benefits from 2016 to 2050 while providing greater access to high-quality educational services (2015).[25] Solidifying high-quality universal pre–K education, childcare, adult care, and elder care across the United States would all result from a federal job guarantee that includes provisions for human infrastructure investment. Although our proposal is facially gender neutral, it has basic elements that could disproportionately benefit women. This would greatly ease time and financial burdens borne disproportionately by women.

Some opponents of the FJG argue that if the market is not currently providing these jobs, then the government has no reason to do so. For example, according to Guy Standing, "a job guarantee is a form of subsidy, in that it involves a payment for doing something for which there is no proven market demand. Unlike a universal unconditional transfer, all labour subsidies involve both substitution effects and deadweight effects" (Standing 2013).

In our economy, we can find numerous examples of unfulfilled voids by the private sector where the government has had to step in to provide necessary and socially beneficial services through additional employment and investment. The core purpose of federal taxation and expenditure is to provide the American people with the government services and public goods.

For instance, prior to the American Civil War, the United States did not have a government-run public fire department (Tebeau 2012). Instead, fire departments were private or organized solely on a volunteer basis, at times leaving poor houses and neighborhoods to burn, and the well-to-do were privy to what is today a public good with potential spillover calamity—adequate fire protection. Without government spending, production of public goods will be inadequate, resulting in socially inefficient outcomes.

From our perspective, the government has a public goods and equity role to fill gaps where the market fails—and there are plenty of cracks and canyons to be addressed. We believe that a wide range of socially useful jobs can be filled by the ranks of the unemployed with the assistance and coordination of the NIEC. After all, children are undereducated, too few have adequate medical care, greater care and service is needed for our elderly, our parks are understaffed and underutilized, and our nation's transportation infrastructure is inadequate. Some of these jobs can be countercyclical, like infrastructure investment, and others can function as a *permanent* expansion of government services, such as universal preschool.

Why Not Just Adopt a Basic Income Guarantee?

The universal basic income proposal has gained followers across the political spectrum as a viable path to fight increasing deprivation; it also is a non-incremental, bold policy that merits comparison with the FJG. The FJG and the UBI are not necessarily mutually exclusive. In the end, it depends on the structure of the specific policies proposed: is UBI posited as a substitute or complement to the FJG?

24. Noteworthy is that under previous direct employment programs administered by the U.S. government, large-scale childhood education projects were administered, including the employment of more than thirty-three thousand teachers during the WPA to offer educational programs, including program-operated preschools (Harvey 1989).

25. Other scholars have put forth alternative proposals for determining the types of jobs to be undertaken. Pavlina Tcherneva argues for a "social enterprise model" for job creation within a FJG program (2012). She advocates a federal job guarantee initiative that engages heavily with the nonprofit sector, including existing and emerging nonprofit enterprises, to place workers in employment with these organizations.

Although we oppose the idea of substituting a UBI for a FJG, we believe some form of a UBI, such as a negative income tax, could be beneficial if coupled with the FJG, to ensure an adequate standard of living for all.

We argue in favor of FJG over the UBI on the following grounds:

the FJG provides the dignity of nonpoverty employment for all who seek it;

the FJG enables the nation to fulfill a host of socially useful tasks that are not currently provided, or are underprovided, by the public sector;

the FJG carries a lower inflation risk than the UBI;

the FJG contributes directly to macroeconomic stabilization; and,

perhaps surprisingly, the FJG will cost considerably less.

Advocates of the UBI have been critical of the FJG proposal (Van Parijs 1995; Standing 2002; Standing 2013). To justify a UBI, Standing fundamentally questions the ability of a market society to provide jobs for all, claiming that market societies rely on restricted job openings to discipline the poor; however, with the presence of a FJG, full employment is achieved. Standing's objection rests on a philosophical opposition to the nature of work in modern society. From his perspective, the requirement to work is fundamentally punitive and unjust. Additionally, Guy Standing claims that the FJG would condemn the poor to have to work. On the contrary, the work that we envision via a FJG provides the dignity of contributing to social welfare in a social setting, which in turn is associated with economic, physical, and mental well-being (Goldsmith, Veum, and Darity 1997; Darity 2003).

Workers employed under the FJG would enable the nation to fulfill a host of socially useful tasks either not provided or inadequately provided by the private sector, including those outlined. Today, we still observe the enduring benefits of projects constructed under the WPA and CCC—the FJG will ensure that similar projects are constructed, providing economic, social, and environmental benefits for generations to come.

Unlike the UBI, the FJG generates productive activity via the public provision of goods and services, lowering the inflationary pressures associated with the allocation of similar levels of income through a UBI. The FJG may have some inflationary pressure, but Pavlina Tcherneva has expressed concern that the magnitude of a UBI might even lead to hyperinflation. Inflation would dampen the real effects of a UBI program. This problem would be exacerbated if workers receiving the UBI exited the workforce altogether and reduced output via *voluntary* unemployment (Tcherneva 2013).

A substantial benefit of the FJG is that it functions as a strong automatic stabilizer in the economy, expanding during economic downturns, and contracting during economic booms when the private sector's demand for labor increases and workers migrate from the FJG program into the private sector. This mechanism provides substantial macroeconomic stabilizing effects on the economy—potentially reducing the magnitude and frequency of economic downturns. Regarding the UBI, no countercyclical measures are built into the model—allowing financial markets and businesses cycles to continue causing unnecessary economic hardship and job loss for Americans (Goldsmith, Veum, and Darity 1997; Darity 2003).

To compare the costs of the two programs, we need to identify the level and ways a UBI could be funded, because levels of generosity could vary greatly. Reviewing work from various UBI advocates, we see that the following three features hold throughout: the policy is universal, the UBI is distributed to individuals, and the UBI is set at a level to support a basic living standard, with a goal of poverty elimination (see Van Parijs, 1995; Standing 2002; Standing 2013).

Estimates for the UBI vary, but Charles Clark estimates the UBI would have cost roughly $1.98 trillion in 1999, equivalent to $2.86 trillion in 2016 dollars (2003, 150). Harvey also calculated the total cost of a UBI, finding at the time of his study that it would cost $2.23 trillion, equivalent to $2.98 trillion in 2016 dollars (2005). Both of these calculations are based on a payout of approximately $12,500 per person per year. These are annual cost estimates—estimates that represent a cost more than double that of the FJG during the most severe recession

in almost a century (see table 1), and more than four times our estimates under current economic conditions with a modest uptake assumption.[26]

These estimates showing that the FJG costs are much less than the UBI do not account for the returns to investments that would take place under the FJG—resulting in substantial GDP, employment, and productivity growth. Finally, the costs associated with UBI will not ebb and flow with the business cycle, hence it lacks economic stabilization properties. For these reasons, we strongly support a FJG when UBI it is posited as a substitute, though we recognize that the two can function as complements.[27]

How Do We Elicit Effort if People Cannot Be Fired?

The federal job guarantee ensures that workers cannot be fired and left without alternative employment. According to Janet Yellen, writing two decades before her appointment as chair of the Federal Reserve, if full employment were to be achieved, a worker would automatically shirk since they would be ensured employment at another firm (1985). But economic history indicates that such a claim is highly exaggerated, as strong labor markets have coexisted with high levels of economic growth (Bivens 2016).

If there were widespread worker shirking under conditions of strong labor markets, such strong periods of growth are unlikely to have occurred. Other studies, like those analyzing care work (England, Budig, and Folbre 2002) and management practices (Brockner et al. 1992), acknowledge that pecuniary incentives alone cannot adequately explain variations in worker effort.

Eliciting worker effort can be achieved through a variety of mechanisms. For instance, Samuel Bowles argues that from "a social efficiency standpoint . . . [m]ore carrot and less stick would affect a technical efficiency improvement" (2012, 279). If history is any guide, we can look to the accomplishments under the CCC and WPA, programs that were highly effective in providing socially and economically beneficial employment.

President Roosevelt and WPA administrator Harry Hopkins took great measures to minimize shirking or corruption throughout the WPA by establishing the "Division of Progress Investigation" (Wallis, Fisherback, and Kantor 2007). According to Paul Krugman, "this program was so effective, that a later congressional investigation couldn't find a single serious irregularity it had overlooked" (2007, 62). This strategy may have been effective during a severe national crisis, but additional mechanisms can be put in place to minimize potential shirking under the FJG.

First, the FJG program will have an oversight committee, similar to the Division of Progress Investigation under the WPA. These positions can be filled by FJG employees, adding no additional cost to the program. In addition, wage variation will be built into the program. The prospect of promotions within the public-sector employment job ladder scheme provide financial incentives for workers to perform on the job. Although minimum compensation is set at the poverty line, we anticipate a mean salary that is 35 percent above the minimum, allowing for promotions, including higher compensation, for workers who develop or possess more specialized skills.

Finally, compensation will depend on the worker's actually showing up for the duration of the work day. Workers under the FJG are paid hourly; thus, if a worker fails to show, wages will not be paid.[28]

In the case of the FJG, much of the work undertaken will be local, community-based projects. Because many of the projects are embedded in workers' communities, workers themselves will be more vested in these

26. Even in our extreme high-end estimate the cost of the job guarantee program would only amount to $2.14 trillion, substantially less than the cost of the UBI.

27. Other scholars, such as Dorian Warren, have discussed modified basic income proposals, which incorporate a progressive distribution scheme. His plan for a Universal PLUS Basic Income includes a form of reparations, providing black citizens with additional resources to adjust for the unjust treatment they have received (Warren 2017).

28. Exceptions include the use of benefits provided under the program, such as medical leave and family leave.

community-based projects, as occurred in the direct employment program in Argentina (Tcherneva and Wray 2005). Thus, through localization, reward systems, and proper oversight under the FJG program, we do not anticipate worker effort to be a substantial obstacle.

Would Such a Program Be Prohibitively Expensive?

Although the initial financial cost estimated in table 1 may at first glance appear high, the initial costs will be offset by extensive cost savings through reduction of current social insurance programs, many of which would be substantively less necessary, return on investment within the program itself, moderation of economic downturns, expansion of economic capacity, and increases in tax revenues, particularly at the local and state levels. The latter entities frequently are bound by fiscal year constraints to balance their budgets that lead to tremendous cutbacks in the services they provide during economic downturns.

The FJG substantially will reduce the need for the current levels of social insurance programs as individuals become ineligible for benefits such as SNAP after their earnings surpass the designated thresholds. In addition, progressive taxation, as outlined, could be enacted if politicians sought to offset the remainder of the FJG. Because the funding of the FJG will have Keynesian stimulus effects even as it directly provides full employment, we expect that increases in economic production will help reduce net costs further.

Part of the initial cost of the FJG is due to the failure of the U.S. government to provide universal health care for its citizens. If the government were to provide all Americans with health-care coverage, program costs would be reduced considerably.

Would the Federal Job Guarantee Hurt Small Businesses?

The goal of the FJG is to simultaneously eliminate poverty and unemployment while supporting a robust and inclusive economy—including a small-business sector. The FJG will have adverse effects on small businesses that rely upon low-wage labor. But the magnitude of these effects can be approximated by looking both at the historic data and recent research on the effects of increases in the minimum wage.

Under the FJG program, in 2016, the wage would have been $11.56 plus benefits. An increase of this magnitude would increase the wages of millions of workers—ensuring all the dignity of a decent wage.[29] This degree of compensation is not beyond historical trends tracking the magnitude of the minimum wage. During the late 1960s, when we saw peak real values of the minimum wage, the small-business sector did not collapse—nor do we anticipate it doing so under the FJG. Rather, we do anticipate, initially, a redistribution of profits in favor of labor and a modest rise in price levels.[30]

Recent research on the minimum wage provides additional evidence. Starting with work by David Card and Alan Krueger (1994, 2000), we now have compelling evidence on the employment effects of higher minimum wages. Their approach has been refined and replicated by Arindrajit Dube, William Lester, and Michael Reich (2010). Consistently, these researchers find no evidence of job losses in high-impact sectors from modest increases in the minimum wage.[31] However, larger employment effects may take place since the total compensation under the program—inclusive of benefits—amounts to $16 an hour, an amount beyond the scope of existing empirical minimum wage

29. One avenue for reduction of the wage bill for small businesses, and program costs for the FJG, would be to institute a universal health care program in the United States. Instead of coupling a basic human right like health care to employment, decoupling these would substantially reduce financial burdens on small businesses, and increase worker productivity.

30. In a study of employment effects for the fast food industry, if a $15 minimum wage were to be implemented, Robert Pollin and Jeannette Wicks-Lim find that the fast food industry could absorb wage increases without cutting their employment levels by reductions in turnover and "modest annual price increases" (2016).

31. Sectors typically affected by increases in the minimum wage include retail trade, health care and social assistance, and restaurants. Although some studies, such as those by David Neumark and William Wascher (1992)

models (for additional discussion of the minimum wage, see Romich and Hill 2018).

Some employment effects could be overcome by growing evidence indicating that a rise in the minimum wage can reduce job turnover (Dube, Kaplan, and Zipperer 2014) and increase per capita output to the extent that higher wages spur greater productivity (Reich et al. 2016). Reductions in turnover and increases in productivity explain why many small businesses have chosen to invest in higher compensation packages for employees with great success (Ton 2012) and generally support (60 percent) a $12 minimum wage pegged to inflation (Small Business Majority 2015).

Finally, through the FJG, we expect to see a substantial rise in effective demand, as well as investment in infrastructure across the country—boosting sales while driving down transportation and utility costs for small businesses. Furthermore, research has found that in many instances higher minimum wages are associated with superior outcomes for small businesses. A study by the Fiscal Policy Institute analyzed the impact of higher minimum wages on small businesses between 1998 and 2001, finding that small businesses grew twice as fast in states with higher minimum wages—3.1 percent to 1.6 percent (2004).[32]

Because workers, especially those at the low end of the income distribution, have a higher marginal propensity to consume, we would expect a substantial uptick in sales for businesses and perhaps an uptick in small businesses in currently economically depressed geographical areas. A report by the Chicago Federal Reserve Bank on the impact of spending as a result of a minimum wage increase found every dollar increase in the wage resulted in an annual spending increase of $2,996 (Aaronson, Agarwal, and French 2007).[33] Given the robust literature on the minimum wage, we do not believe the FJG will drastically reduce the small businesses sector.

DISCUSSION AND CONCLUSION

Not only does the idea of a federal job guarantee have a lengthy history in American politics, it also has significant political support. For example, the Black Youth Project 100's "Agenda to Build Black Futures" explicitly includes the charge that "All adults who want a job should have a right to employment through public or private opportunities through a federal jobs program."

In 2014, Jesse Myerson's article in *Rolling Stone* proposed five policies that should be supported by the millennial generation; one of them was a government employment guarantee. When the *Huffington Post* commissioned a national survey to assess the degree of support for each of the five, the only one with substantial support was the job guarantee (Swanson 2014; Resnikoff 2014). Overall, a plurality of respondents, 47 percent, said that they favored a job guarantee versus 41 percent who said no and 12 percent who had no opinion. Fifty-nine percent of households with incomes less than $40,000 favored the job guarantee, and 36 percent of households with incomes greater than $100,000 favored it.[34]

Given this public support, perhaps at the

and Neumark, Ian Salas, and Wascher (2014) find more sizable job losses from an increase in the minimum wage, we believe that a recent paper by Sylvia Allegretto and her colleagues effectively refutes those findings (2016). In the paper, the authors properly account for existing state level trends to assess employment effects of raising the minimum wage, and put forth leading edge credible research design on the minimum wage—finding no sizable employment effects.

32. Although these examples review modest increases in the minimum wage, we argue that small businesses will likely benefit from the more sizable wage increases that would occur if the FJG were enacted. Businesses would benefit because the program would increase the purchasing power of working-class households, who have a higher marginal propensity to consume. Additionally, with a higher wage, the economy would likely see more robust productivity growth.

33. Adjusted to 2016 U.S. dollars.

34. Additionally, the Kinder Institute ran a poll in the Houston MSA region to assess voter support for government programs that reduce inequality. Seventy-six percent of respondents agreed that "The government should see to it that everyone who wants to work can find a job" (Kinder Institute 2016).

least, a local experiment is warranted—a local job guarantee. To help workers and communities with the most need, the local job guarantee would cover an economically depressed county or city and be coupled with residency requirements to eliminate concerns of in-migration. Partnering with a local government to implement a jobs guarantee program could lift thousands out of poverty and revitalize a regional economy.

The program would work with government and local community and business groups to assess sectors most in need of public services, such as local infrastructure or social services. In general, the local guarantee would mirror the proposed federal job guarantee; thus, the jobs are meant to provide local services and public goods in the region, rather than to produce private goods that can be exported out of the region. However, by providing public services and goods, the job guarantee would no doubt boost private economic productivity as well.

Such a local guarantee would test the economic and poverty-alleviating benefits of a job guarantee program, and it can also serve as a pilot program for a larger scale jobs guarantee program by providing improved estimates of costs and participation rates in relation to pre-guarantee conditions. As a pilot program, it would demonstrate how a job guarantee would work in practice in the United States, providing evidence to extrapolate toward the proposed federal version.[35] In addition, as demonstrated by the Fight for 15, a minimum wage campaign that has succeeded in New York and California, and health-care reform, when the national Affordable Care Act was modeled after Massachusetts's reforms, having successful local pilot programs can go a long way toward making a federal version politically feasible.

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35. A local guarantee as a pilot program would benefit greatly from federal funding but could also be valuable as a standalone poverty and unemployment reduction program by providing immense value added through the dual goals. Extensive data collection and recordkeeping would be essential, allowing rigorous evaluation of the impacts, as well as afford a common starting point for supporters and skeptics alike.

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Working to Reduce Poverty: A National Subsidized Employment Proposal

INDIVAR DUTTA-GUPTA, KALI GRANT, JULIE KERKSICK, DAN BLOOM, AND AJAY CHAUDRY

Subsidized employment programs that increase labor supply and demand are a proven, underutilized strategy for reducing poverty in the short and long term. These programs use public and private funds to provide workers wage-paying jobs, training, and wraparound services to foster greater labor force attachment while offsetting employers' cost for wages, on-the-job training, and overhead. This article proposes two new separate but harmonized federal funding streams for subsidized employment that would expand automatically when and where economic conditions deteriorate. Participating states and local organizations would be offered generous matching funds to target adult workers most in need and to secure employer participation. The proposal would effectively reduce poverty among workers during work placements, and improve long-term unsubsidized employment and other outcomes for participants and their families.

Keywords: employment, subsidized, transitional jobs, work, wraparound services, barriers

The U.S. economy does not produce enough employment opportunities for all those who are able and want to work and who could contribute to the economy. This is especially true in the most challenging economic times—such as the Great Recession, when unemployment levels reached 10 percent—but it also remains true today, eight years into an expansion that has lowered unemployment to under 5 percent. According to Bureau of Labor Statistics (BLS)

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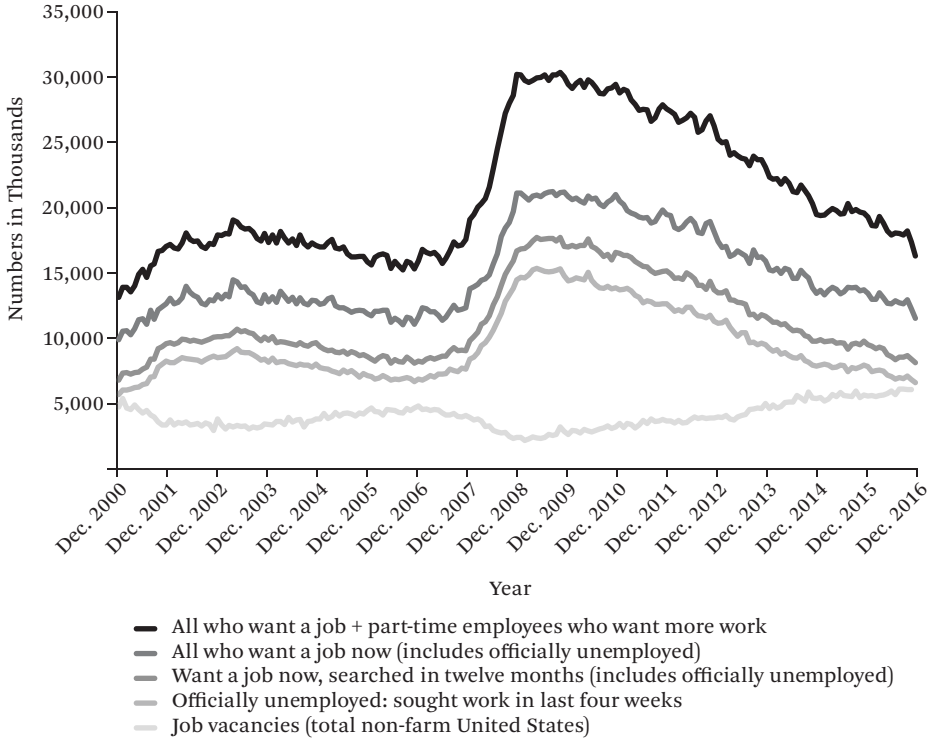
Figure 1. U.S. Job Shortage



Source: Authors' compilation based on Bureau of Labor Statistics 2017.

data covering the period from 2000 to 2016, the number of officially unemployed jobseekers (using the formal, conservative definition that an unemployed person must have actively sought work during the previous four weeks) has exceeded the number of job vacancies (regardless of part-time or full-time, and of the wage rate) by more than two million for most of the last fifteen years. When other BLS measures of unemployment and underemployment are added, the ratio of job seekers to job openings rises significantly.

In short, there is an aggregate job shortage almost all of the time, even when millions of available jobs go unfilled. The result is that regardless of economic conditions, a swath of American workers—in particular those with serious or multiple barriers to employment (see figure 1)—are routinely left out of labor force opportunities.[1] Periods without stable and adequate employment represent lost income and productive output, and are associated with a lower well-being for workers, their families, and their communities (Nichols, Mitchell, and Lindner 2013). This can include higher poverty, poorer health, and greater criminal justice expenditures, as well as worse educational outcomes for many low-income children.

One promising and potentially cost-beneficial and cost-effective approach for addressing these issues is subsidized employment (Nichols, Mitchell, and Lindner 2013; Dutta-Gupta et al. 2016). Subsidized employment helps boost incomes and improve labor market outcomes and well-being, especially for disadvantaged workers. It even has cross-

1. Barriers to employment are broadly defined as limitations that make attaining competitive (unsubsidized) employment significantly less likely. These personal and institutional obstacles reflect a complex mix of socioeconomic dynamics, which can manifest as or exacerbate skill limitations; physical and behavioral health issues, including disabilities; criminal justice system involvement; family obligations; limited resources; immigration status; and discrimination based on characteristics such as race or ethnicity, gender, and age, among others.

ideological and bipartisan support (Office of U.S. Representative Robert Dold 2016; Haskins 2014; Floyd 2016; Luhby 2010; Office of U.S. Senator Tammy Baldwin 2016, 2017). This support may stem from the fact that subsidized employment offers a way not only to provide essential basic income in exchange for productive work, but also to connect workers to services and opportunities that can lead to wider, longer-term benefits even beyond the labor market. In addition, subsidized jobs can reduce the risk an employer perceives or the cost they may bear from hiring a worker or increasing a worker's earnings, employment, or income.

Despite these proven (and in many cases rigorously evaluated) benefits, subsidized employment is still an underutilized strategy in the United States (Dutta-Gupta et al. 2016). This article proposes a national subsidized employment policy that would provide dedicated and flexible funding streams to subsidize work positions, which in turn would have the potential to lead to further-reaching gains for the well-being of participating workers and their families, employers, and communities at large.

WORKERS LEFT OUT

In recent years, even as the economy has added nearly fifteen million jobs since the end of the Great Recession (Center on Budget and Policy Priorities 2017), large segments of the labor force and those just outside it are not well-attached to work and their capacities are not being employed or developed. The 5 percent of the labor force that is officially unemployed represents nearly eight million workers, in terms of the current size of the national labor force (Bureau of Labor Statistics 2016a). Some economists may consider the current economy to be at or near *full employment* based on the level of churn in a large, dynamic economy in which many workers are first entering and reentering the labor market, and others are experiencing short spells of unemployment as a part of regular labor dynamic changes (Zumbrun 2015). However, two million (more than one-quarter) of those unemployed in the August 2016 monthly employment report were long-term unemployed (FRED Economic Data 2016b; Bureau of Labor Statistics 2016b, 2016c).[2] This does not include the more than two million discouraged workers who either are not considered part of the labor force or face barriers to employment that make them marginally attached to the labor market. Nor does it consider the additional six million workers employed part time for economic reasons who indicated they would have preferred full-time work (Bureau of Labor Statistics 2016d). This suggests that as many as ten million American adults at any point in time may fall into these categories, in addition to the six million more who are unemployed and not in the long-term unemployed group.

Of further concern is that the labor force participation (LFP) rate in the United States has been declining, especially in recent years, even as the economy has added jobs:

> Since 2000, the LFP rate has fallen from its historical high rate of 67 percent (84 percent for prime-age workers) in 2000 to 63 percent (81 percent for prime-age workers) as of August 2016, even with unemployment below 5 percent (FRED Economic Data 2016a).
>
> The participation rate of twenty-five- to fifty-four-year-olds, who are prime-age workers, declined from 83.4 percent in 1994 to 80.9 percent in 2014 (Toossi, 2015; Council of Economic Advisers 2014).

Since 2000, and particularly since 2007, labor force participation has fallen as a result of several coinciding forces: the severity of the Great Recession, the increasing rate of retirements by the oldest age cohorts of the baby boom generation, and the overall aging of the population that has steadily increased the number of older Americans living well past their working lives (Toossi 2015; Council of Economic Advisers 2014; Congressional Budget Office 2014). Economists estimate that half of the decline in LFP is due to the aging of the population, and the other half to continuing cyclical and other structural factors. One of the structural factors that may have contributed to the recent decline is the likelihood that large numbers of discouraged workers have exited the la-

2. Long-term unemployed refers to workers unemployed for twenty-six or more consecutive weeks.

bor force either because they do not believe that enough employment opportunities are available, or because they are facing barriers to employment. Their capacity for economic productivity is untapped even in an extended period of ongoing economic recovery.

The lack of job opportunities and secure employment is unevenly shared among Americans, with particular groups and communities bearing a greater burden. Today's disconnected younger workers face particular challenges getting a foothold in the labor market—all of which were exacerbated in the aftermath of the Great Recession (Forsythe 2015). In addition to young workers, African Americans and individuals with less education have disproportionately high unemployment and long-term unemployment rates roughly double the average (Evangelist and Christman 2013). Other significant groups that face barriers to employment include

- people with short- and long-term disabilities that create work limitations;
- formerly incarcerated individuals or those who have any previous criminal record; and
- people in areas of concentrated joblessness where entire communities may be disconnected from the labor market and the networks that lead to employment opportunities (Dutta-Gupta et al. 2016).

WORK AND POVERTY

Employment (and especially steady employment) is widely seen as one of the surest routes to exit poverty or prevent entering it. Work, especially full-time work, is more highly associated with lower poverty than almost any other factor that influences the risk and duration of poverty. Brookings Institution researchers examined a variety of factors that affect poverty, and estimated that the poverty rate for families with children would be cut in half if all non-elderly, non-disabled family heads worked full time (Haskins and Sawhill 2009). Other research corroborates these findings, showing that higher employment is a primary way families exit poverty (McKernan, Ratcliffe, and Cellini 2009). For instance, the Urban Institute estimated with respect to 2010, that if only 25 percent of the unemployed poor took advantage of wage-paying transitional jobs at the then-prevailing minimum wage (and smaller percentages of the poor who worked only part time increased their employment levels through such jobs), the poverty rate would have declined by nearly 9 percent (from 14.8 percent to 13.5 percent), using the more realistic Supplemental Poverty Measure (SPM). If 50 percent of the unemployed poor took advantage of such transitional jobs, and smaller percentages of part-time poor workers increased their employment through such jobs, the Urban Institute estimated that the poverty rate would have fallen by more than 17 percent—from 14.8 percent to 12.2 percent). As part of a separate proposal that also included a minimum wage increase, larger Earned Income Tax Credit (EITC), expanded childcare, and an income boost for impoverished adults with disabilities and retired seniors, the Urban Institute analysis estimated a 50 percent to 58 percent drop in the poverty rate—from 14.8 percent to 7.4 percent or 6.3 percent, depending on the take-up rate for transitional jobs (Lippold 2015). In short, jobs are a major pathway out of poverty.

It is thus no surprise that while the 2015 poverty rate for all non-elderly adults ages eighteen to sixty-four was 12.4 percent, among those with any employment in 2015 it was barely half that rate (6.3 percent), and among workers employed year-round, full-time it was just 2.4 percent. By contrast, the poverty rate among adults ages eighteen to sixty-four who did not work at least one week in 2015 was 31.8 percent. This group totaled nearly fifteen million adults, who accounted for more than 60 percent of all the 24.4 million poor, non-elderly adults in the United States (U.S. Census Bureau 2016).

Moving beyond just these strong associations between employment and poverty, evidence is ample that providing work opportunities and income, particularly when jobs are scarce or people face serious barriers to employment, can mitigate the degree of poverty experienced (Dutta-Gupta et al. 2016). As we discuss later in the article, rigorously evaluated programs produced large increases in earnings during the period when participants worked in subsidized jobs (Dutta-Gupta et al. 2016). For example, in the U.S. Department of Labor's En-

hanced Transitional Jobs Demonstration, programs targeting people (mostly men) returning from prison and low-income noncustodial parents increased participants' earnings by as much as $2,000 to $3,000 over the course of the year (Redcross, Barden, and Bloom 2016).

In the U.S. Department of Health and Human Services' Subsidized and Transitional Employment Demonstration, a short survey was administered to the program and control groups a few months after study enrollment, when many participants were working in subsidized jobs. The difference between the two groups in the overall employment rate was large. The survey measured a number of economic and noneconomic outcomes that might plausibly be affected by work. Although the results varied from site to site, some impacts on measures of perceived financial well-being, happiness, and even mental health were statistically significant (Redcross et al. 2012; Glosser et al. 2016). Also noteworthy is that some experiments proved effective in leading to increased earnings and employment beyond the program period, likely reducing poverty even after the program ended (Dutta-Gupta et al. 2016).

One example is the particularly effective New Hope for Families and Children demonstration project in Milwaukee. New Hope reduced poverty among those who worked in community service jobs, including workers "with moderate barriers to employment [who] saw higher employment, earnings, and income through the five-year follow-up period" (Dutta-Gupta et al. 2016, 33). Data from New Hope also showed changes in the behaviors and outcomes of participants' children, including positive attitudes about and actual engagement in work-related activities, which likely reduced poverty incidence among these children (Miller et al. 2008).

SUBSIDIZED EMPLOYMENT AS AN UNTAPPED STRATEGY

Subsidized employment is a promising but underfunded strategy for reducing joblessness and poverty among the long-term unemployed and others with barriers to employment. It includes but is not limited to relatively temporary, transitional employment intended to lead directly to unsubsidized (that is, competitive) employment. At its core, subsidized employment offers public subsidies of workers' wages (and associated payroll taxes and work-related costs) to encourage the hiring of workers who are unlikely to be hired otherwise. It also allows the opportunity for local, intermediary organizations to provide complementary wraparound services alongside job placements.

The empirical evidence in support of subsidized jobs as an important national employment strategy already exists. For example, a number of different subsidized employment models spanning forty years and targeting hard-to-employ groups have been rigorously evaluated (Dutta-Gupta et al. 2016). Other studies have examined the implementation of large-scale, broadly targeted subsidized employment programs such as those operated in 2009 and 2010 under the Temporary Assistance for Needy Families (TANF) Emergency Fund (TANF-EF) (Pavetti, Schott, and Lower-Basch 2011; Farrell et al. 2011).

The findings from these and other studies show the importance of subsidized employment as a strategy for workers typically left behind in the labor market. First, virtually all evaluated programs revealed significant worker demand for and interest in these programs regardless of wider economic conditions. Second, nearly all of the rigorously evaluated programs showed that the programs genuinely increase employment among participants. When people were offered temporary subsidized jobs, program participants were substantially more likely to be employed than members of a control group who were not offered subsidized jobs. This is a critical result, because it means that the programs were successfully targeting many people who would not otherwise have worked. Moreover, they were able to place participants into jobs that provided both income support and opportunities for meaningful work experience and skill acquisition (Dutta-Gupta et al. 2016).[3]

3. The term *meaningful work* in this article refers to productive and economically valuable work that would plausibly be demanded by the private and public sector without regard to the value of employment to the worker.

The longer-term results were more mixed, but certain features—especially relating to participation duration and the provision of wrap-around supports and services—in some programs may have led to more positive economic and social outcomes. In a few studies, program participants continued to have higher employment rates or earnings than the control group even after the temporary subsidies ended. This suggests that some programs were able to increase their participants' employability. However, in most studies, the employment rates and earnings of the two groups converged after the subsidized jobs ended, and the program group's long-term employment outcomes were no better than those of the control group. Still, many of these programs nevertheless had positive impacts beyond the duration of the job placement, including reduced recidivism (Redcross et al. 2012) and improved outcomes for children of adult participants (Miller et al. 2008).

Studies of the broad-based programs that operated under the TANF-EF describe how these programs were able to get up and running and place thousands of people into subsidized jobs quickly and efficiently during the Great Recession (Pavetti, Schott, and Lower-Basch 2011; Farrell et al. 2011; Roder and Elliott 2013).

In sum, these studies show that it is possible to design and operate subsidized employment programs that provide meaningful work opportunities to large numbers of jobless individuals. These models can provide earnings for productive work performed, whether they are targeting a broad swath of unemployed workers during a recession or a narrower group of more disadvantaged workers who experience high rates of joblessness even when overall economic conditions are good. In other words, subsidized employment programs can achieve the primary goals of the national program proposed here—an earnings foundation in the short term that contributes to poverty reduction and an increase in unsubsidized employment and earnings in the medium to long term. At the same time, the evidence suggests that ongoing experimentation is needed, which this proposal is also intended to facilitate.

A NEED FOR FEDERAL SUPPORT

A permanent national subsidized employment program with new dedicated federal funding would reduce short- and long-term poverty by helping participating workers with temporary, wage-paying jobs and facilitating their transition to obtaining—and maintaining—unsubsidized (competitive), secure, and decent employment during economic expansions and contractions. In recent history, the federal government has shown itself more able to raise revenues and provide countercyclical funding increases than state and local governments. Whether local programs did or did not improve workers' medium- to long-run labor market outcomes, they would provide earnings and ensure productive work output while offering countercyclical balance during economic contractions. Moreover, the needs addressed and likely positive impacts would have important national implications. Funded programs could reduce public criminal justice, health, and other spending, and have positive long-term impacts on the custodial and noncustodial children of participating workers (Dutta-Gupta et al. 2016). For employers, the program would expand their labor pool for marginal hiring that would not take place without a public subsidy.

EXPECTED EFFECTIVENESS

In addition to these significant antipoverty effects from earnings during program participation, the expected effectiveness of this proposal can be determined in part by surveying existing evidence of impacts from subsidized employment models that approximate what this national program would fund. In addition, the program would include funding and requirements that ensure that it grows the evidence base for subsidized employment.

Research Review

A number of subsidized employment models have been rigorously evaluated over the past forty years; in fact, several large-scale studies are under way as of this writing. Most of these studies were randomized controlled trials: individuals who were eligible for and interested in a particular subsidized employment program were assigned, at random, to a program

group that was invited to participate in the program or to a control group that was not (in some studies, the control group was offered assistance searching for an unsubsidized job). The two groups were then followed over time (usually two to four years) to assess whether people who were offered subsidized jobs had better outcomes than those who were not (Dutta-Gupta et al. 2016).

These studies have contributed to a growing base of knowledge about the implementation and impact of these programs. However, it is important to note that almost all focused on models that targeted groups facing serious barriers to steady employment—for example, people with disabilities, people coming home from prison, and public assistance recipients—and sought to use temporary subsidized jobs as a tool to improve participants' long-term employment outcomes. These programs operated on the assumption that people would "learn to work by working." As discussed earlier, however, this is just one of several possible goals of subsidized employment (Dutta-Gupta et al. 2016).

Almost all of the studies showed a similar pattern of results. Early in the follow-up period, when many program group members were working in temporary subsidized jobs, the program group's employment rate was dramatically higher than the corresponding rate for the control group. This is a critical result, because it means that the programs were successfully targeting many people who would not otherwise have worked, but who wanted to work and did indeed successfully take advantage of wage-paying jobs that were made readily available. In other words, the programs were not spending money to create jobs for large numbers of people who would have found employment anyway. Moreover, they were able to place participants into jobs that provided opportunities for meaningful work. As might be expected, impacts on employment during the early period were larger for more disadvantaged participants, who were less likely to find jobs on their own (Bloom 2010).

The longer-term results were more mixed, but some had features that led to more success. In a few studies, the program group continued to have higher employment rates or earnings than the control group even after the temporary subsidies ended. This suggests that some programs were able to increase their participants' employability. This pattern was observed in some programs targeting people with disabilities, and in one program that targeted public assistance recipients and combined classroom training with subsidized jobs. These programs were all similar in that they targeted specific groups of people, which can be a strategy for success. For example, Transitions SF targeted incarcerated adults who were not job ready and Youth Transition targeted youths with disabilities (Dutta-Gupta et al. 2016).

However, in most studies, the employment rates and earnings of the two groups converged after the subsidized jobs ended, and the program group's long-term employment outcomes were no better than those of the control group. In one study of a program for people recently released from prison, the program generated lasting reductions in recidivism (particularly for those at higher risk), which led to net cost savings for taxpayers, but other programs for a similar population did not achieve this result. Of course, long-term improvements in earnings and employment represent just one measure of success for these programs. A comprehensive review that looked at more than forty subsidized job programs over forty years found that the best of these programs decreased workers' public benefit reliance, improved school outcomes among the children of workers, lowered criminal justice system involvement for workers and their children, and reduced long-term poverty (Dutta-Gupta et al. 2016). For example, in the mid-1990s, the New Hope Project in Milwaukee significantly improved parents' employment, earnings, marriage rates, and mental health, and the achievement and behavior of the children of participating parents also improved. The New Hope Project provided health insurance and subsidized childcare, along with an earnings supplement, which shows that using subsidized employment as a part of a package of benefits rather than a standalone policy can lead to success. Society's gains easily exceeded the program's costs.

Because the studies tested a variety of different subsidized employment models for differ-

ent populations, they have yielded important lessons on program design and implementation. For example, some of the programs placed subsidized workers in nonprofit social service organizations or social enterprises (businesses with a social purpose) that would accept almost anyone, and did not ask the employers to commit to hiring the participant after the subsidy ended (most of the agencies did not have enough funding to take on more unsubsidized workers). In those models, the proportion of program group members who actually worked in a subsidized job was quite high, sometimes approaching 100 percent.

Other models attempted to place participants with private, for-profit businesses, and asked the businesses to commit to hire participants after the subsidy ended, if their performance met expectations. In contrast to the programs discussed earlier, the private-sector–focused programs placed fewer than half of the program group into subsidized jobs. This is perhaps not surprising because often businesses will not hire people who are considered unqualified, even with generous subsidies.

This disparity does not mean that the former programs had better long-term outcomes, but it does suggest that any program aiming to provide subsidized jobs to a large number of hard-to-employ individuals would almost certainly have to allow for placements with nonprofit organizations or public agencies.

Other operational lessons can be drawn from the experience of states and localities that used funds from the TANF Emergency Fund (part of the American Recovery and Reinvestment Act) to employ more than a quarter million youth and adults during the height of the Great Recession (Administration for Children and Families 2012). Many of these programs were able to get up and running and reach a large scale very quickly by keeping eligibility criteria simple and developing streamlined procedures to issue subsidies. Interestingly, the largest programs placed most subsidized workers in private sector jobs, often with small businesses, though it is important to note that in a very weak labor market, these programs were serving many people with relatively strong work histories (Pavetti, Schott, and Lower-Basch 2011).

In sum, research shows that it is possible to design and operate subsidized employment programs that provide meaningful work opportunities to large numbers of jobless individuals. These models can provide earnings in exchange for actual work performed, whether they are targeting a broad swath of unemployed workers during a recession or a narrower group of more disadvantaged workers who experience high rates of joblessness even when overall economic conditions are good. These programs can also have benefits beyond the labor market. In other words, subsidized employment programs can achieve the primary and secondary goals of the national program proposed here. At the same time, the evidence suggests that more experimentation is needed to identify subsidized employment models that can reliably improve workers' long-term employment outcomes, perhaps by combining subsidized employment with other needed services such as job training.

A NATIONAL SUBSIDIZED EMPLOYMENT STRATEGY

This article proposes a national subsidized employment program comprising two distinct federal funding streams: formula funding and competitive grants to states and local entities. The new effort is intended to realize multiple goals, at times in tension with each other, including

- providing unemployed and underemployed individuals the opportunity to work and earn income that allows them—in combination with the EITC and Child Tax Credit (CTC) they can then claim—to rise out of poverty;
- providing on-the-job training and help for individuals who do not have the skills, education, or work histories to effectively compete in the formal, unsubsidized labor market;
- providing small businesses with the chance to test their potential for growth by providing access to time-limited employment subsidies;
- increasing employment rates in communities with high concentrations of joblessness;

providing marginalized communities with resources to address community needs; and

mitigating barriers to employment through providing access to wraparound services.

In addition to improving workers' overall income through earnings by making them eligible for the EITC and CTC, which will add to the poverty reduction impacts, the program's provision of wages will result in workers' paying FICA (Social Security and Medicare) taxes, which will increase their prospects for a more secure and healthy retirement.[4]

PROGRAM ADMINISTRATION AND FUNDING DISBURSEMENT

The program would be administered cooperatively by the U.S. Department of Labor (DOL) and the U.S. Department of Health and Human Services (HHS), both of which have highly relevant experience and expertise. The structure of the funding would reflect a two-pronged federal strategy: a DOL-managed program of grants to states based on a funding formula; and an HHS-managed competitive federal grant program for local entities. Both are discussed in more detail later in the article.

National legislation would create the two streams for funding, which would be distinct, but able to be mixed by on-the-ground recipient organizations. The first would be available to all states to use for a broad share of struggling workers, but require state plans for targeting workers with serious or multiple barriers to employment. The second would be available to local governments and community-based organizations for targeting communities and workers who are not well served by state programs. The federal government would use a formula for all states in the first category and competitive grants for the second.

Formula funding to all states recognizes that the needs for subsidized employment are varied, based on regional economies, rural versus urban conditions, and ongoing structural changes in local economies. Using formula funding to all states ensures that states can address different needs within their borders while targeting the policy to specific areas and populations. It also underlines that this strategy is not just about or for certain populations or states, but also needed and useful across the entire country in addressing unemployment and underemployment.

Although the two grant programs would operate fairly independently, HHS and DOL would be required to coordinate in developing the rules and regulations for each program to ensure that they would operate in harmony with one another.

PROGRAM BENEFIT AND SUBSIDY CONFIGURATION

Under the proposal, the federal government would provide states with a generous match for subsidized employment program spending (see section on proposed funding) and local entities with competitive grants. State and local programs would directly or through intermediaries provide subsidies to third-party employers (which could be private, nonprofit, or public) to hire and employ eligible workers.

Subsidies would be used by employers toward hiring, compensation, and on-the-job training costs. Payments to employers would be allowed to vary by and within states. However, employers cannot be subsidized for more than 120 percent of wage costs, which is a reasonable approximation of total compensation and overhead costs for the lowest paid workers.

Programs also may use federal funds to provide wraparound services, including screening and matching and job preparation services, as well as transportation, childcare, counseling, or other assistance. The scale of programs and these complementary services would vary across target population, location, and other factors. The policy would be sufficiently flexible to allow programs to adjust to local dynamics and changing circumstances while keeping the needs of participants and employers paramount.

As for specific wages and costs, workers in subsidized job placements would be paid at

4. The EITC will see increased costs because the economic expansion from this policy is mostly in low-wage work, so more people will be eligible for the EITC because they have jobs that pay low wages. However, the EITC itself can lead to poverty reduction.

least the prevailing minimum wage in the relevant jurisdiction. The wage subsidy to the employer would not be higher than the prevailing minimum wage (that is, the federal minimum wage, now $7.25 per hour, or, if higher, the applicable state or local minimum wage). However, if employers wanted to pay a worker more than the prevailing minimum wage, they would be able to do by supplementing the minimum wage with their own resources.

Under state formula-funded programs, each subsidized job would be limited to nine months, though this period could be extended to accommodate time needed for training. Workers would be able to apply for a different subsidized job if still unemployed four weeks after completing the initial period of program participation. The individual could not be hired back, however, by the same employer or at the same site, because that could become a way that an employer could unfairly take advantage of the program (such as hanging onto specific individuals indefinitely, at taxpayer expense, with no thought of bringing them onto their own payroll). Programs may create review processes to address occasional exceptions to this rule that might make sense.

Furthermore, if the subsidized employment program is part of skilled training, the maximum time for the subsidy might be longer (or shorter), based on the level of skill and experience that the worker needs before being hired as a regular employee. If the program is part of an initiative that targets low-skilled individuals, the maximum time might also be extended.

WORKER ELIGIBILITY AND TARGETING

The structure and design of the proposed program would aim to balance several, potentially competing objectives: to target scarce public funds to those most in need; to provide states the flexibility to tailor the program to reflect local conditions and preferences; to promote participation by employers; to ensure that program implementation is efficient; and to allow the program to operate effectively in both strong and weak labor market conditions.

As discussed, the program would include two parallel federal funding streams: broad-based grants to states and territories that would be distributed according to a formula, and targeted, competitive grants to localities or nonprofit organizations to serve specific populations.

To limit administrative expenses and respond to local need, federal eligibility requirements for individual participation in a subsidized job under this program would be few. Participants would be

> unemployed for sixty days or more, or have earnings below half the prevailing minimum wage in the previous twelve months ($7.25 per hour in much of the country);[5]
>
> eighteen years of age or older; and
>
> lawfully permitted to work.

These restrictions are intended to simplify administrative burdens and increase outreach effectiveness while targeting workers who are struggling to find employment recently or secure stable earnings. The policy is also not intended to address the overlapping but often quite distinct needs of school-age youth.

These criteria would include underemployed (less than full-time) workers; discouraged workers who have been unemployed for a significant amount of time and may have stopped looking for work; and those who are just becoming low-income after job loss, which would enable a strong and automatic countercyclical response. In addition, asset tests would be prohibited. Having such broad eligibility requirements would allow local programs to saturate struggling communities that generally do not have enough employment opportunities,

5. We recommend using a simple formula that assumes two thousand hours of work. For example, in a city in Florida lacking a separate minimum wage, the maximum prior-twelve-month earnings would be $8.05 (the state's minimum wage), divided by two, and multiplied by two thousand hours, or $8,050. This formula intentionally leads to variation across labor markets and over time. This threshold likely would be sufficiently generous during recessions, as evidenced by data from the Economic Mobility Corporation's 2013 evaluation of several TANF Emergency Fund subsidized employment programs during 2009 and 2010 (see Roder and Elliott 2013).

especially for people with barriers, including limited skills and uneven work histories, to employment.

The streamlined nature of the rules governing the formula grants would thus leave many of the key design decisions to the states. Although no federally set maximum income limit is in place, states would be able to set such limits as they see fit. In other words, the proposal would leave room for states to have the option of targeting low-income families and individuals. States could set additional eligibility criteria subject to some limitations intended to prevent discrimination. Nevertheless, the program would be well targeted for several reasons. First, subsidized job placements would pay the prevailing minimum wage in the relevant jurisdiction initially.[6] The wage received by workers could rise during the placement, but the wage subsidy received by employers could not. In other words, employers would be free to increase both their share of and the amount of the wage paid. The low pay offered in these positions inherently prevents them from going to individuals whose families have higher incomes, because those with educational and other advantages would rarely see these jobs as attractive or necessary.

Finally, workers would not be permitted to participate in more than three years of subsidized employment total during any five-year period (each placement limited to nine months per worksite). In recognition of the fact that some workers, even upon completing several subsidized jobs, may (due to barriers such as a disability or significant health issue) never be able to attain stable, unsubsidized employment, states would be able to institute waivers for this requirement. Time limits would be suspended during periods of recession.

The competitive grants also build in room for programs to be more narrowly targeted. These funds would have to be used to subsidize jobs for individuals with specific characteristics that make them hard to employ, such as those with disabilities, veterans, noncustodial parents who owe child support, or those with criminal records. Alternatively, these grants could be targeted to people living in specific communities with high poverty rates.

Under both funding streams, the proposal would also require state plans to target—but not restrict eligibility to—people with serious or multiple barriers to employment.[7] Barriers to employment, though broadly defined, would constitute limitations that significantly reduce the likelihood of an individual being able to attain or maintain competitive (unsubsidized) employment. Limitations could be "personal or institutional, and can manifest as skill limitations; physical and behavioral health issues, including disabilities; criminal justice system involvement; family obligations; limited resources; and discrimination based on characteristics such as race, gender, and age, among others" (Dutta-Gupta et al. 2016, ix).

EMPLOYER ELIGIBILITY

Because the program would target many people facing serious structural and situational obstacles to steady employment, it will almost certainly be necessary to utilize a wide range of government, nonprofit, and for-profit organizations. Therefore, under both funding structures, public, for-profit, and not-for-profit employers would all be eligible to receive subsidies. It would also be permitted for a nonprofit organization to act as an intermediary and employer of record (EOR) for workers who are placed elsewhere. The EOR mechanism places most of the formal obligations of serving as the employer on the nonprofit organization—such as determining eligibility, providing orientation, formally hiring the subsidized worker, conducting any required background checks and drug testing, and, once the worker is hired, paying the worker, making all required deductions (FICA, Medicare, and so on), providing a pay stub, and issuing a W-2 form. If an initial placement does not work out (for any number of reasons), the EOR also helps the subsidized worker find another place to work. Above all, the EOR helps to identify the "host sites" where subsidized workers actually work. Host sites,

6. If the prevailing minimum wage in the relevant jurisdiction is different from the federal minimum wage, workers would be paid the higher of the two.

7. States would have the flexibility to forego targeting during economic downturns.

in turn, are responsible for providing job descriptions, providing day-to-day supervision, and certifying to the EOR that the subsidized worker was employed for a stated number of hours. The EOR–host site approach has worked well in several states, including Colorado and Wisconsin. Small employers in particular appreciate the approach because, as they consider "testing out" an individual whom they may decide to hire as an unsubsidized worker, they are not burdened with the kind of bureaucracy or paperwork that so often deters small firms from participating in other government-sponsored training and employment programs.

In exchange for hiring workers with barriers, the proposed subsidized employment program lets employers take a low-risk chance on workers they would not ordinarily hire. The result is a mutually beneficial arrangement, in which American employers willing to see a worker through a comparatively brief training and skill-building period and transition to competitive employment can be rewarded with access to previously untapped or underdeveloped labor and talent. For small businesses, the benefits may be even more pronounced. Small businesses are often a good prospect for providing work experience for individuals with limited skills or work histories. They are more likely than large employers to find it mutually beneficial, given that they often lack the capital to expand their workforce. Hiring a worker through a subsidized employment program allows them to test their ability to add positions while limiting their immediate investment to the costs of supervision and training. Those costs are real, but are manageable for many small businesses. Even if a business is unable to hire the person beyond the subsidy period, it has provided experience and training that can be translated to other jobs.

Particularly when placements are with private, for-profit employers, measures must be taken to mitigate concerns about relative cost-effectiveness and the use of public money to (indirectly) subsidize private profits. For example, no employer could use subsidized workers to replace unsubsidized workers or striking workers. States or competitive grantees could also choose to require that employers hire individuals on their permanent payrolls if they are successful in the subsidy period. The wisdom of imposing such a requirement, however, should be carefully considered. Such a requirement may deter private firms who in good faith *want* to hire subsidized workers from participating in the program, given that in advance they cannot necessarily predict whether adding a new worker (subsidized or otherwise) is economically justifiable. Indeed, they may need to try out not merely the subsidized employee, but also the new job itself, to determine whether the new job is economically viable. An absolute requirement that they must hire the subsidized workers they have taken on—even if language like "if the placement is successful" is added—could easily drive away the best employers.

The concern about the program's being exploited to provide windfall profits to unscrupulous private firms is a serious one. To address it, the authorizing legislation and rules could limit participation of private for-profit business to small businesses, potentially defined as those with fewer than a certain number of employees (such as 50, 150, 250, and so on). Another possible safeguard is to limit the total dollar amount of the subsidized wages that any one for-profit firm can profit from (perhaps allowing the firm to offset the limit by unsubsidized wages it subsequently pays to the workers in question). Maybe the most important safeguard against abuse of the program or its workers, however, is to require regular and adequate site visits and to hold employers accountable for program integrity through regular evaluations of their impact. This is one function that an employer of record might perform vis-à-vis the host sites in its network.

TARGETING OF JOB PLACEMENTS

State plans would be required to show consideration for type of placement, including supervision, employment sector, employer size, and other issues (Dutta-Gupta et al. 2016). States—when running programs directly or contracting with private organizations to run programs—must also prioritize programs physically located in areas with the poorest labor market indicators and highest (most concentrated) poverty, as well as work placements accessible to workers in these communities (including through the provision of transportation subsi-

dies). Among localities applying for competitive grant funding, the preference would be strong for programs that operate in and employ workers in communities with high (concentrated) poverty, persistent poverty, or deep poverty. States and localities would be encouraged to include additional requirements as needed (as it may be counterproductive for the federal level to set them).

Employer Expectations

All applicable labor laws would be followed to ensure decent working conditions, including minimum wage laws. Employers (public, private, and nonprofit) that offer advancement opportunities for participating workers would be prioritized.

Programs would be encouraged to follow best practices to support opportunities for rollover in positions for those who are strong candidates for it. Having the work approximate competitive employment as the subsidy winds down—if not from Day One—would also be encouraged within programs. Furthermore, during times of economic expansion, worksites would be limited to organizations by size (which could be defined in terms of employees, profits, or payroll)—but less so as the economy deteriorates. Other strategies for reducing windfall profits may be explored as well (Bartik 2001).

PROPOSED FUNDING

This section describes a mechanism for delivery of funds and provides a federal cost estimate for this proposal. The proposed funding consists of two primary streams: a substantial mandatory funding stream for states and a smaller discretionary funding stream for local programs. The proposal is designed to achieve 100 percent state participation and reach approximately 20 percent of all workers who are unemployed for fifteen weeks or longer; available for and desiring work, but no longer looking; those interested in work, but believe no job is available for them; and those employed part time for economic reasons and earning less than what they would with a full-time subsidized job at the minimum wage.

Federal Funding Delivery Mechanisms

This proposal envisions a generous, open-ended federal match to states for the formula grant. Each states' grant would be based on states' FMAP (Federal Medical Assistance Percentage, or Medicaid match rate). The FMAP for each state is based on the relative per capita income of a state compared with national per capita income. It currently varies between 50 and 82 percent, limited by a statutory maximum of 83 percent (ASPE 2015). Under this subsidized employment proposal, each state would receive a minimum (regardless of macroeconomic conditions) match equal to its FMAP plus half the gap between the state's FMAP and 100 percent, resulting in minimum matching rates ranging from 75 percent in the wealthiest states to 91 percent in the poorest. States would be able to count TANF,[8] Workforce Innovation and Opportunity Act (WIOA), and other federal funding legitimately utilized for subsidized employment toward their contributions. Based on the TANF Emergency Fund's subsidized jobs experience and the adoption of the Medicaid expansion under the Affordable Care Act, a reimbursement rate that is more generous than the existing FMAP for basic Medicaid is likely necessary to ensure that all or nearly all states choose to participate in this program (Kaplan 2009; Ollove 2015). This proposed federal subsidized employment match (FSEM) also would rise (never above 100 percent) and fall (never below 75 percent), with each year-over-year percentage point increase in three-month average state unemployment rates triggering a percentage increase in the match rate. Unlike the FMAP, the FSEM would be more responsive to economic changes by being updated every calendar quarter, though increased match rates would trigger on for a minimum of the balance

8. This proposal may raise concerns about further diverting TANF funds away from cash assistance, a valid use for which there are few if any substitutes in most cases. However, even proposals intended to address the low share of TANF used for cash assistance typically limit a share of all TANF spending to core purposes—typically cash assistance, employment, and work supports—that certainly would be served by subsidized jobs (see, for example, Floyd, Pavetti, and Schott 2017).

of the current and subsequent fiscal year to allow for state fiscal, policy, and programmatic planning. (Overly volatile match rates, especially falls in the match rate, would jeopardize the viability of the program's match structure.)

The competitive grant, administered by HHS, would be administered similarly to existing competitive grant programs.

Cost Estimate and Poverty Reduction Effects

The total direct compensation costs of serving 20 percent of the full universe of eligible participants would be $15.9 billion annually to provide subsidized employment for 2.4 million participants—which would benefit more than seven million members of those workers' households.[9] In addition to these direct compensation costs for wages would be added costs for payroll taxes and net tax benefits, wraparound services, and state and local administrative costs, which would further add to the annual costs.

The total additional earnings received would reduce the nation's overall poverty rate (SPM) from 14.3 percent to 14.0 and thereby lift approximately one million people out of SPM poverty. The reduction in the poverty rate of expected program participants—who are significantly more disadvantaged than the overall population, having a poverty rate nearly 2.5 times the overall rate—would be far greater. For participants, the reductions in the poverty rate and the deep poverty rate (those with poverty levels less than half the supplemental poverty measure's threshold) would be sharp. The poverty rates among participants would be reduced from 35 percent to 20 percent and the deep poverty rate would fall from 14 percent to below 4 percent. Participants would also see a sharp reduction in the poverty gap (the difference between household income and the poverty threshold), eliminating the majority (62 percent) of their poverty. Low-income families that have incomes above the poverty level but less than twice the poverty level would also see benefits that would increase their families' income-to-needs ratio by nearly 20 percent.

These calculations account for the likely change in tax benefits net of taxes paid, such as the EITC and the CTC, but not some net savings that would occur for federal spending on other programs, such as Supplemental Nutrition Assistance Program (formerly Food Stamps), for which higher earnings would reduce benefit amounts for participants (West and Reich 2014). The size and benefits of the program could also easily be scaled for lower participation levels of 10 or 15 percent of the universe targeted for services or higher participation levels of 30 percent.

BUILDING EVIDENCE AND MEASURING SUCCESS

Three main strategies would be used to measure the efficiency and effectiveness of the program and to promote continuous program improvement.

First, HHS and DOL would develop a standard set of operational indicators that states and other grantees would be required to report on a quarterly basis. These indicators would include the number of workers placed into subsidized jobs, the characteristics of those workers, and the duration of their spells in subsidized employment—as well as basic information about the employers who received subsidies (for example, public, private, or nonprofit; total number of subsidized and unsubsidized employees). It would be difficult to make apples-to-apples comparisons across grantees because the specific programmatic and targeting strategies are expected to vary, but these

9. Eligible participants were those eighteen and older who were either unemployed for more than sixteen weeks; working involuntarily part time for economic reasons, but could earn more with a full-time subsidized job at the minimum wage; or discouraged or marginally attached. Another approach we use to check this proposal's cost estimate is to compare the per-worker costs with the approximate costs and enrollment of the subsidized employment component of the 2009–2010 TANF-EF program. Total federal spending for TANF-EF subsidized employment, including administrative costs, was $1.32 billion (Farrell et al. 2011) and it served a total of 262,520 workers over nearly a year and a half (Pavetti et al. 2011), of which we estimate that half were likely full-time participants who averaged six months in the TANF-EF program, and the other half were summer youth for one summer (three months).

indicators would be used to confirm that grantees are using the funds as planned and to highlight areas where technical assistance may be needed. Periodic surveys of employers would be used to measure employer satisfaction.

Second, HHS and DOL would develop a strategy to ascertain whether the subsidized employment program is achieving its primary and secondary goals. The primary goals would include raising earnings—thus, income—and increasing overall rates of employment. Secondary goals would depend somewhat on the specific targeting strategy, but could include improving the rate and amount of child support paid, reducing incarceration, improving economic and social conditions in targeted communities, and improving child well-being. It would be difficult to assess the impact of the subsidized employment on these outcomes for two primary reasons—the first being that the program may not be large enough to "move" these indicators at the state or national level (though it might affect them in individual communities). The second is that, because overall economic conditions and other factors may affect the same indicators, it would be quite challenging to isolate the impact of the subsidized employment program per se. For example, household income may fall during a recession, and it would be hard to determine whether the subsidized employment program made it fall less than it otherwise would have. Despite these challenges, it may be possible to use statistical techniques to estimate the program's impact. In addition, HHS and DOL would undertake periodic random assignment evaluations that would provide data on the impact of the program on individual workers.

Third, HHS and DOL would develop a systematic evaluation agenda focused on program improvement, including both qualitative and quantitative research. Studies of program implementation and operations would be used to identify and highlight efficient models for administering the program. These results would be widely disseminated to grantees. In addition, as noted earlier, periodic randomized controlled trials and other experimental and quasi-experimental methods would be used to measure the impact of particular subsidized employment models on participants.[10] These evaluations would measure impacts both while workers are in subsidized jobs and afterward and would focus on a wide range of potential outcomes depending on the target population (for example, employment, income, justice involvement, child support, and public benefits receipt). Some of them would be long-term studies designed to measure impacts on child well-being. These studies would seek to identify particular approaches to subsidized employment that have larger impacts on participant outcomes and are more cost effective.

CONCLUSION

Work, especially full-time work, is more highly and causally associated with avoiding poverty than nearly any other variable reasonably affected by public policy. Work not only meets immediate needs, especially given that many public assistance programs have work requirements, but is also good for the broader community because it reinforces the expectation of participation in the labor market. However, even when the economy is described as being at full employment, evidence is substantial that many more workers would like to work than are able to secure adequate employment. Targeted efforts that simultaneously reduce employer hiring costs and risks while addressing worker barriers to employment can increase employment overall, especially among disadvantaged individuals. Subsidized employment is such an approach. Although subsidized employment is not appropriate for every unemployed or underemployed worker (or every em-

10. This proposal does not strictly mandate continuous or random assignment evaluations. First, there is value in experimenting with programs that saturate communities, an approach that is not compatible with a randomized lottery. As suggested by one anonymous reviewer, determining priority ranking for admissions could be permitted, enabling regression discontinuity designs. However, such an approach could come with its own conceptual and political challenges and consequently is not required. Finally, continuous (rather than periodic) evaluation has an additional fiscal cost and may reduce the freedom of practitioners to plan, adjust, and innovate in response to their experiences.

ployer seeking to increase its workforce), it is both a proven and promising strategy for some populations. A permanent program with dedicated funding streams can build on the successes of past unsubsidized employment programs, which had neither (Dutta-Gupta et al. 2016). It is encouraging that, in 2016 and again in 2017, federal legislation—Senate Bill 3231 and Senate Bill 1938, co-authored by U.S. Senators Tammy Baldwin (D-WI) and Cory Booker (D-NJ)—were introduced with the goal of creating a federal subsidized employment program. Yet despite the growing body of evidence that subsidized employment is a successful strategy and a rising level of interest among policymakers across the political spectrum, little overall funding and no permanent dedicated funding for subsidized employment programs is available at the federal level.

To be sure, subsidized employment programs are neither silver bullets for all labor market challenges nor fully mature for every reasonable target population of disadvantaged workers. But subsidized jobs programs could and should make up a core component of a broad-based, ongoing strategy to combat poverty, reduce inequality, and ensure that every person wanting to work has access to a decent job at any point in the business cycle. With the goal of supporting robust career paths in mind, subsidized employment should also be developed in parallel with education and training initiatives that forge meaningful and sustainable connections between participants and the labor market. Assuming strong macroeconomic policy, there is no substitute for worker empowerment or strong labor standards such as well-enforced employment protections that prohibit discrimination, especially when it comes to highly disadvantaged workers (Dutta-Gupta et al. 2016). Subsidized jobs is not a panacea, but in combination with other strategies, it has a real chance at leading to long-term labor market gains for the next generation, if not for the adults immediately employed because of it.

As a result, this article proposes a national strategy for funding state and local subsidized employment programs to increase total employment levels, especially among workers with serious or multiple barriers to employment. The proposed strategy consists of two separate but harmonious federal funding streams, which in turn leverage state, local, and private (both for-profit and nonprofit) resources to create decent job opportunities for workers who likely would not otherwise be hired. The resulting employment immediately provides income through wages and earnings, and in some cases would have deeper and long-term positive effects that would tend to reduce poverty among participants and their children while improving outcomes for their communities. This idea is a missing and politically viable notion for reducing poverty.

APPENDIX: FORMULA FUNDING FOR STATES

State governments would be the only entities eligible to receive formula grants.[11] As discussed further below, states would be required to contribute funds to the program, but the match rate would be very favorable to them to encourage state participation in the program. During recessionary periods, the program would be up to 100 percent federally funded.

To receive a federal grant, each state would need to complete a detailed plan specifying how the funds would be used. As part of the plan, states would need to describe how they would use funds in areas with rates of joblessness or poverty that are well above the state averages.

The Department of Labor would operate the formula grant program. DOL oversees WIOA, which provides formula-based funding to states. DOL also administers the Enhanced Transitional Jobs Demonstration, which tested subsidized employment programs for people recently released from prison and noncustodial parents who owed child support (Employment and Training Administration 2016). Thus, DOL is well suited to operate the proposed new formula grant program for subsidized employment.

As for how the states would operate their

11. Here, state government refers to all state governments, tribes, and territories. Specifically, the territories that are referenced and included in this proposal (Puerto Rico, U.S. Virgin Islands, and American Samoa) already have unemployment insurance programs.

Table A1. Estimated Change in Poverty Rates with National Subsidized Employment Program

Poverty Measure	Current	Impact (Change)
National SPM	14.3%	14.0%
Recipients SPM	35.0	20.0
Recipients Deep Poverty Rate	14.2	3.8

Source: Wimer, Collyer, and Kimberlin 2018.

programs, TANF-EF provides a useful model. States used a variety of administrative structures to carry out their TANF-EF-funded subsidized employment programs. For example, in some states, the TANF agency ran the program, while in others it was administered through a partnership between the TANF agency and the agency that oversaw the Workforce Investment Act (now WIOA). In still others, the TANF agency contracted with a nonprofit intermediary to run the program (Farrell et al. 2011). Any of these structures would be permissible under the new program.

Competitive Grants to Local Entities

The competitive grants would be targeted to municipalities or private, nonprofit organizations. To receive funds, a nonprofit organization would need to demonstrate—for example, through letters of support—strong linkages to local government agencies that could provide referrals to the program. The grants would be awarded based on an applicant's demonstrated ability to recruit the target group, and provide both meaningful work opportunities and opportunities for participants to learn hard and soft occupational skills. Unlike the formula funding for states, this funding stream would allow for programs that test a broader set of needs, including engaging workers in less-than-full-time, subsidized work for long periods. Competitive grants would allow for more targeting—by population and geography—and for innovative strategies that can be made subject to rigorous evaluation to further build the evidence base of models that work with particular subgroups or communities. These types of programs, such as the Logan Square Neighborhood Association's Parent Mentor program, may reduce poverty—especially when engaging second earners or people subsisting off of disability and retirement benefits—even if they are not designed to shift people into unsubsidized work (Dutta-Gupta et al. 2016).

HHS, which administered the TANF Emergency Fund, and has also run research projects such as the Subsidized and Transitional Employment Demonstration, would be responsible for the competitive grant program. More generally, HHS's extensive experience and expertise in overseeing experiments and program evaluation make it especially well suited for administering this competitive grant program.

The department would award multiyear grants on an annual basis, with the particular targeting criteria for each year driven by current circumstances and, perhaps, to fill gaps that arise in the states' administration of the formula grants. For example, in one year, HHS might award a set of three-year grants for programs targeting people returning to the community from prison, while in the next, it could award a set of three-year grants for programs operating in high-poverty rural areas.

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A "Race to the Top" in Public Higher Education to Improve Education and Employment Among the Poor

HARRY J. HOLZER

Although many disadvantaged students now attend college, their completion rates are low—especially at community colleges—and many receive associate's degrees in fields with little labor market value, such as liberal or general studies. To address this problem, I propose a federal "Race to the Top" competitive grants program for states. Community colleges would get a well-targeted infusion of resources in return for greater accountability in state funding, based on the subsequent earnings of their minority or disadvantaged students. Funds could only be used to expand teaching capacity in high-demand fields, support services such as career counseling, and work-based learning like apprenticeships. Although the grants would begin as one-time efforts for selected states, ongoing funding to sustain any reforms implemented would be important as well.

Keywords: community colleges, disadvantaged, accountability, high-demand

One of the biggest obstacles preventing low-income Americans from earning more in the labor market is their relatively low level of academic achievement and educational attainment. Children from low-income households obtain postsecondary degrees less frequently than those from middle- or high-income households; if anything, the gaps in higher educational attainment (as well as academic achievement) between low- and high-income children appear to be growing over time (see Reardon 2011; Bailey and Dynarski 2011).

This occurs despite the fact that college enrollments among poor youth and adults have risen quite dramatically. Unfortunately, completion rates in postsecondary education have fallen over time, and more so for poor students than for anyone else. Linkages to the labor market at many high schools and colleges are weak as well, which means that many students there fail to gain education credentials and work experience that the labor market rewards.

In this article, I propose a federal policy designed to improve the academic and employment outcomes we observe for low-income or minority college students. The proposal is a

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"Race to the Top" (RttT) for the nation's community colleges. Through such a policy, the federal government would provide badly needed and carefully targeted additional resources to these colleges, in ways that are designed to increase credential attainment in high-wage fields in the job market among poor students. The states in which these resources are provided would also need to embrace greater accountability in terms of how they subsidize their colleges, among other reforms, to ensure that they encourage better performance in education and employment outcomes among their disadvantaged students.

THE PROBLEM

The labor market rewards to higher education have roughly doubled since about 1980 as a result of changing market and institutional forces.[1] In response, student postsecondary enrollments in the United States have risen quite dramatically in the past few decades, as economic models of human capital investment predict.[2] If anything, enrollments have risen more among low-income students than anyone else because they stand to benefit greatly from higher education (for evidence that the returns to postsecondary credentials in Florida are as high or higher among minorities and poor students as for other, see Backes, Holzer, and Velez 2015).[3] Pell grant funding by the federal government, which helps low-income students enroll at a higher rate, has also risen quite dramatically in the past decade (for evidence on the growing generosity of Pell grants, see Long 2013).[4]

Unfortunately, the growth over time in postsecondary credential attainment has been slower than in enrollments, indicating that completion rates of college programs have declined over time (Goldin and Katz 2008), especially among disadvantaged students (Bound, Lovenheim, and Turner 2010). Benjamin Backes, Harry Holzer, and Erin Velez indicate that this is true in both two- and four-year public colleges, and at any level of achievement (2015).[5]

Although the average return to a college credential is high, there is a great deal of variation across fields of study. For example, the labor market pays a premium for students in science and technology (or STEM), and for many applied fields (like business or law) rather than liberal arts. The latter can still provide rewards for students who get degrees from flagship four-year institutions or attend graduate school, but generally not for those with terminal associate's degrees. Unfortunately, in some states, too many students obtain associate's in arts (AA) degrees in general studies or liberal studies, rather than associate's degrees with more market value, such as associate's degrees in science (AS) or applied science (AAS) in health care and other technical fields, or even occupational AAs in fields such as business or protective services. Even certificates in high-demand fields (such as health technology, advanced manufacturing, and transportation or

1. Economists largely agree that both market and institutional forces have contributed to rising labor market inequality, though they differ on the relative importance of each (for two views, see Autor, Katz, and Kearney 2008; Card and DiNardo 2002).

2. Gary Becker's seminal analysis on human capital investment was one of the first to suggest that college enrollments would rise in response to higher labor market rewards for college degrees (1996).

3. Timothy Bartik and Brad Herschbein present evidence suggesting this is not true over the long run, though their evidence is based on cohorts of young people a few decades ago (2016). Even in their analyses, the returns to higher education attainment among young people from poor families are still quite substantial.

4. The evidence shows that Pell grants clearly raise college enrollment rates among the poor, especially at four-year institutions.

5. Benjamin Backes and his colleagues show that, among students in the top quartile of high school achievers, BA enrollment and completion rates (where the latter is conditional on enrollment) are 0.46 and 0.55 for the poor and 0.60 and 0.67 for the nonpoor respectively. At community colleges, more poor than nonpoor students from the top quartile of achievers enroll (0.52 versus 0.48) but fewer enrollees complete AA or AS degrees (0.41 versus 0.47).

logistics) that the market clearly values generate a stronger economic return to students than associate's in the humanities (see Holzer and Baum 2017).[6]

In the meantime, many students pile up a great deal of debt. Economists usually emphasize that not all student debt is harmful; for those completing their degrees in fields with strong market rewards, students get good returns on their higher education investments. But debt is rising even for those who are not finishing, and especially at those attending for-profit institutions. And tens of billions of dollars in Pell grants and state aid are also spent each year on students who fail to complete their programs or even attain any credits (on Pell grants and college attainment, see Long 2013; on college debt, see Looney and Yannelis 2015; Baum 2016).

Why have college completion rates been declining, and especially why are they so low among disadvantaged students? According to John Bound and his colleagues, low completion rates among poor students reflect a mix of both personal student characteristics as well as those of the institutions they attend (2010).

On the personal side, low-income students face many obstacles when it comes to higher education performance. They often enter college with low achievement in their K–12 years, and are often diverted into unproductive developmental (remedial) education before they can take classes for credit, causing many to drop out before accumulating many credits (for evidence on remediation, see Bettinger, Boatman, and Long 2013; Long 2014; Clotfelter et al. 2013). But, even among students with high levels of high school achievement, college attainment rates are considerably lower for low-income students than others. Why is this true?

First, the financial costs of higher education have risen over time, especially in recent years as state subsidies for higher education have declined; for families with limited financial wealth, liquidity constraints will limit the ability of students and their families to finance investments in higher education (on subsidies and rising prices, see Baum, Kurose, and McPherson 2013; on liquidity and college enrollment, see Lovenheim 2011; Brown, Scholz, and Seshadri 2009).

Even when they have Pell grants, not all tuition and fees are covered at some institutions; and, especially among parents of young children, the time needed to work and parent while in college and enroll part time greatly limits success rates there. Finally, a lack of information and weak social capital networks limit their knowledge of how to succeed in college, especially among those who are first-generation college, the first in their families to enroll there (on part-time attendance, social capital, and student outcomes, see Goldrick-Rab 2010).

But, as well as their personal characteristics, the attributes of the institutions most low-income students attend compound their problems. Poor college students are heavily concentrated at community colleges and lower-tier four-year colleges (as well as the for-profit colleges) with relatively low funding and weak student outcomes. Even among low-income (or first-generation college) students with stronger achievement, their limited knowledge of the postsecondary world often leads them to enroll at the community or four-year college nearest to their own homes, which might not be very high in quality.

Bound and his colleagues show that lower resources per student provided to these institutions by their states at least partly account for the weaker outcomes observed among the students who attend. This makes sense, because fewer resources can mean fewer required classes from which to choose (especially among those who work full time), lower instructor quality, and fewer support services (such as academic tutoring, career counseling, or child-

6. Backes and colleagues document the much stronger labor market returns in Florida to AS than liberal arts AA degrees (which have virtually no return above a high school diploma) among the vast majority of community college students who do not transfer and get a BA, and even the relatively strong market returns to certificate programs which the poor or lower achievers can complete in a range of fields. Nevertheless, more than 40 percent of students who complete an AA or AS credential do so in humanities (usually liberal studies or general studies) with no market returns at all.

care) that might help these students overcome these challenges (see Bettinger, Boatman, and Long 2013). In contrast, the for-profit institutions increasingly attended by many poor students have more resources, but often even lower completion rates and much higher debt loads borne by students after attending (see Cellini and Chaudhury 2012; Deming, Goldin, and Katz 2013; Deming et al. 2016).

In addition to the problem of too little funding, the community colleges many students attend face too few incentives to improve the academic and labor market outcomes of their students. For instance, public colleges are subsidized by the state for "seat time" rather than successful student outcomes; higher student attainment perhaps brings better reputation for institutions but no direct reward from the state.

In addition, the costs of expanding teaching capacity in certain high-demand fields—especially the more technical classes in health care and elsewhere—are also much higher, due to the high costs of instructors and especially equipment in those fields. But the colleges obtain the same subsidies and tuition dollars for all classes. So the incentives for them to spend scarce dollars on expanding teaching capacity in these high-demand fields are therefore low (see Holzer 2014; Kim and Stange 2016; Dougherty et al. 2016).

Also, vested interests are strong—especially among tenured faculty—to continue teaching the liberal arts classes in which they are trained, rather than newer occupational fields in which they are not. Also, regular instructors in high-demand fields are likely to have fallen behind the technical frontiers in many areas, in contrast to newer instructors and especially adjunct faculty drawn from more current industry employees.

Besides the problems created by personal student characteristics and institutional funding and incentives, a few other factors likely contribute to the weak outcomes we observe among students at community colleges. For one thing, the generally low level of academic and career counseling there might be one reason why many students choose generic liberal arts programs of study there with weak labor market returns, rather than those with higher market returns described. A number of additional factors likely reinforce these choices: many have particularly weak backgrounds in math and science, or these fields simply do not appeal to them. For those who remain undecided about what to study, liberal arts or general studies are default categories into which they automatically are placed in many states.

Additional characteristics of the community colleges reinforce this pattern. According to Tom Bailey and his coauthors, many community colleges provide very little structure to guide students through their programs of study, either within or across institutions. They compare these colleges to cafeterias in which students face enormous amounts of choice but little guidance in making them. Accordingly, they call for the creation of more "guided pathways" as students move from general background courses to more specific academic or occupational fields of study (see Bailey, Jaggars, and Jenkins 2015; Scott-Clayton 2011).

An additional, though related, problem is likely: according to high-ranking officials at several community colleges, most students arrive intending to transfer to four-year colleges and universities after one or two years.[7] Yet only about one-fourth of community college students actually transfer, and only about half of them complete a bachelor's degree. These students likely could benefit from more accurate information and guidance about ultimate success rates in transferring, and in choosing a field of study that will provide the remuneration right after college that many seek.

In addition to traditional occupational AA and AS degree programs, newer efforts to more effectively link students to the job market—including adult students returning for part-time degree or certificate programs as well as younger or full-time students out of high school—have been developed in recent years. For instance, sector-based training efforts involve partnerships between industry groups

7. This point was emphasized in conversations I had with the provost of Miami-Dade College, Rolando Montoya, and with the president of Macomb Community College, Jim Jacobs.

and community colleges, often guided by a knowledgeable intermediary, to train workers for well-paying middle-skill jobs in health care, advanced manufacturing, information technology, and some service industries. In addition, career pathways are being built that combine a stackable set of academic credentials and competencies, plus relevant work experience, on the way to careers in health care or other high-demand industries. For example, such a pathway might start with a certified nursing assistant credential and move toward a licensed practical nurse (LPN) associate's degree and even a bachelor's in science in registered nursing (see Conway and Giloth 2014; Fein 2014).

Evaluation evidence on the ability of sector-based training to raise earnings among low-income students has been very strong; and evaluations of some well-known career pathway programs are under way (see Maguire et al. 2010; Michaelides, Mueser, and Mbwana 2015; Hendra et al. 2016).[8] But states are wrestling with how to replicate the best programmatic models, and how to bring them to scale. Community colleges will often lack the knowledge of how to scale them, or the incentives to invest significant resources in doing so. And employers might also be reluctant to participate, given the skepticism many have about engaging with the public sector in any serious way.

Thus, to encourage states and community colleges within them to expand their sector-based and career pathway approaches while maintaining their quality and links to employers might require not only technical assistance to these institutions but also changes in the funding and incentives that many now face.

THE PROPOSAL

In response to these problems, I propose a multiyear "Race to the Top" program for state funding of community colleges. A competitive grant program would be established to provide significant new federal grants to states that implement performance-based funding with strong emphasis on the outcomes—both academic and employment—of their disadvantaged students.[9] If successful, this effort might be incorporated into the Higher Education Act to provide more continuous funding for states receiving competitive grants. States could focus exclusively on their community colleges in such efforts or also include their lowest-tier four-year college colleges and universities, where low-income students also tend to concentrate.[10]

Such a program would build on other efforts of states and of federal government in recent years. For instance, the U.S. Departments of Education and Labor have provided a range of competitive grants to states in both the George W. Bush and Obama administrations to improve community college links to the job market. The largest and best known of these, the Trade Adjustment Assistance and Community College to Career Training (TAACCCT) grants, dispersed about $2 billion of funds to states, regions, and institutions to build greater capacity in community college programs that respond directly to local labor market needs. A series of Workforce Innovation grant programs from the Department of Labor, education innovation grants from the Department of Education (known as Investment in Innovation, or I3), and Social Innovation Fund (SIF) grants have contributed as well.[11] The recently reauthorized Workforce Innovation and Opportu-

8. There are other evaluations now under way for the Health Professions Opportunity Grants and Pathways to Advance Careers and Education programs funded by the U.S. Department of Health and Human Services.

9. Although the performance incentives would not have to be limited only to outcomes of disadvantaged students, their outcomes specifically must receive heavy weight in any performance-based funding scheme to receive additional funding.

10. This mechanism would not be applicable at private nonprofit or for-profit institutions, which do not receive direct funding from the state to lower tuition levels. It should also not apply to flagship universities, where large percentages of students major in liberal arts and then go onto graduate school for professional training.

11. For instance, the National Fund for Workforce Solutions combined private contributions from several major foundations with SIF grant funds to build effective sector-based training programs in more than thirty locations. The Obama administration also funded states to build their higher education and workforce data capacities

nity Act) also requires states to build sector-based training models and to measure performance consistently within and across them (for more, see the Center on Law and Social Policy 2015).

Somewhat separately, the states have also begun changing their funding structures for higher education to encourage more successful education outcomes, such as higher completion rates. Indeed, more than half of all states have begun to use performance-based (or outcomes-based) funding of higher education, to create more accountability in their higher education institutions. The National Conference of State Legislatures (NCSL) tracks these developments, and details about them appear in their website (2015). Some states have moved more rapidly, or put relatively more weight on the performance-based measures in their higher education funding formulas, than others.

But, as the NCSL website indicates, most such efforts to date focus only on academic measures of outcomes—such as credit or credential attainment—rather than subsequent employment measures of their students, such as future earnings. Many put too little emphasis on the outcomes of minority or disadvantaged students, which is our primary interest here, and pay too little attention to the two-year colleges where most disadvantaged students are concentrated.

And, to date, most states have implemented accountability schemes without providing additional resources to expand teaching or service-delivery capacity at the institutions that mostly serve low-income students. Consequently, the improvements generated in student outcomes so far from these accountability schemes appear quite modest, though the research to date is thin.

More specifically, Kevin Dougherty and his colleagues note that the research to date mostly evaluates early accountability efforts in the states, in which only bonuses—but not underlying funding levels—depended on student outcomes; so perhaps it is not surprising that the estimated impacts are weak. They also note that three states with strong accountability schemes—Indiana, Ohio, and Tennessee—have experienced improved completion rates in recent years, though they cannot necessarily attribute those improvements to accountability.

In contrast, the goal of our proposal is to improve both higher education and employment outcomes, particularly for the disadvantaged or minority students, and to provide more resources and stronger incentives (as well as information and technical assistance on best practices from research) for community colleges to do so. The focus on community colleges (and perhaps the lowest-tier four-year schools), where most low-income students in higher education are found, would concentrate the additional resources and incentives where they are most needed and most likely to generate real improvements in outcomes. Indeed, accountability schemes focused on this population are often successful in changing institutional behavior; evidence from K–12 data suggests that, under strong accountability schemes, institutions will do more of what they are rewarded for doing (Deming and Figlio 2016), though care must be taken to avoid "gaming" in the process (as we discuss shortly). The federal government would reward states for basing more of their community college funding decisions on these outcomes, and primarily for low-income populations.

The model on which this initiative would be based is the Race to the Top program, implemented by the U.S. Department of Education during the Obama years, to encourage pre-K and K–12 education accountability. Through this program, the Department of Education dispersed about $4.35 billion to eighteen states and the District of Columbia. Although various analysts debate the relative merits and effectiveness of this program, that Race to the Top substantially affected K–12 school operations in states throughout the country is less contested (Howell and Magazinnik 2017), even among those states that did not obtain (but competed for) RttT funding (for other views on Race to the Top, see Miller and Hanna 2014; Weiss and Hess 2015; Hess 2015). It is such an impact on state programs and institutional pro-

through State Longitudinal Data Systems grants from the Education Department and the Workforce Data Quality Initiative from the Department of Labor (see Zinn and Van Kluenen 2014).

cedures, especially those that affect disadvantaged students, that we hope to achieve through our own RttT proposal.

HOW IT WOULD WORK

Under a new RttT for community colleges, the federal government would create a competitive grants program, in which chosen states would get a substantial infusion of federal resources in return for imposing stronger accountability on these institutions, based on the academic and employment outcomes they generate among low-income students, and for implementing needed reforms to improve these outcomes.

To receive new funding, states would need to argue that the new resources they would receive and the new incentives they would generate will likely improve the capacity and willingness of these institutions to successfully address the current challenges faced by their disadvantaged student populations, by providing more effective supports and services (such as remediation, tutoring, career counseling, and childcare), and also by expanding credential programs with labor market value in which such students could be successful. But, within the accountability schemes, institutions would need to show actual improvement in outcomes to receive and retain funding over time.

Accordingly, within the competition for the resources, states would need to specify:

- the nature of the accountability systems they would create for funding public higher education;
- how their community colleges would spend the additional resources they receive; and
- other reforms they would undertake to improve outcomes for disadvantaged students there.

Proposals would reflect a collaborative effort between state-level administrators who set higher education policy and the community college administrators who spend the resources and implement reforms on the ground.

Accountability

States would need to specify in advance the performance-based incentives they plan to use in funding their community colleges. At least two criteria for such incentives would be established: a strong emphasis on subsequent employment outcomes of their students, and not just their academic outcomes; and a primary focus on the outcomes of disadvantaged students, to ensure that improved outcomes are strongest for the poor.

The new financial incentives for both kinds of outcomes must be large enough, relative to total funding, that the community colleges feel like they have real "skin in the game" regarding improving outcomes for disadvantaged students (Deming and Figlio 2016). In their proposals, the states would need to indicate that they are developing their administrative higher education and earnings databases to monitor these outcomes, along with the capacity to analyze them. Using accountability measures based specifically on the outcomes observed among minority or disadvantaged students would also help ensure that these institutions provide students with more access to and supports in any programs affected by states receiving grants.

Of course, using employment outcomes to create incentives could create their own problems—if, for example, they discourage colleges from offering their students enough capacity in certain less-compensated fields (like social services) that create strong "public goods," or for students whose earnings do not rise until several years out of college or after graduate school (Deming and Figlio 2016). Focusing the incentives only on the outcomes of community college students mitigates these concerns, to some extent, because relatively few community college students enter these fields or attend graduate school. And the earnings of students would have to be measured over enough years afterward to not punish colleges for those who take longer to find higher compensation, especially for those who transfer to four-year colleges and ultimately obtain BAs (which should be captured by the academic attainment as well as earnings measures used for accountability among such students).

Rewarding institutions whose students obtain more high-demand and high-value credentials (in fields identified earlier), instead of higher earnings in the future per se, might

be another way of dealing with these complications—as long as these credentials will likely continue to be highly valued and demanded in the labor market over time. Improving successful transfer rates to four-year colleges and universities should certainly be an allowable use of federal funding. But, given the extremely low rates of successful transfer (including BA attainment) among community college students currently, expanding opportunities for students to obtain sub-BA credentials with market value should be a higher priority.

States would also need to indicate that the measures they will use for accountability are not easily "gamed" by colleges and creating unanticipated consequences, which is always a risk when using performance measures to allocate public funding (for examples, see Barnow and Smith 2004). For instance, with credit attainment and completion rates as the only accountability measures, states could be tempted to raise admissions requirements (known as cream-skimming to improve measured outcomes) or to lower completion standards within their academic programs.

To eliminate the incentives of colleges to "cream" in admissions, the states might use certain types of value-added or risk-adjusted measures of academic and employment outcomes, which would control for earlier achievement or earnings capacities of their students. But such measures might be too complicated to be easily understood by or transparent to the public (Deming and Figlio 2016).

Instead, using outcomes for disadvantaged students and especially lower-achieving students in funding formula should help mitigate this problem.[12] Indeed, Anna Cielinski and Duy Pham advocate the use of such equity outcomes to improve the targeting of accountability measures on the disadvantaged as well as to reduce gaming (2017). Because adult students returning to community colleges have somewhat lower completion rates relative to more traditional (younger) students but higher enrollments in certificate programs linked to employment, decisions on how to treat them in accountability measures would be very important. And, to keep measures simple and transparent, they might simply reward colleges that achieve certain predetermined levels of improvement over time in credentials obtained and earnings observed among their poor or low-achieving students.

Thus, to give an example, states might base a third to a half of their community college funding on how much individual colleges raise the percentages of minority or disadvantaged students there—particularly with low earlier achievement—who obtain BAs or sub-BA credentials with high market value. Some amount of funding could be reserved for simply obtaining a certain minimum threshold in these measures, in levels or increases over time; while the rest could be distributed competitively for those showing the strongest improvements over time.[13]

Planned Expenditures

States would also need to specify how they intend to spend the new resources. If they choose, states might include lower-tier four-year public institutions as well as just community colleges in their program. At whichever institutions are included, allowable spending of new federal resources would be limited to

> expanding teaching capacity in programs that offer credentials with strong labor market rewards, either for occupational associate's degree or certificates programs;
>
> offering support services for the poor, such as additional merit-based financial aid, career counseling and coaching, job placement services, childcare, and access to other public supports; and

12. Even when establishing specific goals for disadvantaged or minority student populations, there can be "creaming" within these categories. But focusing on students with initially low achievement would counter the tendency to cream within demographic groups.

13. David Deming and David Figlio argue that simple thresholds of this type are highly transparent, well-targeted, and less likely to be gamed by the institutions (2016).

providing stipends for work-based learning activity such as apprenticeships.

Proposals to expand teaching capacity in high-demand fields, such as nursing and other health technician fields, would require some evidence to be provided by the states that labor market demand and compensation in those fields remains and will continue to be strong. For instance, states could use data on recent employment trends or current job vacancies in such fields, as well as on the earnings of recent hires in those fields. [14] Some evidence that such capacity is currently limited in those fields—for instance, by currently enrolling fewer than the number of students who seek to enroll—would be helpful, though student enrollments there might also rise if career counseling were improved.

And some efforts to make these classes accessible to disadvantaged students who might struggle academically—perhaps through improved remediation or tutoring—would be important as well. These efforts could include "bridge" programs designed to prepare students before they arrive on campus, or efforts to identify and remedy important achievement gaps among college-bound students while they are still in high school.[15]

The additional support services that could be provided to disadvantaged students should, as much as possible, be based on evidence of what actually works in this regard. For instance, rigorous evidence now indicates that accelerating remediation and embedding it within job training or labor market information can improve its efficacy; making some kinds of academic counseling mandatory seems to improve its effectiveness. Using adults to coach disadvantaged students, and even frequent text messaging regarding schedules and assignments, can improve performance as well (on these approaches, see Bettinger, Boatman, and Long 2013).

Making a variety of such supports available all at once in a coordinated and intensive fashion might well make all of them more effective. This seems to be a lesson drawn from the Accelerated Study in Associate Programs (ASAP) program at the City University of New York (CUNY), which has doubled completion rates among students who need remediation and are also willing to attend full time (see Strumbos, Linderman, and Hicks 2018; for the impacts of ASAP, see Scrivener et al. 2014).[16] On the other hand, because ASAP at CUNY only applied to full-time community college students, and since over half of treated students still did not complete their programs in the ASAP evaluations, the colleges should not depend exclusively on this approach (Scrivener et al. 2014).

Effective career counseling for students seems critically important if students are to make sensible choices about what and how to study. As research in the field of behavioral economics frequently reminds us, simply making labor market information available (especially in online formats) is unlikely to change student behavior very much; such information must be clearly and directly communicated to students to be effective.

One such way of delivering such information is to open satellite offices on college campuses of the One-Stop shops (now called American Job Centers) funded around the country by the Department of Labor (through the Workforce Innovation and Opportunity Act). Indeed, more such centers are being collocated on such campuses. These shops provide both staff-assisted access to general labor market information and more personalized testing and counseling services. Although they must remain accessible to

14. The most relevant data would be at the metropolitan or state levels, which are the relevant labor markets for most such occupations, since relatively few workers with sub-BA credentials migrate over time across states. Such data are also quite available now from Census data sources such as the Longitudinal Employer Household Dynamics program on industry-level employment or various sources of job vacancy data.

15. States are beginning to reach out to high school students who express an interest in higher education, in their junior and senior years, to identify gaps in math and reading preparation and to address them before they arrive on campus. One such example is the Florida College and Career Readiness Initiative.

16. Of course, whether the program would work at other colleges besides CUNY, and with students unable to attend full-time, remain unclear.

nonstudent workers as well, this might be a relatively low-cost method of delivering the needed information and counseling to students who need it. Continually upgrading the quality of information provided, as technology creates new and improved data sources, would be an important undertaking of states as well (for a recent update, see Reamer 2015). Opening "Single Stop" offices, which help low-income students gain access to available public income supports and services, on more campuses would be helpful as well (Single Stop 2017).

Finally, stipends for work-based learning, such as apprenticeships, might be an additional way of enhancing student success. It is well known that the labor market strongly rewards early work experience among young people, and that low-income or minority students gain too little such experience. Too much work experience while students attend high school or college can also be harmful, but when linked to their fields of study such work appears to be more valuable to career progress (on the impacts of apprenticeships on earnings, see Reed et al. 2012).

The evidence on the effectiveness of apprenticeships for low-income workers is particularly strong, and evidence that disadvantaged youth are more motivated to continue education or training when paid is substantial as well.[17] Although private employers are the ones who usually provide payment for work performed, in some instances an incentive payment to these employers from the state might help engage them; and at other times public subsidies of the privately paid wages, or direct payment for services provided to the public, are worthwhile as well.[18]

The attractiveness of a state proposal for RttT funding might also well be enhanced by their stated intent (and plans to implement) reforms in a variety of areas to improve education and employment outcomes for disadvantaged students. As noted, reforming developmental education is a very high priority, given the evidence that such remediation is often ineffective, and perhaps even harmful to students.

Other Reforms

Reforms in developmental education might include the implementation of coterminous remediation, which might even be embedded within the material being taught, rather than stand-alone remediation, which serves as a prerequisite for enrolling in the actual classes needed for a credential.[19] Also, instead of simply requiring the same remediation (such as passing an Algebra I test) for all, remediation might be customized to what is needed by students in their chosen programs of study. Focusing on practical use of math, rather than Algebra I—which is done in a variety of newer programs (such as Quantway or Statway) with some evidence of success—would also help. And even the delivery of remediation can be changed in new models that use technology to deliver the needed instruction (see Long 2014; Bailey, Jaggars, and Jenkins 2015).

Building more sector partnerships (or expanding their capacity) between colleges and industry, and more career pathways into well-paying jobs, could be another component of a serious plan. As noted earlier, these partnerships are often limited in scale of student and employer involvement. Enhancing these, while maintaining the quality of instruction and ties to local industry needs, are critical for achieving the desired impact of these models on employment outcomes at the state or national levels. Developing state education and workforce "systems" that are heavily built around sector partnerships and career pathways would also

17. Examples demonstrating the importance of paid work in motivating students in school or in training appears most recently in a set of summer jobs programs reviewed by Nelson Schwartz (2013).

18. Some examples of these ideas include public service employment, public subsidies for transitional jobs in the public or private sectors, or direct public subsidization of private-sector employment, which the federal government did with its Emergency TANF employment subsidies in the stimulus program in 2009 and 2010 (see Roder and Elliott 2013; Dutta Gupta et al. 2016).

19. Two such examples include the Integrated Basic Education and Skills Training program (I-BEST) in the state of Washington (Zeidenberg, Cho, and Jenkins 2012) and the LaGuardia Bridge program (Scrivener et al. 2014).

be a valuable part of any state plan to obtain RttT funding.[20]

Additional steps might be taken to rationalize the divisions between credit and not-for-credit classes and programs. The division between such programs seems fairly arbitrary right now, though the distinctions are hugely important for the extent to which students can use financial aid (especially from Title IV of the Higher Education Act) to fund their studies. There are already proposals to rectify this problem at the federal level, and to allow financial aid to be used in any program whose labor market value can be demonstrated (see McCarthy 2014).[21] But, if such proposals are not implemented at the federal level, perhaps states can take some actions on their own to address this problem in their proposals for RttT funding.

Finally, states might decide to implement some of the reforms recently emphasized by Thomas Bailey and his coauthors, which entail building more structured (or guided) pathways within the academic institutions, and even across them (for students attempting to transfer to four-year colleges). Bailey and his colleagues offer detailed guidance to college administrators on how this structure would be built, and the nature of guidance provided to students in their time there (2015).

Of course, in all such cases, recipients of awards would be required to demonstrate the effectiveness of their plans at improving outcomes, if awarded. Rigorous evaluation by the Departments of Education and Labor of the different plans implemented would be critical as well, so we develop greater knowledge of what works more or less effectively in this area.

COST

Finally, we need to address the issue of cost. How much should the federal government spend on its new RttT effort? And should it be a strictly one-time infusion of federal funds, or should some of it be at least partly renewable for states that show they spend their money well?

The issue of how much federal funding is adequate in such a situation is unclear. In the original RttT, $4.35 billion that was delivered to eighteen states plus the District of Columbia (which covered 45 percent of K–12 students in the United States) was enough to create a range of behavioral changes, even in states that competed for but did not win awards. Perhaps a similar amount allocated to community colleges would be enough to change their behaviors as well. These colleges have other incentives for improving their performance—perhaps to address accountability that the states are already imposing on them.

On the other hand, the evidence suggests community colleges are already very strapped for resources, and juggle many competing needs (such as academic versus occupational training), especially for student populations that are frequently disadvantaged. Total revenues at community colleges nationally are about $60 billion a year (American Association of Community Colleges 2017), so $4 billion would constitute only an 8 percent increase in total funding—though its effect would be more concentrated among the states (perhaps fifteen to twenty) that actually receive the funding.[22]

An allocation of $5 billion to $10 billion would likely have stronger impacts on college behavior, and strengthen the incentives of all states to apply for such funds. A few suggestive calculations can illustrate its likely impact. For instance, estimating roughly eight to ten million students enrolled in for-credit programs at community colleges each year, total costs per student are now $6,000 to $7,000. If certificate and associate's degree programs in the high-demand and high-cost fields like health care average $10,000 per student year, then an extra

20. Lisa Soricone emphasizes the need for systems development at the local or state levels in order to make sector-based training successful (2015).

21. One proposal to provide Title IV funding for noncredit training programs with demonstrated labor market value is Senator Tim Kaine's Jump-starting Businesses by Supporting Students (JOBS) Act.

22. Total K–12 public spending in the United States was $620 billion in 2013, so the $4 billion provided in the RttT program was very small in relative magnitude but still managed to affect school behaviors.

$10 billion could fund one million additional slots.[23]

Alternatively, if average costs of comprehensive services like ASAP or stipends for work average $5,000 per student, then $10 billion would fund these such services for another two million students.[24] Or, combining the costs of extra classroom capacity and services, we could fund a half a million slots in high-demand fields as well as services or stipends for one million students. And if one of the conditions of states receiving grants is that they partially match grants with some additional resources of their own, then the impacts of the program could be substantially greater.

It is worth remembering that the Obama administration's initial proposal for accountability in its American Graduation Initiative in 2009 called for a new expenditure of $12 billion over a number of years. This was ultimately reduced greatly to the $2 billion spent on TAACCCT grants, but the initial proposal is instructive in terms of the magnitude of what the Obama administration considered necessary in this realm.

And should some part of these funds be renewable, at least for states where outcomes of poor students are improving? A frequent complaint about one-time competitive grants is that operational changes made in states and regions to secure such funding are not sustained over time when such funding disappears. To make these changes more sustainable over time, some large percentage of that allocation for states who are chosen should be renewable. Additional competitions for those not chosen might also be considered in the future. Such funding might be embedded within a reauthorized version of the Higher Education Act or implemented separately from it.

ADDITIONAL CONSIDERATIONS AND CONCERNS

As noted, it is critical that states design accountability schemes that do not lead colleges to game the system and create unanticipated consequences, such as barring disadvantaged students from attending or lowering academic requirements for passage. Genuine improvements in the academic and employment outcomes of disadvantaged students must be demonstrated over time, and not result from any such gaming.

Any efforts to improve occupational training and workforce services at community colleges or other public institutions must not only achieve scale while maintaining employer participation and a focus on disadvantaged students. In addition, such systems must provide a careful balance between the specific skills needed today in the industries and careers targeted, and more general analytical and communication skills that the labor market rewards.

In the short run, the former might be more important; in the long run, the latter matter too. Many employees will ultimately change firms or even industries, and any skills that are publicly financed should be at least partly portable across firms and sectors. In addition, in a dynamic and uncertain future labor market—where technologies will likely evolve in ways we cannot predict—the skills heavily demanded today might not be demanded tomorrow. And skills reflecting unmet demand today might be filled tomorrow, simply allowing for the usual lags with which worker skill supplies respond to such demand over time (for more on these limitations, see Holzer 2015).

For all of these reasons, states and their community colleges need to strike an appropri-

23. AACC and other sources note that more than seven million students were enrolled in for-credit classes at community colleges in the fall of 2015. Assuming that some fraction of these were in short-term certificate programs from which there was some turnover out of fall enrollments, and that these were replaced by new enrollees in the spring, it is likely that enrollments for the entire year average eight to ten million. According to Practical Nursing.org, annual tuition in Licensed Practical Nursing (LPN) programs average $10,000 to $15,000, and those in health certificate programs are no doubt lower (2017).

24. Diane Strumbos, Donna Linderman, and Carson Hicks show that ASAP now costs $3,000 to $4,000 per student each year (2018). If stipends were provided for five hundred hours of work per year at $10 per hour, then stipends plus administrative costs could average $6,000 per student. An average of comprehensive services plus stipends could then be funded at roughly $5,000 per student year.

ate balance between the specific occupational skills that the labor market values today and the more general skills and credentials that are valued over the long term. Students obtaining specific occupational certificates or associate's degrees must have broad enough general skills to successfully move across firms and sectors if they have to; and opportunities for those with specific credentials whose value in the market has declined should find it easier to briefly return to colleges as an adult to retrain a bit than it is now. Although much of this is beyond what the RttT proposal can accomplish, the latter should be structured with these considerations in mind.

CONCLUSION

To improve educational attainment and subsequent earnings for low-income students, those attending community colleges (and perhaps lower-tier four-year institutions) need greater funding, as well as stronger incentives for those funds to be used effectively for such students. A federal competitive Race to the Top program for community colleges, modeled in some ways after the Obama administration policy for public K–12 schools, would provide both funding and incentives.

In the proposal outlined, community colleges (and perhaps others with large concentrations of low-income students) would get additional funding from the federal government through competitive grants to their states. The allowable uses of the new funding would be limited to expanding teaching capacity in degree or certificate programs in high-demand (or high-wage) fields, supports and services for low-income students, and stipends for work-based learning.

To get the funds, states would have to implement accountability schemes through performance-based funding of higher education. Although many are doing so now, the new performance measures would have to put substantially more weight on the subsequent earnings of their students (not just academic outcomes) or the attainment of high-demand and high-value credentials among their disadvantaged students. A range of other useful reforms in developmental education, expansion of sector partnerships and career pathway models, or the construction of guided pathways through college curricula would be acceptable uses of funds as well.

Special care would have to be taken to be sure that these new standards do not generate unanticipated consequences, as a result of colleges gaming the new standards (for example, by raising admissions requirements or lowering program completion standards). States would clearly need to develop data systems and analytical capabilities to measure and reward such outcomes. Evaluation evidence over time would indicate more clearly what works in the realm of accountability and new expenditures that successfully raises the educational attainment and earnings of disadvantaged students.

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Postsecondary Pathways Out of Poverty: City University of New York Accelerated Study in Associate Programs and the Case for National Policy

DIANA STRUMBOS, DONNA LINDERMAN, AND CARSON C. HICKS

A postsecondary education holds the promise of higher lifetime earnings and social mobility, but too many low-income students never complete their degrees. We propose a set of policy recommendations based on the highly effective Accelerated Study in Associate Programs (ASAP) at the City University of New York (CUNY). CUNY ASAP is a comprehensive and integrated program that addresses multiple barriers to student success by providing students with enhanced advising as well as academic and career services, financial support, and a highly structured degree pathway. ASAP has been shown to have large positive effects on associate degree graduation rates and to cost less per graduate than regular college services. A national policy based on the ASAP model could serve as a highly effective anti-poverty strategy.

Keywords: community college, postsecondary education, associate degree

In the United States, education has the potential to serve as a major pathway out of poverty. Postsecondary education in particular can be a powerful driver of mobility, resulting in social, health, and economic benefits (Hout 2012). Research consistently finds that individuals

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who earn a postsecondary degree have higher earnings and better labor market outcomes (Belfield and Bailey 2011). It remains difficult, however, for many, as demonstrated by the very low postsecondary degree rates nationwide. The problem of low degree attainment is especially pronounced among those from low-income households and those who matriculate at community colleges, the institutions that students from low socioeconomic status (SES) backgrounds primarily attend (Kena, Musu-Gillette, et al. 2015). For postsecondary education to function as an anti-poverty strategy, policies must be implemented to ensure that more students from low-income backgrounds stay enrolled and complete their degrees.

In this article, we present a proposal to increase postsecondary access and success rates by implementing a set of policies based on the highly effective Accelerated Study in Associate Programs (ASAP) at the City University of New York (CUNY). CUNY ASAP is a comprehensive and integrated program that addresses multiple barriers to student success by providing students with enhanced advising as well as academic and career services, financial support, and a highly structured degree pathway that includes carefully planned course schedules and course-taking with program peers. The program requires students to attend school full time and strongly encourages them to take developmental courses early so that they have a pathway to graduation within three years. The CUNY ASAP model has been shown to dramatically increase associate degree graduation rates in both experimental and quasi-experimental studies and to maintain these positive impacts for all subgroups of students examined, including all racial and ethnic subgroups and students from low-income households. Given the labor market returns to a postsecondary degree, a widespread policy intervention based on the ASAP model could have a profound impact on students' lifetime earnings and economic mobility (Levin and García 2017).

BACKGROUND AND LITERATURE

Individuals with a college degree earn more than those with only a high school education. In 2015, median weekly earnings for full-time workers with a bachelor's degree was $1,137 and $798 for those with an associate degree, relative to $678 for those with a high school diploma (Bureau of Labor Statistics 2015). In other words, workers with an associate degree had 18 percent higher earnings than those with a high school diploma. Going beyond descriptive statistics, many researchers have attempted to estimate returns to education using statistical controls for family background and ability, instrumental variables, and twin studies, looking at both additional years of education and degrees earned (Kane and Rouse 1995; Marcotte et al. 2005; Dadgar and Trimble 2015; Jepsen, Troske, and Coomes 2014; Card 1999). This research has found largely consistent evidence of positive earnings gains from an associate degree—with average estimates of a 13 percent increase for males and a 22 percent increase for females (Belfield and Bailey 2011).

Focusing specifically on mobility, Ron Haskins finds that a college degree has a large impact on the likelihood of moving up the economic ladder. With a college degree, children born into the bottom income quintile had a 41 percent chance of making it to the top two quintiles, relative to just a 14 percent chance without a college degree (Haskins 2008). Furthermore, the changing economy now demands employees with more education and training and provides fewer opportunities for those with only a high school education. Anthony Carnevale, Nicole Smith, and Jeff Strohl predict that 50 percent of U.S. job growth expected by 2018 would require at least an associate degree, underscoring that an associate degree may be even more essential for employment than it has been historically (2010).

A postsecondary education also has non-economic benefits. Researchers have found evidence of social and health benefits, including better health outcomes, reduced welfare receipt, and a decrease in criminal involvement (Belfield and Bailey 2011). Other benefits include positive effects on the community, family life, and reported levels of happiness, as well as increases in social capital (Hout 2012).

Postsecondary Degree Attainment

Although evidence suggests that postsecondary education can lead to social and economic mobility, the unfortunate reality is that many in-

dividuals from low-income families struggle to earn a college degree (Haskins, Holzer, and Lerman 2009). Low-income students are less likely to enroll in postsecondary education in the first place, which has led to calls for policies and programs designed to increase access to college (Ellwood and Kane 2000; Haveman and Smeeding 2006). However, access is not the only problem—there are also stark inequalities in college completion. Martha Bailey and Susan Dynarski find that students from low-income families were six times less likely to have earned a bachelor's degree by age twenty-five than those from high-income families, with only 9 percent of low-income students earning a degree by that age (2011). These differences remained when controlling for prior academic performance and the gap has grown over time. Part of these differences arises from the fact that low-income students are more likely to begin their path to a bachelor's degree by first enrolling at a community college with the intention of transferring. Few make it to that point.

COMMUNITY COLLEGES

Low-income students are more likely to attend community colleges than other types of institutions, both because they are less expensive and because many of them are open access institutions, allowing students to enroll who do not meet college readiness standards required by other types of institutions. Between 6.7 and 7.7 million students nationwide enroll at community colleges in degree-seeking programs each year, about 40 percent full time (National Center for Education Statistics 2016). Unfortunately, most of them do not complete a degree. National statistics show that only 19.8 percent of first-time, full-time degree-seeking students at public two-year institutions had earned a certificate or associate degree from their initial institution three years after entry (Snyder and Dillow 2015). Looking more broadly to consider students who transfer and over a longer time frame, only 35.1 percent of students who began at two-year public institutions had earned a degree from any institution six years later (Snyder and Dillow 2015).

A large percentage of students at community colleges nationwide are low income, with over half in receipt of federal Pell grants, which are predominately awarded to students with less than $20,000 in household income (National Center for Education Statistics 2014; U.S. Department of Education, Office of Postsecondary Education 2014). Students at community colleges, and low-SES students more specifically, face many barriers to completion (Attewell, Heil, and Reisel 2011; Goldrick-Rab 2010). Many students are not academically prepared for college-level courses, and must take remedial or developmental coursework that is difficult and time-consuming before they can even begin credit-bearing courses. This presents an immediate challenge to building academic momentum and decreases a student's chance of success because the number of credits earned in the first year is a key predictor of degree completion (Adelman 2006). In addition, many students struggle with financial issues, and need to work while in school or have family responsibilities that require them to balance school, work, and family—or both. Work and family obligations sometimes force students to attend part time, which can again lead to a loss in momentum and decrease their likelihood of graduating. Students may also struggle to feel integrated into college life and achieve a sense of belonging (Tinto 1993; Karp and Bork 2014). In particular, first-generation college-goers may not have the social capital or networks of family and friends familiar with the demands of college to help guide them.

Community colleges themselves are often not structured to support student success and could benefit from large-scale institutional changes (Bailey, Jaggars, and Jenkins 2015; Complete College America 2016). Despite enrolling students with the greatest financial, academic, and frequently personal needs, community colleges receive low public funding relative to other types of institutions (Kahlenberg 2015). A key structural problem is lack of good academic advisement, as advisors often have very large caseloads and are unable to provide personalized and frequent attention to students in need of support. High-quality advisement is important. Without it, students often do not know what course work to take to complete their degree, which delays degree completion.

Other institutional barriers include: lack of

coordination between the many departments and offices that serve students; an overabundance of degree options with a lack of structure to help students make decisions; policies for remedial placement and exit that prevent many students from moving into college coursework; and limited resources to provide high-quality experiences for students (on other institutional barriers, see Holzer 2018). The many barriers to postsecondary completion underscore the need for a transformative policy proposal. The CUNY ASAP model was designed specifically with these barriers in mind and seeks to address them with a comprehensive and integrated package of supports and resources.

ASAP Program Model

Accelerated Study in Associate Programs was created through a partnership between CUNY and the New York City Office of the Mayor with the explicit goal of addressing poverty by improving educational outcomes for low-income students. The majority of ASAP students are low-income and more than 80 percent receive Pell grants (Strumbos and Kolenovic 2016). Key ASAP program components include full-time enrollment, consolidated scheduling, cohort course-taking, comprehensive advisement, career and employment services, tutoring, summer and winter course-taking, and immediately and continuously addressing any remedial needs. Financial resources include tuition waivers (for any gap need beyond need-based financial aid awards), New York City transit cards (MetroCards), and free use of textbooks.

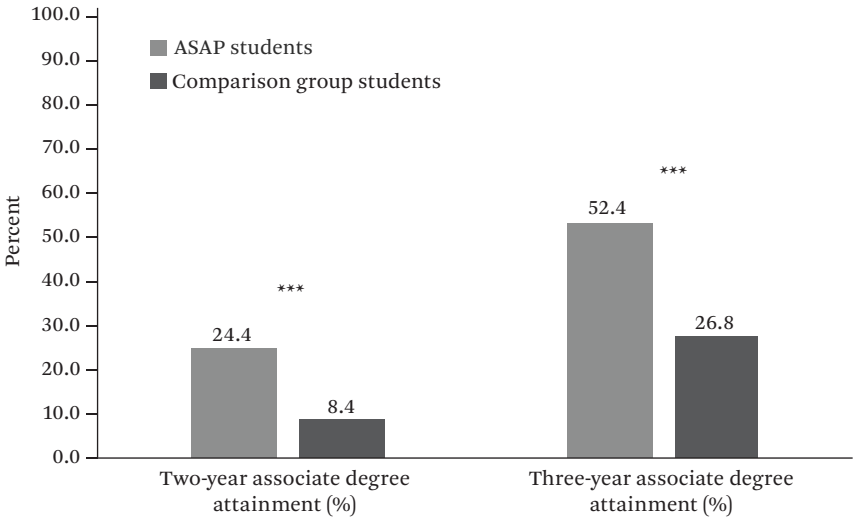
ASAP was designed to operate as a consortium of partner colleges and the CUNY Office of Academic Affairs (OAA). Colleges manage recruitment and direct service to students, tracking of student data to monitor progress and engagement, and campus integration and communication. CUNY OAA provides overall program administration and fiscal oversight, program-wide evaluation and data management, cultivation of external partnerships, management of common resource needs (such as MetroCards for transportation, textbooks, and promotional materials), citywide outreach, and coordination of program-wide activities including staff training. CUNY OAA and campus staff meet on a monthly basis, are in weekly contact about program and evaluation matters, co-present at conferences, co-plan program-wide events, and identify professional development needs for staff at varying levels. This division of labor and collaboration between program stakeholders from advisors to career specialists to directors has allowed ASAP to operate at maximum efficiency with a strong focus on program quality.

ASAP is deeply committed to the use of data for both evaluation and program management purposes. A fully dedicated ASAP research and evaluation team is embedded at CUNY OAA and collects and produces a wide range of data for program stakeholders, who meet often to review data, share challenges, and discuss best practices. ASAP has an established set of program benchmarks to monitor student progress toward three-year degree completion and determine if the program is delivering services as planned to all students. Examples of data indicators to monitor academic progress include semester retention rates, credit accumulation, enrollment in developmental courses, and rates at which students become fully skills proficient. Another key data point reviewed regularly is the frequency of contact with ASAP advisors. Data are collected and reviewed monthly and drive all decision-making regarding issues from delivery of services to program expenditures.

Evidence of ASAP's Outcomes and Cost-Effectiveness

The primary goal of ASAP is to graduate at least 50 percent of its students within three years, more than double the three-year graduation rate at the time the program was launched. CUNY OAA staff conducted a rigorous internal evaluation of its first cohort using quasi-experimental methods and found that ASAP students who entered in fall 2007 had a three-year graduation rate of 54.6 percent, versus only 26.4 percent for a comparison group of similar students (Kolenovic, Linderman and Karp 2013). These rates were impressive, but they were for a subset of students, because the initial cohort entered ASAP with no developmental course needs (although more than 40 percent had a need when first accepted to CUNY). Following the exceptional outcomes of this first

Figure 1. Associate Degree Attainment



Source: Authors' calculations using CUNY administrative data.
Note: A two-tailed t-test was applied to differences between ASAP and comparison group students. Total sample size was 6,462 (3,231 in the ASAP group and 3,231 in the comparison group). Estimates are adjusted by college and cohort using fixed effects.
***$p < .001$

cohort, ASAP expanded its eligibility criteria in 2009 to accept students with up to two developmental course needs at time of entry into the program.

An analysis of the most recent five cohorts with graduation data (fall 2009, spring 2010, fall 2010, fall 2011, and fall 2012) using propensity-score matching found that ASAP students had a three-year graduation rate of 52.4 percent, which was 25.6 percentage points higher than the comparison group graduation rate of 26.8 percent (figure 1). In addition, ASAP students had a higher two-year graduation rate (24.4 percent versus 8.4 percent); and those students who graduated within three years completed their degrees in slightly less time (4.7 semesters compared to 5.0 semesters on average). ASAP effects on three-year associate degree attainment were found for all cohorts, as well as for students who entered with developmental need, and for all admissions types (see table 1). Previous internal research has also shown that ASAP effects were found for all subgroups of race-ethnicity and gender, and for Pell recipients (Strumbos and Kolenovic 2016). Of particular note, African American male students in ASAP had a three-year graduation rate of 47.0 percent (versus 20.8 percent for the comparison group), Hispanic male students had a rate of 46.7 percent (versus 18.2 percent), and Pell recipients a rate of 52.7 percent (versus 27.3 percent) (Strumbos and Kolenovic 2016).

Third-semester outcomes (shown in table 2) demonstrate that ASAP students were already ahead of comparison group students early on in their degree studies. ASAP students re-enrolled at a higher rate (81.3 percent) than comparison group students (73.8 percent) and were enrolled full time at a higher rate (77.4 percent of all students who started versus 60.4 percent). ASAP students also had accumulated more credits by the end of their third semester—31.9 credits to 26.9. Looking only at students who were still enrolled at the end of the third semester, the cumulative grade point average (GPA) was quite similar for ASAP students (2.72) and comparison group students (2.65).

ASAP has also been studied by external researchers using rigorous methods. MDRC, a nonprofit, nonpartisan education and social

Table 1. Three-Year Associate Degree Attainment by Characteristics at Entry

Outcome	N	ASAP Students	Comparison Group Students	Difference
Cohort/semester of entry[a]				
Fall 2009 cohort	834	53.7	22.8	30.9***
Spring 2010 cohort	758	46.8	20.1	26.8***
Fall 2010 cohort	980	42.7	30.4	12.3***
Fall 2011 cohort	886	56.8	25.5	31.3***
Fall 2012 cohort	3,004	55.5	28.8	26.6***
Admission type				
First-time freshmen	4,238	50.4	24.0	26.4***
Transfer students	389	52.5	21.0	31.5***
Continuing students	1,835	57.0	34.4	22.6***
Developmental need at entry				
Fully proficient at entry	2,164	64.0	35.7	28.4***
At least one developmental course need at entry	4,298	46.6	22.4	24.2***

Source: Authors' calculations using CUNY administrative data.
Note: A two-tailed t-test was applied to differences between ASAP and comparison group students.
[a]For the ASAP cohorts that entered in fall 2009, spring 2010, and fall 2010, prior year students were used for the comparison group. Starting with the fall 2011 ASAP cohort, students from the same year were used for the comparison group. Estimates are adjusted by college and cohort using fixed effects.
***$p < .001$

Table 2. Third Semester Outcomes

Outcome	ASAP Students	Comparison Group Students	Difference
Retention (%)	81.3	73.8	7.5***
Full-time enrollment (%)	77.4	60.4	17.1***
Cumulative credits earned (end of semester)	31.9	26.9	5.0***
Sample size	3,231	3,231	
Cumulative GPA (end of semester)	2.72	2.65	0.07**
Sample size	2,625	2,379	

Source: Authors' calculations using CUNY administrative data.
Note: A two-tailed t-test was applied to differences between ASAP and comparison group students. Cumulative GPA is measured out of those who were still enrolled at the end of the third semester. Estimates are adjusted by college and cohort using fixed effects.
***$p < .001$; **$p < .01$

policy research organization, conducted an evaluation of ASAP using an experimental (random assignment) design to reduce the chances that selection bias and student motivation were the true causes behind ASAP's apparent effects. The MDRC study included students from three community colleges—Borough of Manhattan Community College, LaGuardia, and Kingsborough—who entered in spring 2010 and fall 2010. All students in the MDRC study entered ASAP with at least one developmental course need. MDRC found that program group stu-

dents, those who had the opportunity to participate in ASAP, had nearly double the three-year graduation rate of control group students, at 40.1 percent versus 21.8 percent, an effect of 18.3 percentage points. The study authors noted that "ASAP's effects are the largest MDRC has found in more than a decade of research in higher education" (Scrivener et al. 2015, ES-2). They also found that program group students had higher rates of enrollment every semester, higher rates of full-time enrollment, higher levels of total credit accumulation, and higher rates of transfer to four-year colleges during the study period.

Finally, ASAP's cost-effectiveness and benefits have also been examined in two reports by the Center for Benefit-Cost Studies in Education at Teachers College, Columbia University. The first report found that, although ASAP costs considerably more per student, its higher graduation rates result in a lower cost per graduate. The cost per graduate for ASAP students is $6,500 less than the cost per graduate for comparison group students (Levin and García 2012).[1] The second report, a benefit-cost analysis also by Henry Levin and Emma García, estimated benefits to students and taxpayers. It found that the investment in ASAP generates millions of dollars in net benefits through increased lifetime earnings and tax revenues, as well as reduced spending on public health, criminal justice, and public assistance (2013, 2017). Levin and García estimated a benefit-cost ratio of 3.5:1 for each ASAP graduate and further estimated that an enrollment of one thousand students in ASAP would produce total net benefits of approximately $46 million more than the net benefits for the same comparison group enrollment.

Preliminary evidence of longer term outcomes of the first two cohorts of ASAP students suggest that they continue to pursue further education after completing the associate degree. Six years after entering ASAP, 61.3 percent of students had earned an undergraduate degree (associate or bachelor's), 57.8 percent of students had transferred to a baccalaureate program, and 25.2 percent had earned a bachelor's degree (Strumbos and Kolenovic 2017). These transfer and degree attainment rates were significantly higher than the rates for a propensity-score matched comparison group. For first-time freshmen, the ASAP student transfer rate was 19 percent higher than the comparison group and the bachelor's degree attainment rate was 49 percent higher. This suggests that ASAP not only helps students earn their associate degrees, but also helps them transfer and better prepares them for success in earning the bachelor's degree, even more critical for long-term economic mobility.

POLICY PROPOSAL BASED ON ASAP

The ASAP model consists of a package of supports and policies that have been shown effective when delivered in a comprehensive and integrated way. The program has only been tested and proven successful when it is offered as a complete package, and we believe all components are essential to its success. Our policy proposal is based on the key features of ASAP and includes the following nine recommendations.

Encourage and support full-time enrollment for all students

Build degree momentum through use of winter and summer course-taking and a focus on addressing remedial needs

Provide financial supports to students, including transportation and textbook assistance

Provide comprehensive advisement focused on building strong and deep relationships with students

1. Levin and García used estimated graduation effects from a propensity-score analysis of ASAP's first cohort, showing that ASAP students had a three-year graduation rate of 55 percent versus 24 percent for the comparison group of similar students at CUNY (2012). They estimated the costs of producing associate degrees for both ASAP and comparison group students by calculating the costs of the aggregate, full-time equivalent (FTE) enrollments over three years for both groups using an ingredients-based approach and budgetary information provided by CUNY. The costs were then divided by the numbers of graduates in each group to determine the cost per graduate.

Develop tools and resources to guide students, such as course sequences and degree maps

Build a connected community through a summer institute to orient students and by blocking at least two first-year courses

Integrate academic support and career development services into the menu of mandatory services

Build strong relationships between advisors and faculty and enable interdepartmental coordination across college units

Promote a culture of ownership and accountability at all levels

Encourage and Support Full-Time Enrollment

An essential piece of a national policy proposal based on the ASAP model is that students must be encouraged, if not required, to enroll full time each semester. This requirement should be coupled with supports to enable students to take on a full-time course load (as described in subsequent sections). ASAP students are required to enroll full time each semester they are in the program, which means a minimum of twelve credits per semester at CUNY community colleges.

Full-time enrollment is a key predictor of degree completion (Attewell, Heil, and Reisel 2011). Adelman's research on academic momentum demonstrates how important it is for students to enroll in and earn credits in their first year (2006). However, many institutions do a poor job of communicating to students how important it is to enroll full time each semester or to explain the implications of enrolling part time. At CUNY, like many other institutions, most associate degree programs require sixty credits. This means that a student must earn at least fifteen credits each semester (or thirty credits per calendar year) to graduate in two years, the presumed time frame for community colleges. However, the message to students is often that they can enroll in twelve credits or choose to go part time without pointing out that this could delay their graduation significantly and potentially impact time-stamped financial aid. It is critical to provide students who want to earn a degree in a timely fashion with a clear message about enrolling full time and the expectation to graduate in three years or less.

Yet, it is not enough to encourage or require students to enroll full time—it is also important to support students so that they are able to take a full-time course load. Many community college students are working while in school or have family responsibilities, or both, making it difficult to take a full-time course load. If provided with appropriate and relevant supports, many students with these outside responsibilities are in fact able to enroll full time—ASAP has shown that through delivery of the full program model, students are able to remain enrolled full time at higher rates. The MDRC study found that students in ASAP were enrolled full time at higher rates each semester than the control group. In the second semester, 85.6 percent of program group students were enrolled full time relative to 65.2 percent of control group students, for an estimated effect of 20.4 percentage points (Scrivener et al. 2015). Given that this was a random assignment study in which program group students and control group students had an equal likelihood and ability to enroll full time prior to the study, this finding indicates that ASAP's robust combination of supports, structures, and resources enabled students to stay enrolled full time.

Some may argue that full-time enrollment is not a realistic option for all students. However, without enrolling full time, it is virtually impossible to complete a degree in a timely manner. For students who want to earn an associate degree within three years, the message should be clear that in order to graduate within this time, they will need to earn at least twenty credits per year. Evidence from evaluations of ASAP shows that when students are supported with financial resources and provided with robust advisement, integrated support services and flexible course-taking options, continuous full-time enrollment is attainable for many more students. Rather than operating under the premise that full-time enrollment is not possible for most students, institutions should work to make it possible for more students to do so. This can be accomplished by offering consolidated course schedules at different times including evening and weekends, reimagining student support services, and providing

financial supports, such as textbook and transportation assistance, to reduce the hours needed for work.

Build Degree Momentum

A national ASAP-like model should provide opportunities to build degree momentum through use of winter and summer course-taking and an immediate and continuous focus on addressing remedial needs. When appropriate, students in ASAP are encouraged to enroll in winter and summer courses with ASAP covering their tuition for these courses. This helps students maintain academic momentum so that they can earn at least twenty credits each year, the critical threshold found to predict completion (Adelman 2006).

The MDRC study found that by the end of the third semester, program group students had earned an average of 30.3 total credits (including developmental education credits) compared to the control group average of 24.1 total credits (Scrivener et al. 2015). Part of this difference was due to winter and summer enrollment. MDRC also found that program group students enrolled during the winter and summer sessions at much higher rates than control group students in the first two years (Scrivener et al. 2015).

Colleges should be resourced to offer free or discounted intersession courses that would help students build academic momentum. For example, CUNY offers developmental education courses and select STEM (science, technology, engineering, and mathematics) courses free of charge in the summer to matriculated students. Other credited summer courses have been offered by CUNY colleges at discounted rates through "buy one course, get one free" initiatives or by offering winter and summer courses as "waiver" courses whereby colleges only pay instructional costs and do not charge separate tuition.

Perhaps more critically, ASAP students with remedial needs are required to address these needs immediately and continuously until they become fully proficient. ASAP carefully tracks enrollment in remedial courses each semester and examines pass rates to monitor progress through remediation. MDRC found that after one year, 63.9 percent of program group members had completed their developmental education requirements, compared with 41.5 percent of control group members (Scrivener et al. 2015).

We recommend that colleges create and effectively market free developmental education interventions in the summer and winter that will help students eliminate or reduce developmental need before matriculation. Such interventions will require an ambitious communication campaign targeting faculty, student support staff, high school or HSE counselors, students and parents. ASAP messaging in this area is aggressive and focuses on how addressing developmental needs quickly puts students on their degree pathway and moves them toward their goals faster. We recommend strong messaging in this area at a national level.[2]

Provide Financial Supports to Students, Including Transportation and Textbook Assistance

While many students receive financial aid toward their tuition, one of the most commonly cited challenges that students face is paying for transportation and textbooks. ASAP provides students with transportation assistance in the form of free MetroCards for the New York City subway and bus system. In addition, ASAP works with the official bookstores/vendors for each college to provide $500 per year for each student to be used toward textbooks. Students who use up more than half of this amount in their first semester may be eligible for additional textbook funds based on their course enrollments and needs. These financial supports are very important to ASAP students—in some cases, they allow students to work fewer hours and concentrate on their course work. In an-

2. Other types of remediation reforms are being implemented around the country that reduce or eliminate the need for remediation or provide alternate pathways through remediation. We strongly support institutional reforms in these areas, although they are not a component of the existing ASAP model, which is focused on services and supports outside the classroom.

nual student surveys, ASAP students consistently report that financial supports are one of the most important program components (Linderman and Kolenovic 2012).

Provide Comprehensive Advisement

Advisement is at the heart of the ASAP model and is an area where substantial improvements are needed at many community colleges nationwide. ASAP advisors build strong and deep relationships with students and remain with them for the entire time they are in the program, from entry to graduation.[3] As cited in a 2013 study of ASAP, the number of contacts between students and their ASAP advisors was found to be a key predictor of timely degree completion (Kolenovic, Linderman, and Karp 2013). Though the need to improve college advisement is a much discussed topic, recommendations are often vague and without a strong evidence base. Our policy proposal recommends several concrete ways to improve advisement.

Advisor-Student Ratios of 1:150 with an Accompanying Triage Model to Ensure That High Needs Students Have Necessary Support

ASAP advisors have a maximum caseload of 150 students per advisor to ensure that they can meet with students frequently and provide personalized and timely support. By contrast, nationally community college advisors have an average caseload of 441 students (Robbins 2013). In the first semester of the program, all ASAP students are considered high-need students and are required to meet with their advisor twice per month. After the first semester, students are sorted into needs groups each semester based on a combination of academic progress, personal resiliency, and program compliance factors. The requirement to meet with an advisor is then adjusted based on their needs group. This allows advisors to manage their caseloads by "triaging" students so they can provide more frequent assistance to students who are in need of greater support. A policy based on the ASAP model would cap the maximum number of students assigned to each advisor at 150 and encourage the use of a similar triage model to guide caseload management.

Training for Advisors Beyond the Scope of Traditional Academic Advisement That Focuses on Personal Development and Helping Students with Long-Term Goals

ASAP advisement is much more in-depth than traditional community college academic advisement. ASAP advisors are trained to use a developmental advisement approach recommended by National Academic Advising Association (NACADA), which considers the needs of the whole student, aims to help advisors build rapport with students, and focuses on fostering goal-setting and self-advocacy skills. In advisement sessions, ASAP advisors cover topics such as long-term planning, career goals, time management, and strategies for addressing personal issues, in addition to focusing on traditional academic advisement tasks like helping students select and register for classes. MDRC found that students who received ASAP advisement reported a much broader range of topics discussed with their advisor than control group students who received regular college advisement (Scrivener et al. 2015). Given that many students at community colleges are the first in their family to attend college, they may not have personal or family networks that can provide this type of guidance. Advisement that covers these topics is crucial for many community college students and is lacking at most institutions.

Advisor Assignments to Ensure the Same Advisor Remains with the Student Through Graduation

Ensuring that the same advisor remains with a student from acceptance through graduation helps build strong and deep relationships so that students feel comfortable with their advisors, trust their guidance, and are willing to follow their recommendations. We recommend a staffing structure that allows advisors to stay

3. More details on the ASAP advisement model are provided in "Inside ASAP: A Resource Guide on Program Structure, Components, and Management" (Boykin and Prince 2015).

with students throughout the course of their academic career.

Expectations Clearly Communicated to Students of the Requirement to Meet Frequently with Advisor and Compliance Encouraged by Incentives

As mentioned, ASAP students are required to meet with their advisor twice per month in the first semester. After that semester, depending on their need, the requirement may be lowered to as little as once every other month. Advisors meet with students in a variety of ways—individual in-person meetings, small group meetings, large group meetings, and by phone. The mandatory nature of advisement in ASAP also removes the guesswork for students when assessing when and how to reach out for support from an advisor when the service is optional. Melinda Karp points out that many first-generation, low-income students are unsure of where and how to reach out for help when they arrive at college and therefore do not reach out at all (2011). ASAP students are informed of the requirement to meet with their advisor during the recruitment process and commit to meeting the requirement as a step to enrollment. To ensure that students meet this requirement, incentives are used. Students who do not meet with their advisors as required may have their MetroCard deactivated. Early on in their academic careers, before students realize the value of advisement, the MetroCard serves as an important incentive to ensure that students meet program requirements. We recommend a clear message to students about the advisement meeting requirements and a mechanism to incentivize students to attend these meetings.

Data Systems to Track Advisement and to Create Accountability for Participation and Outcomes

Finally, the use of data serves as a key component of the ASAP advisement model in several ways. First, ASAP advisors have access to a custom database that allows them to monitor student academic progress and to carefully track contacts with students and notes from meetings. Advisors can use this database to run reports to identify students who did not have a meeting in a given period of time and to review prior meetings and notes. Advisors are trained and strongly encouraged to use data to better serve students. Second, ASAP campus directors and program management staff make frequent use of data to monitor the program and to make decisions. Monthly reports are run to track how many students are meeting with their advisors and how frequently, types of meeting topics (using meeting codes entered by the advisors), and types of action taken (using action codes entered by the advisors). Reports are also run to track student enrollment and success in developmental courses, semester-to-semester retention, credit accumulation, GPA, and graduation. Aggregate reports help program administrators ensure the program is on track to meet benchmarks, while student-level reports help advisors identify students in need of support. Developing or refining data systems that can be used across multiple levels to support advisement and program management is also an essential piece of ensuring that advisement is delivered effectively.

Develop Tools and Resources

At many community colleges, students are provided with a vast array of options of degree programs and little guidance or detailed information about the requirements. Thomas Bailey, Shanna Jaggars, and Davis Jenkins lay out the main issues with what they refer to as the "cafeteria college" and the need for guided pathways to better support students (2015). In ASAP, each major is carefully mapped out with course sequences and semester-by-semester plans of what courses to register for in order to graduate in three years or fewer. These tools help students see the long-term plan and path to their degree and help advisors provide appropriate guidance and support. They also help ensure that students do not waste time, energy, and financial aid dollars taking courses and earning credits that will not count toward their degree. Making easy-to-understand course sequences and degree maps available to students is an essential piece of our policy proposal.

Build a Connected Community

Building a sense of community can be very difficult in a community college setting, which makes it hard for students to feel integrated and

connected to peers, faculty, and staff on campus. When students feel connected to each other and to the staff and have a sense of belonging at the institution, they are more likely to stay enrolled and graduate. ASAP works to build this sense of community and connection by creating opportunities for students to meet each other and to build a sense of belonging with other students in their cohort. For students entering in the fall, a summer institute is held prior to the start of the semester where students have a chance to meet each other and learn more about what it means to be a part of the ASAP community. In their first year, students take three to five blocked classes with other ASAP students—classes are considered blocked if they have at least ten ASAP students. We recommend an orientation prior to enrollment to begin to build a sense of community and placing students in at least two courses in their first year with the same group of other students.

Integrate Academic Support and Career Development

Many community colleges have tutoring centers and career services offices, but too often students do not take advantage of these resources. In ASAP, students are required to attend tutoring while they are taking remedial courses, or if they are struggling academically, or if their advisor deems it necessary. Tutoring attendance is tracked and, as with advisement, students must meet the tutoring requirement to continue to receive the financial resources provided by the program.

ASAP also provides a dedicated career and employment specialist (CES) at each college. Students are required to meet with the CES individually or in workshops several times prior to graduation and are expected to meet a series of career development benchmarks. Again, meetings and benchmarks are tracked to ensure that students receive these services. We recommend that academic support, such as tutoring or supplemental instruction, and career development services are provided to students and communicated as a required activity.

Build Strong Relationships

Coordination across departments is often lacking in community colleges, which makes navigating college life difficult and confusing for students. ASAP staff work closely with all offices in the college, including admissions, financial aid, bursar, and the registrar to ensure that supports are in place for students and that the college is working effectively as an integrated institution. In addition, ASAP advisors build strong relationships with faculty and gather faculty feedback about students on a scheduled basis so they can intervene promptly to help students if they are struggling. This effectively creates a team of faculty and staff working jointly to support students. Establishing fully integrated, coordinated institutional communication systems to better support student success is an important element of our policy proposal.

Promote Ownership and Accountability

The last crucial piece of developing a national ASAP-like model is promoting a culture of ownership and accountability at all levels of the institution. Having leadership buy-in and investment in the success of students is necessary for the program model to work. From inception, ASAP was identified as a top priority for CUNY; and CUNY Office of Academic Affairs and college leadership were actively engaged in establishing optimal conditions for the program to launch and operate efficiently on an ongoing basis. Examples included expediting staff hiring, identifying appropriate program space, encouraging timely recruitment and enrollment of students, and supporting communication and coordination across academic departments and other college units.

ASAP also has a strong management structure with a data-driven culture that encourages accountability for clearly articulated student outcomes and program service delivery benchmarks that are constantly reviewed to allow for continuous improvement. As mentioned, data on program activities and student outcomes are carefully collected and progress toward goals is tracked and reviewed on a scheduled basis. Stakeholders at all levels, including ASAP campus directors and their immediate program team members such as advisors, recruitment staff, and career specialists, meet regularly to review their own local data (pulled from the ASAP database or produced by the CUNY OAA

ASAP research and evaluation team), delivery of services, and student needs. Each staff member is clear on the benchmarks they are individually working toward from enrollment targets to the number of advisement contacts with students.

Partner college directors come together monthly with CUNY Central ASAP staff to discuss program-wide trends, review data produced on an annual schedule, share best practices, and consider strategies for addressing challenges and improving program impact. Finalized semester and annual program data are collated and shared with college and CUNY leadership as well as funders to ensure that all stakeholders are fully aware of program successes and areas for potential improvement. Only with this type of systemic buy-in and sustained support will these policy recommendations result in program success that leads to higher graduation outcomes.

COST AND EXPECTED IMPACT

Such a program could be implemented and funded at a national level several ways. One is a competitive federal grant process, such as the "Race to the Top" grant program proposed in this double issue (Holzer 2018). In a competitive grant process, states or institutions could apply for funding to implement an ASAP-like program or to restructure their institution based on the key components of the ASAP model. Each year, around 1.2 million students enroll in community colleges for the first time and between 60 and 65 percent enroll full time when they begin. If an ASAP-like program were provided to all first-time full-time students at community colleges, roughly 750,000 students would have been enrolled in fall 2013 (Kena, Hussar, et al. 2016).[4] On top of this, a group of students would become able to enter full time with the proper supports.

A detailed cost analysis for this proposal has not been conducted, but we estimate that, with 750,000 students served, a national policy based on ASAP could cost between $2.25 and $4.88 billion in the first year. If the retention rates are similar to ASAP rates (80 percent in second year and 40 percent in third year) and 750,000 new students enrolled each year, second year costs would be between $4.05 and $8.78 billion and third year and ongoing costs would be between $4.95 and $10.73 billion per year.

These estimates are based on costs that range from $3,000 to $6,500 per student per year. When ASAP began with just over a thousand students, the additional annual cost per student above usual CUNY community college full-time equivalent allocations was $6,500. That cost dropped dramatically as the program has expanded. As of academic year 2016–2017, the annual cost per student was $3,700 with additional savings expected as the program grows to serve more students and further economies of scale are realized. The ASAP demonstration in Ohio was estimated to cost $3,000 per student per year above regular college costs (Sommo and Ratledge 2016). Of course, the costs to implement ASAP-like programs would depend on many factors, including the amount of existing state, system, and institutional resources and the ability to marshal those resources, local differences in personnel and other program expenses, and the level of investment dedicated to building and maintaining a strong data system and effective program management structure.[5] As discussed, even at its highest cost, ASAP has proven to be extremely cost effective (Levin and García 2012; Scrivener et al. 2015) and to demonstrate strong return on investment (Levin and García 2017).

In terms of potential impact, national data show that more than half of all students entering public two-year institutions were at or below 200 percent of the federal poverty level in

4. Ideally, all community college students could eventually receive ASAP-like services. However, the simplest way to estimate the costs and potential impact of a nationwide expansion is to consider how many students would be served if all students were provided with the program as they entered a community college. For this reason, we focus our estimates on first-time students.

5. For example, the State of New York recently launched the Excelsior Scholarship program to provide free public college tuition for students from families making less than $125,000 annually who are not fully covered by existing federal and state financial aid.

2011–2012, an estimated 32 percent below 100 percent, and another 23 percent between 100 and 200 percent (National Center for Education Statistics 2017). The ASAP model has been found to be effective for all students, including those from lower income quintiles and those who receive federal Pell grants. Doubling graduation rates for students below the poverty level would increase the number of individuals with associate degrees, better situating them for higher earnings and increased employment opportunities throughout their lifetimes. A college degree nearly triples the chances of an individual moving from the lowest income quintile to the top two income quintiles (Haskins 2008). A human capital approach such as this one would likely enable far more individuals to move out and stay out of poverty.

LIMITATIONS AND ALTERNATIVES

The ASAP model has limitations, of course, and colleges could consider alternative approaches. The most frequent criticism is that not all students can enroll full time because some students must work to support themselves. As mentioned, we strongly believe, based on the evidence from ASAP, that many more students could in fact attend full time if they were properly supported or if courses were scheduled and offered in the evenings, on weekends, or online to enable working students to enroll in at least twelve credits per semester. The model would also work for part-time students if they enroll during summer and winter sessions and if courses are available during those times. Institutions committed to success for working students should ensure they offer course options that make it possible for students to enroll in enough credits each year. Unfortunately, if students do not enroll in enough credits to earn at least twenty credits per year, it is not possible for them to graduate with an associate degree within three years. Institutions are responsible for ensuring they communicate this message clearly to students so they can make an informed decision. In addition, students who attend part time may be eligible for less financial aid and, again, institutions should ensure that they properly communicate the financial aid implications of different choices to students.

A second limitation of the model is that it costs more than traditional community college services and requires a significant investment in staff, training, and space. ASAP costs are higher, but as several studies have shown, the costs are actually less per graduate when the large increase in graduation rates are considered. A more robust upfront investment in an evidence-based program model offers a more efficient use of public funding than current spending practices that have consistently yielded low completion rates.

There has been discussion of other interventions at the national level that could and do have an impact on community college success, such as free community college tuition, expansion of Pell grant awards, implementation of guided pathways models, and stricter accountability for colleges in the form of performance funding. Currently no proposed interventions have the robust evidence base and consistent strong track record of success as ASAP. Free community college tuition initiatives, expansion of Pell and year-round Pell, are highly beneficial to students; however, it is important to keep in mind that students have many expenses beyond tuition (such as for transportation and books, which ASAP covers). It is also worth repeating that providing financial resources alone is also not enough to help students overcome barriers. In addition to having financial needs, many students are in need of wraparound services and coordinated supports. In many cases, interventions that are purely financial may not be enough to help students succeed.

HISTORY AND FUTURE OF ASAP

CUNY ASAP originated out of a partnership between CUNY and the New York City Office of the Mayor and provides a solid example of how close collaboration and strong commitment from government can enable successful rollout of a complex postsecondary initiative. The story of how ASAP was created underscores the importance of strong buy-in from key stakeholders. An evidence-based program model is a clear necessity, but without the right commitments and players at the table, even a robust model has little chance of success.

The Center for Economic Opportunity and Education as Pathway to Economic Opportunity

Early in 2006, New York City Mayor Michael Bloomberg convened a commission composed of leaders from the academic, public, philanthropic and business sectors to create a set of recommendations about how New York City (NYC) could better address the issue of poverty. Among other strategies, education was identified as a crucial pathway for increasing economic opportunity and moving people out of poverty. Notably missing at the time were programs that provided adequate supports for students in the community college setting. Many students enrolled at CUNY community colleges were stuck in remedial or developmental education courses and the six-year graduation rate hovered around 20 percent.

For the commission, focusing on evidence-based programming was key to ensuring that the interventions proposed would have impact. The commission recommended close monitoring of all initiatives as well as evaluation to determine efficacy. The NYC Center for Economic Opportunity (CEO) was created as a unit within the Office of the Mayor to implement, monitor, and evaluate effective solutions to poverty, bringing forth the recommendations of the commission.[6] It was funded with public and private dollars—with an annual allocation of approximately $80 million to be used for demonstration projects, monitoring, and evaluation.

Creation of ASAP and History to Date

CUNY's then Chancellor Matthew Goldstein saw an opportunity with the efforts of the commission and the creation of CEO and approached the mayor with the idea for ASAP. With this support from CEO, ASAP was created in January 2007 to address poverty by radically improving the associate degree attainment rates of low-income New Yorkers. Rather than initiate a small pilot program at one or two colleges, all community colleges in the CUNY system were included from the beginning, to ensure the model could be effective in a variety of settings. ASAP began with an initial cohort of 1,132 students across CUNY's then six community colleges: Borough of Manhattan, Bronx, Hostos, Kingsborough, LaGuardia, and Queensborough.

CEO worked closely with staff at CUNY on program development, and helped build a rigorous evaluation agenda to effectively monitor outcomes and determine impact. The program had strong support within the mayor's office and high visibility. These factors were extremely valuable in problem-solving and ensuring that CUNY ASAP received the necessary funding and attention required for successful implementation. Based on its early results, funding from CEO was made a permanent allocation to CUNY in 2011 and the University expanded ASAP to 4,300 students over the next three years. To date, ASAP has served more than thirty-three thousand students across eleven cohorts between 2007 and fall 2017. The close collaboration between City government and a postsecondary institution was a key ingredient in the successful implementation of ASAP and serves as a model for how a similar program could be rolled out in other cities and states.

ASAP Expansion, Replication, and as National Policy Model

In 2014, Mayor Bill de Blasio and the City of New York made an even larger investment in ASAP's expansion so that it can help even more low-income students earn an associate degree. With an additional $77 million in new annual city funding, ASAP is undergoing a major expansion across CUNY to enroll twenty-five thousand students per year by 2018–2019 and beyond across nine colleges.[7] Program growth will include a specific focus on serving more STEM majors to position more students for projected in-demand job opportunities across multiple employment sectors in the region. The expansion will also include the ultimate proof of the ASAP concept through a campus-

6. The Center for Economic Opportunity has since been merged with another unit in the mayor's office and renamed the Mayor's Office for Economic Opportunity.

7. Medgar Evers College became part of ASAP in fall 2014; College of Staten Island and New York City College of Technology joined ASAP in fall 2015.

wide expansion at Bronx Community College that will place most first-time, full-time students who enter the colleges into an ASAP pathway. The ASAP model is also being replicated at CUNY at the bachelor's level. In fall 2015, John Jay College of Criminal Justice, one of eleven CUNY senior colleges, launched an ASAP-like program called Accelerate, Complete, and Engage (ACE) that incorporates all core elements and resources of ASAP and aims to double the four-year bachelor's completion rates of participating students. Early findings from the first cohort are promising: ACE students are demonstrating significantly higher credit momentum toward a degree than matched comparison group students after four semesters. The New York City Mayor's Office for Economic Opportunity and a private funder have supported an additional ACE cohort in fall 2017. CUNY is pursuing additional funding opportunities to further expand ACE and assist other CUNY senior colleges to create similar programs.

Additionally, ASAP is being replicated beyond CUNY through a demonstration project in Ohio at three community colleges. CUNY provided technical assistance to partner colleges and the Ohio Department of Higher Education, which serves in a convening capacity. MDRC is leading a random assignment study of the Ohio programs and early findings suggest they are realizing promising impacts (Sommo and Ratledge 2016). CUNY is also providing technical assistance to two community colleges in California and New York (Skyline Community College and Westchester Community College) that aim to replicate and rigorously evaluate their own ASAP-like programs.

A national policy based on the ASAP model would take these efforts to the next level—leading to a dramatic increase in associate degree completion rates. ASAP has been recognized by the U.S. Department of Education as an example of a promising intervention to increase low-income student success (U.S. Department of Education, Office of the Under Secretary 2016). Already, members of the House Committee on Education and the Workforce have announced a bill, the Community College Student Success Act, to fund community colleges to "develop and implement programs modeled after ASAP to improve degree completion" (Committee on Education and the Workforce 2017). Bringing ASAP to national scale could be a transformative anti-poverty strategy with broad social and economic effects. Millions of students attend America's community colleges every year with aspirations to create a better life for themselves and their families by earning a college degree. They deserve nothing less than the country's collective best efforts to help them realize these goals building on proven, evidence-based practice.

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A Two-Generation Human Capital Approach to Anti-poverty Policy

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We propose a two-generation anti-poverty strategy to improve the economic fortunes of children in the United States. Our policy bridges two traditionally siloed interventions to boost their impacts: Head Start for children and career pathway training offered through community colleges for adults. We expect that an integrated two-generation human capital intervention will produce greater gains than either Head Start or community

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college alone for developmental and motivational, logistical and financial, social capital, and efficiency reasons. We suggest a competitive grant program to test and evaluate different models using federal dollars. We estimate average benefit-cost ratios across a range of promising career fields of 1.3 within five years and 7.9 within ten years if 10 percent of Head Start parents participate in two-generation programs.

Keywords: poverty, Head Start, two-generation, career pathway training, child development

The economic fortunes of children in the United States are deeply concerning. One in five children are living in poverty (Child Trends Databank 2015a), and intergenerational economic mobility is harder than ever: only 10 percent of children born in the bottom quintile move to the top quintile when they are adults (Isaacs, Sawhill, and Haskins 2008; Sawhill and Reeves 2016). As we continue in the twenty-first century, our nation needs new anti-poverty policies and programs to promote the life chances of disadvantaged children.

Education is one of the strongest predictors of income in the United States. Incomes in highly educated families are three times larger than in families with low levels of education (Bradbury et al. 2015). This educational disadvantage compounds over generations and is more pronounced in the United States than in most other advanced industrial countries. The United States ranks near the lowest in its share of working-age citizens who surpass the educational attainment of their parents (OECD 2014). We also know that parents' education and income are significantly linked with children's educational achievement (Reardon 2011).

Given the strong association between parent and child human capital formation (Ermisch, Jantti, and Smeeding 2012), we argue for linking two traditionally siloed anti-poverty interventions with the goal of strengthening their impacts: early childhood education for children and career pathway training for adults (Chase-Lansdale and Brooks-Gunn 2014). These combined services are now referred to as two-generation human capital programs and are beginning to proliferate across the United States. Our proposed strategy uses Head Start as the child platform and community college as the parent platform. Head Start is the largest and only federally funded early childhood education program targeting low-income children through a whole-family approach, making it a promising component for testing a two-generation anti-poverty intervention (Sommer, Sabol, Chase-Lansdale, and Brooks-Gunn 2016). Head Start has also been shown to be effective in promoting children's cognitive outcomes (U.S. Department of Health and Human Services 2010).

Community colleges (and their nonprofit, technical school counterparts) are increasingly serving student parents with similar sociodemographic characteristics to Head Start parents. Many parents in community colleges have young children, and 15 percent are single parents (Horn, Neville, and Griffith 2006). Although community colleges often have disappointing results in helping low-income student-parents overcome barriers and reach their educational goals (Goldrick-Rab and Sorenson 2010; Miller, Gault, and Thorman 2011), an expanding innovation in the field of job training programs—sector-based career pathway training—has shown promise for low-income adults. Sector-based career pathway training programs have positive impacts on educational persistence and certification and have the potential to improve earnings and income, especially when combined with financial incentives and wrap-around supportive services (Eyster, Anderson, and Durham 2013; Holzer 2009), although their effectiveness for parents is unknown.

Our idea is to promote the pairing of sector-based career pathway training for parents with Head Start programming for their young children in order to improve educational gains across generations and expand service effectiveness and efficiencies. A major goal of this essay is to bridge traditionally siloed theories and bodies of evidence—early childhood education for children and workforce development for parents—to support the premise that there is potential for two-generation programs to have large impacts on parents and children. We argue that two-generation programs would improve effectiveness of existing programs by si-

multaneously boosting educational outcomes for children and parents and subsequent earnings for parents, which is likely to have positive synergistic effects across generations. Intentional and intensive two-generation service partnerships can further promote these gains over light touch referrals that have not proven effective (Hsueh, Jacobs, and Farrell 2011). We conjecture that purposefully and systematically integrated two-generation programs will produce greater gains than Head Start or career training programs alone for developmental and motivational, logistical and financial, social capital, and efficiency reasons. We expand on each below.

The foundation of two-generation programs is the linked lives of parents and children. Children have much to gain when parents increase their education and income, including improved knowledge, skills, schedules, and financial resources, all of which directly benefit children (Chase-Lansdale and Brooks-Gunn 2014). From a motivation prospective, two-generation programs may inspire parents to succeed in meeting their own educational goals as they see their children succeeding in school. Children's positive experiences in Head Start have served as a motivator for parents to improve their lives (Gelber and Isen 2013; Love et al. 2013; Sommer et al. 2012). This may be especially true in two-generation programs that help parents see the vital connection between their own educational attainment and their children's (Caspi 2000; Knudsen et al. 2006; Sommer, Sabol, Chase-Lansdale, and Brooks-Gun 2016). Moreover, parents serve as educational role models for their children, helping them develop their own academic and career identities as they grow. Two-generation programs could directly promote these linkages through the alignment of curricula that take into account that children and parents should each be understood holistically, as part of a family unit. Aligned parent and child curricula can expand parents' knowledge base in parenting and careers simultaneously.

Many of the obstacles to successful workforce development program completion among low-income families are logistical, including lack of access to regular, safe childcare, and financial support while parents attend school. Using Head Start as a platform ensures that all children are taken care of during the day. Further coordinating parent and child school schedules can help parents ease the logistical burdens of managing work, school, and the care of young children. In addition, conditional cash incentives and tuition coverage for certification, preparatory skills training, and employment services can help reduce parental stress and financial worry and support their success in the program.

From a social capital perspective, colocation of parent and child services can improve social connection and support among families and service providers, accentuating their dual roles as parents and students (Small 2009). Joint programs improve the odds that parents will expand their social capital, which has been shown to help reduce attrition and increase parental engagement (Sommer, Sabol, Chase-Lansdale, Small, et al. 2016). Career coaches who individually support parents can serve as important informational resources and connect parents to the services they need most while also promoting connection among parents through regular structured meetings and specially designated college classes.

Two-generation programs may also increase service efficiencies. Programming at both community colleges and Head Start centers involve a range of supportive services, including academic and career counseling and coaching, childcare, and financial supports. Two-generation programs are in the position to target and streamline these services, drawing on specialized expertise and organizational structures already in place. Head Start centers are well equipped to help parents set goals for themselves and their families, offer emergency assistance and other financial supports, provide wrap-around childcare, and help families address a broad range of family needs (such as, housing and mental health services). Likewise, community colleges have expertise in occupational skills training, employment services, and academic supports. Two-generation programs intentionally align programming across organizations and reduce service duplication.

Our overall recommendation is to develop policy regulations and funding levers at the federal level that support further testing and eval-

uation of two-generation human capital models for low-income families. Strong theoretical support with limited empirical evidence motivates our proposed policy. We encourage the Administration for Children and Families (ACF) in the U.S. Department of Health and Human Services to serve as the lead agency and initiate a competitive grant process that will stimulate and evaluate the impacts of new models that offer intensive and quality services for each generation, leading to much needed research evidence. We are suggesting small grant applications that build on the evidence that early childhood education is largely effective for children and that career pathway models are largely effective for adults.

We start with a short history of two-generation approaches and how developmental science and economic theories support current two-generation approaches.

A HISTORY OF TWO-GENERATION APPROACHES

A two-generation approach pairing early childhood education and parent human capital development is not a new idea. One set of two-generation programs in the 1990s which Lindsay Chase-Lansdale and Jeanne Brooks-Gunn (2014) refer to as "Two-Generation 1.0" emphasized early childhood education combined with family support, parenting, family literacy, GED training, and access to public benefits. Another set of early programs involved helping parents, mostly teenage mothers, develop life skills, graduate from high school, attain employment, and reduce their dependence on welfare. For example, the New Chance Demonstration, the Learning Earning and Parenting Program, and the Teenage Parent Demonstration (TDP) showed some success in helping parents enter educational programs but had very few impacts on parents' GED attainment or on children's behavioral or social development (Granger and Cytron 1999).

These earlier versions of two-generation programs were limited by light touch services for one generation, thus missing many of the possible benefits of two-generation programs (for example, easing logistical burden for parents or building social capital). The motivation for most Two-Generation 1.0 programs was either to promote parenting skills and family functioning to strengthen the impacts of early childhood education, or to add childcare as a work or school support to improve parents' economic self-sufficiency. These interventions lacked the intensity and purposeful coordination of services for either parents or children, and the level of partnership needed to co-design service delivery to achieve impacts across generations (Chase-Lansdale and Brooks-Gunn 2014).

NEW TWO-GENERATION THEORY

Two-generation human capital programs today emphasize the interrelatedness of outcomes for parents and children, drawing on the rising application of multidisciplinary research and especially links between theories in developmental science and economics. Decades of research from developmental science demonstrates that parents are the primary influence on young children's development (Bronfenbrenner 1979; Phillips and Lowenstein 2011), and that the parent-child dyad and home environment are the foundation for children's healthy development (Gadsden, Ford, and Breiner 2016). Parenting practices and parent-child interactions play a critical role in fostering children's cognitive, language, and socioemotional development (Sandler et al. 2012). Increasing parent human capital is likely to lead to improved cognitive stimulation in the home environment and parent-child interactions, which in turn will relate to children's well-being and school readiness (Harding, Morris, and Hughes 2015).

Family investment theory suggests that as parents improve their education and get better jobs with higher earnings, they will have more financial resources to invest in their children (Oreopoulos and Petronijevic 2013; Kornich and Furstenberg 2013; Yeung, Linver, and Brooks-Gunn 2002). Families with greater economic resources are able to purchase more opportunities that are directly beneficial for children and youth, such as learning materials in the home (Foster 2002; Linver, Brooks-Gunn, and Kohen 2002; Waldfogel 2006; Yoshikawa, Aber, and Beardslee 2012). Additional income may also reduce stress at home and enhance parent psychological well-being and optimism, all of which are associated with improved family

functioning (Chase-Lansdale and Brooks-Gunn 2014; Conger et al. 2002; Yoshikawa, Aber, and Beardslee 2012). Parents with higher levels of education also tend to spend more time interacting with their children and better adapt this time to fit the developmental needs of their children, especially when compared to parents with lower levels of education (Guryan, Hurst, and Kearney 2008; Kalil, Ryan, and Corey 2012). Thus, supporting parents' development can potentially influence their skills and capacities as parents, students, and wage earners, which is likely to be directly associated with children's outcomes.

According to human capital theory (Becker and Tomes 1986; Heckman 2006), improving a child's or parent's skills and capacities leads to further skill development and capacity building, and from family systems theory, we know that such improvements can translate to positive benefits across generations within the same family (Cox and Paley 1997). Making these investments when children are young is likely to produce even greater gains for both children and their parents (Heckman 2006; Magnuson 2007), and these mutual benefits are likely to multiply across time. As the sociologist Sean Reardon has shown, children of parents with higher levels of education are likely to complete more years of school than their peers whose parents have lower levels of education (2011). New research from the economists Jorge Luis Garcia, James Heckman, and colleagues also suggests that high-quality early childhood education paired with increased parental education and earnings generate social mobility, and may produce significant savings to society in the form of lower rates of incarceration and reduced reliance on social benefit programs (2016).

HEAD START AS A TWO-GENERATION PLATFORM

Head Start is a logical platform for designing and evaluating two-generation human capital approaches because it is the longest running anti-poverty program for children in the United States and has served almost twenty-two million since its inception in 1965 as part of President Johnson's War on Poverty. Head Start enrolls almost one million preschool children with nearly $8 billion in annual appropriations. The program is currently administered locally through 1,700 Head Start agencies that provide services to about fifteen thousand Head Start centers with over forty-one thousand classrooms (Administration for Children and Families 2016a). Families are eligible for Head Start if they receive public assistance, are experiencing homelessness, or have family incomes below the federal poverty line (Child Trends Databank 2015b). Head Start now reaches 34 percent of children three to five years of age who are living in poverty (Child Trends Databank 2015b).

Head Start views itself as the original two-generation anti-poverty program for families. It has taken a whole-family anti-poverty approach over the past fifty years, seeking to improve the well-being of parents (mothers and fathers) and children. Yet Head Start has historically focused largely on fostering children's learning and social development through high-quality early childhood education in center-based settings (Zigler and Styfco 2004; Zigler and Valentine 1979). For parents, the most typical Head Start services include physical health, mental health, nutrition, and parenting programs as well as crisis management (Vinovskis 2008; Zigler and Valentine 1979). Supports for parents' human capital development are much less common.

Parents of children enrolled in Head Start face a number of challenges typically associated with poverty, including limited education and either unemployment or part- or full-time employment in jobs with little to no wage growth potential. Approximately 42 percent of parents of Head Start children have less than a high school education, 33 percent have only a high school or GED degree, 16 percent have some college but no degree, 7 percent have a technical certificate or associate's degree, and only about 5 percent have a bachelor's degree or more (Sabol and Chase-Lansdale 2015). In other words, only 12 percent of Head Start parents have the education needed to enter the skilled workforce.

Among Head Start participants in the nationally representative Head Start Impact Study, only 50 percent of mothers were employed—33 percent full-time and 17 percent part-time (U.S. Department of Health and Hu-

man Services 2006). The modal occupation among employed mothers was the service industry (56 percent), and only 4 percent of employed mothers worked in the health-care sector. Head Start participant fathers were employed at 84 percent (74 percent full time and 10 percent part time). The most common occupations for employed fathers were the services industry (27 percent) and the construction and extractive occupations (21 percent). Only 1 percent of fathers worked in the health-care sector (U.S. Department of Health and Human Services 2010). The household income of Head Start participants is likely to increase substantially if mothers and fathers move from unemployment to part-time or full-time employment and into middle- or high-skill in-demand service-sector jobs, such as health care.

At present, Head Start has strong interest in supporting parent human capital, but has limited infrastructure and support to do so. Among Head Start parents, only 10 percent are enrolled in job training services, 5 percent participate in English as a Second Language programs, and 14 percent receive adult education services through their children's Head Start center (Administration for Children and Families 2015; Sabol, Chor, and Healy 2017). Yet many parents seek such human capital services from Head Start or other early childhood education programs, leaving a large unmet demand (Sabol et al. 2017; Sommer et al. 2012).

Emerging evidence suggests that Head Start does have positive effects on parent and child human capital development. Drawing on the experimental Head Start Impact Study dataset, Terri Sabol and Lindsay Chase-Lansdale (2015) show that parents of children who are randomly assigned to Head Start versus other community early childhood education programs increase their educational attainment, particularly among those with some postsecondary educational experience. A comprehensive review completed by the Office of Planning, Research, and Evaluation under the U.S. Department of Health and Human Services (Puma et al. 2010) also demonstrated that Head Start has large and sustained impacts through elementary school, especially for children who are cared for in their or another's home (Zhai, Brooks-Gunn, and Waldfogel 2014), but these impacts tend to diminish as children progress. Both effects could potentially be strengthened through more purposeful programming across generations. New legislation that requires full-day programming is one step in the right direction to improve program benefits for children and could be beneficial to parents as a comprehensive work or school support (Gibbs 2014). There is also on-the-ground momentum to further launch two-generation interventions but the approach has not been systematic or comprehensive.

Based on evidence from current model programs, we suggest a multipronged two-generation approach in three phases: career exploration, certification, and employment. Career exploration at Head Start centers supported by an expert career coach with small peer cohort meetings would help parents address their limited knowledge of educational opportunities, build social capital, and help them see the connections between their own learning and others'. Coordinated career training programs with Head Start services and wrap-around childcare would ease logistical burdens while helping parents achieve short-term certification leading to increased wages. Skills training, academic counseling, and employment services at community colleges would support educational advancement and post-training career employment (Attewell et al. 2009; Austin et al. 2012).

ADVANTAGES AND DISADVANTAGES OF USING HEAD START AS A TWO-GENERATION PLATFORM

The Office of Head Start's Parent, Family, and Community Engagement Framework and current Head Start grant funding encourages Head Start programs to support parents in advancing education and training toward careers and research institutions to study their impacts, suggesting strong institutional interest in two-generation human capital approaches (Administration for Children and Families 2013, 2016c). Moreover, the 2016 Head Start Performance Standards authorized by the Administration for Children and Families, the latest reform in almost twenty years, newly require that Head Start programs establish collaborative relationships and partnerships with other agencies and

programs, including workforce development and training programs, adult or family literacy, adult education, and postsecondary education institutions (Administration for Children and Families 2016b; Office of Head Start 2016). Our proposal incentivizes Head Start agencies to design and evaluate such partnerships largely through additional funding for two-generation innovation to answer whether two-generation collaborative strategies improve outcomes for children and parents beyond what each program can achieve independently.

Using Head Start as a two-generation base improves efficiencies and draws on existing service strengths and capacities. Head Start family support workers are required to conduct needs assessments to help parents set individual goals, many of which already include education and employment. Head Start centers are also well positioned to foster parents' social connections in ways that benefit parents and children (Sommer, Sabol, Chase-Lansdale, Small, et al. 2016). Most important, Head Start has a track record of on-site integration of services for parents and children, such as mental health programming (see Yoshikawa and Knitzer 1997), that go beyond simple referrals, putting the program in an advantageous position to implement two-generation strategies. This could include aligned parent and child curricula, dedicated classes and class placements at community colleges, and on-site meetings at Head Start, which foster parent social capital.

Adding parent career pathway training to Head Start services also presents several challenges. For example, Head Start center quality for children can vary widely along an array of dimensions, such as teacher-child interactions (Currie and Thomas 2000; Currie and Neidell 2007; Bloom and Weiland 2015; Love et al. 2013; Walters 2015). The proposed funding strategy suggests a competitive application process that would involve quality thresholds for services to children and parents. Head Start program standards already require centers to measure and report elements of structural and process quality. Quality assessment in workforce development services would likely include institutional characteristics such as access to credentialing programs that are valued by local employers and employment opportunities that allow for increased earnings over time (Holzer 2009). Community colleges would be expected to offer employment retention services, and preference would be given to programs incorporating additional financial and supportive services of their choice given that we know little about the individual effectiveness of such services which are typically bundled (Martinson and Holcomb 2007).

Another possible roadblock is that families are enrolled in Head Start for only 1.25 years on average (Lee 2011), potentially offering too little time for parents to advance their human capital before children exit the program. Yet career pathway training programs offer a distinctive advantage in that they focus on short-term credentials that on average can be achieved in a year or less (e.g., medical assistant and computer network support). That Head Start enrolls older (three- and four-year-old) children also could be viewed as a disadvantage in that the program does not begin early in children's lives. Yet parents of younger children (that is, Early Head Start) may not be ready to add school to the care of infants, especially when also balancing work or when traveling long distances is involved, such as rural communities (Hsueh and Farrell 2012).

The types of collaborative relationships with community colleges that are needed to support a two-generation approach are also likely beyond the current resource capacity of Head Start programs. Supportive services to Head Start parents in the current model tend to rely on low-intensity referrals to community-based programs, thus involving fewer resources (Hsueh and Farrell 2012). Yet a grant process that offers significant additional funding is likely to incentivize Head Start centers to invest in the kind of intentional and intensive partnerships with community colleges necessary to design and test the value-add of paired services.

CAREER PATHWAY TRAINING AS AN INNOVATIVE HUMAN CAPITAL STRATEGY FOR HEAD START PARENTS

A new paradigm of workforce development programs has emerged that combine human capital development with job placement and supportive services in growing career fields. These programs are in direct response to two broad

structural changes in the U.S. economy: offshoring and mechanization. Since the 1990s, many low- and middle-skill jobs have moved overseas (Blinder 2009), and a significant proportion of traditional blue-collar manufacturing and service-sector jobs have become automated (Autor and Dorn 2013). These positions have been replaced by skilled and semi-skilled employment positions that are performed locally and in person (Blinder 2009). Health care is a prime example. The rapidly aging U.S. population has led to a huge demand for healthcare workers with specialized certification (for example, certified nursing assistant, medical assistant, and licensed practical nurse). Other similar service fields include information technology (such as computer support specialist) and manufacturing (welder and certified machine operator), all growth sectors of the twenty-first-century economy.

Sectoral career pathway training programs are designed to offer training in such fields and meet the needs of local employers (King and Prince 2015). Students can earn stackable credentials in a specific field that provides a career pathway to increased earnings over time (Holzer 2009). The fact that most of these programs are low-cost, entry-level, and can be completed in under a year is especially advantageous to low-income families who need to gain a near-term return on investment of their limited time and resources while raising young children.

The last three decades have witnessed a large increase in the number of career pathway training programs, most of which are combined with supportive services such as career coaching, transportation assistance, and job placement and retention services. Sheila Maguire and her colleagues (2010) experimentally tested the impacts of three career pathway programs—Jewish Vocational Service-Boston, Per Scholas, and Wisconsin Regional Training Partnership (WRTP)—and found completion rates between 73 and 78 percent. The treatment effect on certification for WRTP and Per Scholas programs ranged from 22 percent to 45 percent, depending on the type of certification. Across all sites, earnings increased by $4,000 and $6,000 annually eighteen to twenty-four months after completing the program.

Richard Hendra and colleagues (2016) also evaluated four workforce training programs, which together make up WorkAdvance: Per Scholas, St. Nicks Alliance, Madison Strategies, and Towards Employment. These programs had significant impacts on employment by targeted sector, ranging from 12 to 41 percent, but found mixed evidence of increased earnings. A range of quasi- and nonexperimental evaluations have generally found positive but mixed results regarding the impact of career pathways on earnings and employment by target sector (Gasper and Henderson 2014; Rademacher, Bear, and Conway 2009; Roberts and Price 2015). Evidence is accumulating that these programs can also produce longer-term earnings gains (Smith and King 2011). Given that these programs have focused on young, male and childless workers (Martinson and Holcomb 2007), we do not know how effective they would be for low-income parents of young children.

Evidence from the community college literature on postsecondary education persistence and completion suggests that incentives and in-kind assistance can help families maintain financial stability while pursuing advanced education (Deming and Dynarski 2010; Huston et al. 2001). Other strategies to increase college persistence have included small learning communities, tuition and fee remission, and travel and childcare subsidies (Bailey, Jeong, and Cho 2010; Brock and Richburg-Hayes 2006). These further reduce logistical and financial burdens to help parents support their families while they advance their careers. As both the economist Harry Holzer and sociologists Diana Strumbos, Donna Linderman, and Carson C. Hicks describe in this double issue, the City University of New York's (CUNY) Accelerated Study in Associate Programs (ASAP), which offers financial incentives (such as tuition waivers and textbook vouchers), modified schedules (for example, blocked and continuous development courses), and a range of supportive services (such as individual and group advising, embedded career development, and academic supports) is perhaps the most successful of the community college programs aimed at increasing persistence and graduation among community college students (Holzer 2018; Strumbos, Linderman, and Hicks 2018). In a quasi-experimental study, ASAP students experienced

graduation rates 25.6 percentage points higher than the comparison group (52.4 percent to 26.8 percent), and had increased graduation rates among African American and Hispanic males, as well as low-income students (Strumbos and Kolenovic 2016). The comprehensive array of services to address individual barriers is likely to have played a role in achieving impacts. Offering childcare on community college campuses is one strategy to reduce logistical burdens on parents. A number of Head Start centers across the country are testing the strategy of colocating childcare services on community college campuses, a potentially promising two-generation human capital strategy (Hoffman and Robins 2005).

ADVANTAGES AND DISADVANTAGES OF INVESTING IN CAREER PATHWAY TRAINING FOR HEAD START PARENTS

Sector-based career pathway certification training offers an innovative human capital strategy well suited to the needs of Head Start parents. These programs have been shown to be effective in helping adults improve their educational attainment and persistence and have the potential to raise earnings in the short- and long-run, both critical needs for low-income parents. Short-term credentialing also allows parents to enter and exit educational programming as financial circumstances require and according to the developmental needs of their children.

Community colleges are likely to gain from enrolling Head Start parents. These parents are better prepared for school given that they are already receiving quality, affordable care for their children and have the benefit of supportive services to address common barriers to completion (such as transportation and housing). Through Head Start participation, they also may have acquired skills and credentials that are likely to help them enter and advance more quickly in school (such as ESL or GED services) than students without these services. As a result, Head Start parents may have higher persistence and completion rates than other low-income students, an important benefit to community colleges as they are increasingly held accountable for student persistence and degree completion (U.S. Department of Education 2011).

The increased emphasis on work and employment in career pathway training, however, could be viewed as a limitation to this approach. One could argue that students from all economic strata should be encouraged to pursue AA and BA degrees, and that students who enter career certification programs miss out on the more traditional college experience (Rosenbaum 2001). Yet low-income student parents are likely to lack the financial resources needed to pursue a college degree while also raising young children. Moreover, participation in career pathway training may serve as a stepping-stone toward future college pursuits. Career certification programs also offer low-income parents the opportunity to develop skills that are likely to help them succeed in college, especially once they have increased family income and are raising school-aged children who need less childcare.

EMPIRICAL EVIDENCE FROM TWO-GENERATION HUMAN CAPITAL APPROACHES IN HEAD START

Experimental research on the effectiveness of two-generation human capital approaches is only just emerging, and most two-generation programs to date have been light touch. Two noteworthy evaluation examples from a base of Head Start (or Early Head Start) include the study of Enhanced Early Head Start (Hsueh and Farrell 2012) as part of MDRC's multisite Enhanced Services for the Hard-to-Employ Demonstration and Evaluation Project, and an evaluation of the effectiveness of the Community Action Project of Tulsa, Oklahoma's (CAP Tulsa) CareerAdvance program for parents of children enrolled in CAP Tulsa's Head Start centers (Chase-Lansdale et al. 2017). The first is an example of a light-touch approach. The second involves Head Start and community college partnerships, the intentional alignment and coordination of services for parents and children, and supportive services provided on-site at Head Start centers.

The Enhanced Early Head Start program specifically targeted parents of children from infancy to age three and helped them access local job training and education resources. The model largely involved referrals to other programs for services that parents were expected

to access on their own and did not include on-site educational programming for parents. An experimental evaluation of about six hundred families participating in Early Head Start services, half of whom were offered the education and workforce components and half of whom were not offered these services, showed no significant differences between treatment and control groups in parenting, employment, education, child development, or earnings three years after program start. Parents in the treatment group reported higher levels of psychological distress, possibly suggesting that raising expectations without producing results was stressful for parents. The low-intensity program model for parents combined with varying levels of expertise and comfort among the Early Head Start staff in supporting parent human capital are potential explanations for the lack of impacts. Additionally, some parents expressed interest in staying home with their very young children over enrolling in education and training programs, especially those in rural communities where available childcare and transportation were limited. These findings suggest the benefits of a two-generation approach that targets families with preschool-age rather than younger children, includes on-site services to parents, and involves service collaboration strategies across generations.

The CAP Tulsa two-generation model includes these elements and is distinctive in several ways. The CareerAdvance program is offered from a foundation of unusually high quality center-based early childhood education centers (Sabol and Pianta 2015; Sommer et al. 2015). Children enrolled in CAP Tulsa's Head Start centers, which also receive supplemental state pre-kindergarten funds, showed higher achievement and lower grade retention through eighth grade than children in parental or childcare (Gormley, Phillips, and Gayer 2008; Gormley et al. 2011; Phillips, Gormley, and Anderson 2016). The CareerAdvance program draws on many of the latest innovations in education and career training (only some of which have been rigorously evaluated). CareerAdvance focuses on career pathway programs in health care, a growth area or sector of the local economy according to a labor market analysis, that are likely to lead to higher earnings and more stable jobs (Holzer and Martinson 2008; Jenkins 2006; King 2014). The program also offers a sequence of "stackable" credentials linked with increasing wages through career advancement in health care (Audant 2016; King and Prince 2015). Benefits to parents include the ability to enter and leave employment and school as needed to achieve certification, practice skills, or improve earnings. Additionally, career pathway training programs give parents the flexibility to intermittently invest in their own education and pursue gainful employment while attending to the shifting time investments in their children across developmental trajectories. Likewise, CareerAdvance provides a range of supportive services for participants, including individual coaching and peer partner meetings that include knowledge and skill building for parents in their roles as students, workers, and parents (Sommer, Sabol, Chase-Lansdale, and Brooks-Gunn 2016).

The current evaluation of CareerAdvance examined the early effects of program participation on parent human capital among a sample of almost three hundred families. The study used quasi-experimental methods to estimate the average treatment effect of CareerAdvance combined with Head Start relative to families in a matched-comparison group who received Head Start services alone (Chase-Lansdale et al. 2017). The research design tested the added benefit of career pathway training for parents of Head Start children, not the effect of a two-generation program compared to either Head Start or career pathway training offered separately.

Parents in CareerAdvance had significantly higher rates of certification and employment in the health-care sector after one year in the program than the matched-comparison group. For example, CareerAdvance enrollees' rates of certification were 62 percentage points higher compared to the matched-comparison group. These results are especially remarkable given that comparison career pathway programs do not focus on low-income parents of young children who likely face a range of barriers to educational attainment and employment. For example, Mathew Maguire and his colleagues found treatment impacts of 34 and 22 percent in health-care certifications for nonparents

(2010). The CareerAdvance evaluation also found higher levels of commitment to work and career, self-efficacy, and optimism among the treatment group who participated in Head Start and CareerAdvance than among the comparison group who participated in Head Start alone. These findings suggest that the program is working as intended, developing parents' attachment to a career and a career identity, fostering the belief in their ability to achieve their goals, and leading to a positive outlook on their lives, all of which resulted in improved labor force outcomes (Chase-Lansdale et al. 2017).

COMBINING HEAD START SERVICES WITH CAREER PATHWAY TRAINING

Our policy proposal involves the Administration for Children and Families (ACF) in the U.S. Department of Health and Human Services leading a two-generation initiative to fund the development and evaluation of new partnership models across the country among Head Start agencies and community colleges (or nonprofit technical centers). ACF is the logical lead agency: its mission is to serve both parents and children, it has service expertise in both generations and experience in on-site service delivery, and it already recognizes the value in testing two-generation approaches (Administration for Children and Families 2016c). These partnerships could also include the U.S. Departments of Education and Labor, which have demonstrated interest in the coordination of human capital services for parents and children, such as the Department of Labor's Strengthening Working Families Initiative (U.S. Department of Labor 2016).

The goal is to combine two innovative antipoverty programs for parents and children into one policy. Our recommendation involves substantial new funding to Head Start agencies and community colleges that form intentional and strategic two-generation partnerships, incentivizing coordination, collaboration, and possibly colocation of services. At present, most Head Start programs do not have the structure to support parents in preparation for and participation in career pathway training, and most community colleges do not have the capacity to address many of the barriers faced by low-income parents, especially the lack of quality, affordable care for their children when at school or work.

The purpose of the grant would be to support the development of model programs that could be evaluated and then scaled-up at lower cost. Grant applicants would have the flexibility to design partnerships in ways that are best suited to meet the needs of the communities they serve. We propose one prototype for our cost-benefit analysis based largely on CAP Tulsa's CareerAdvance program and the WorkAdvance program evaluated by MDRC, the two strongest examples of sector-based career pathway training programs with proven success. CareerAdvance is of particular interest because it is designed specifically for Head Start parents, whereas WorkAdvance serves low-income adults, most of whom were men.

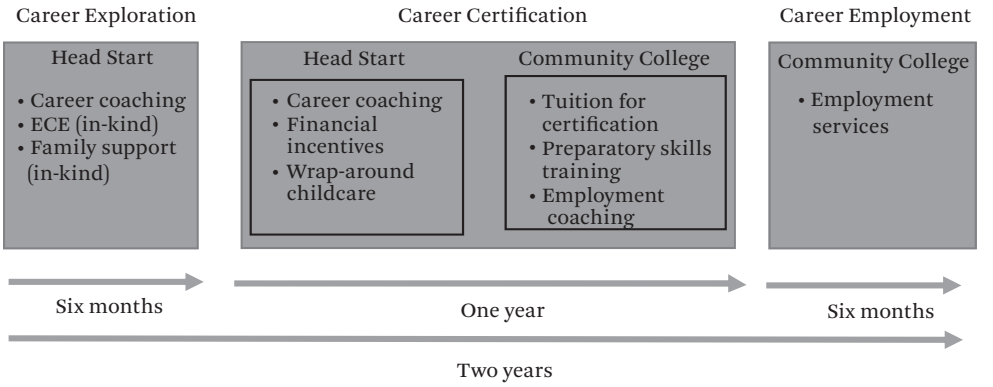
Target Population

Our proposal targets low-income parents already benefiting from Head Start's early childhood education services for children and supportive services for families and who are educationally prepared to benefit from near-term enrollment in career pathway training, specifically those who have a high school diploma, GED, associate's degree, career certification or some college (but did not receive a BA degree). Of the approximately 817,470 families with children that Head Start annually serves, 549,360 families (67 percent) include a parent who meets these educational requirements annually. Given that families participating in Head Start services on average include 1.4 parents, and assuming that both parents in a two-parent household have the same education level, 769,104 parents would be eligible for participation annually (U.S. Department of Health and Human Services 2014). Using the fact that about 10 percent of CAP Tulsa's eligible Head Start parents participated in its CareerAdvance program (Chase-Lansdale et al. 2017), we estimate that 76,910 Head Start parents would participate in our proposed two-generation human capital program each year.

Potential Model Program Services and Length

Drawing on best practices for parents and children, we propose a model that involves career

Figure 1. Potential Model Program Services and Length per Cohort



Source: Authors' compilation.

coaching, wrap-around childcare, conditional cash incentives delivered by the Head Start agency, tuition coverage for certification, preparatory skills training, and employment services offered at the community college. Wrap-around childcare is especially important given the lack of on-site childcare at most community colleges.

Conditional cash incentives for program attendance are important to maintain household income (which is already at the poverty level) when Head Start parents return to school.[1] Parents face the challenge of balancing employment, family, and school, in terms of both time and income burdens, and must decide whether and how much to work during training. Reductions in work hours are often necessary to accommodate parent classes and childcare schedules. We do not propose work prescriptions but rather program flexibility that supports family circumstances. Training programs targeting low-income mothers that emphasized work-first strategies have not been shown to be effective (see, for example, Hamilton 2002).

Using Head Start as a platform for parent programming takes the burden of coordination away from parents and intentionally offers most training and education services during the Head Start centers' hours of operation. Wrap-around childcare services, which parents can navigate with the help of current Head Start family support staff who already know available community resources and are well versed in quality standards, will ease work-training-family conflicts further. Moreover, on-site childcare at community colleges, coordinated with Head Start services, would likely be most beneficial to families. Minimizing logistical challenges of all types is likely to have important implications for the ability of parents to participate fully in Head Start and career advancement services, and for children to attend Head Start regularly.

These services would need to take place over two years, possibly in three consecutive phases: career exploration (six months), career certification (twelve months), and career employment (six months). Figure 1 outlines the set of potential core program elements and a proposed period over which they could occur, providing a basis for our cost analysis. The goal is to estimate the costs and benefits of a prototype that balances effectiveness and efficiency.

Parents could enter credentialing programs in a variety of career fields according to the interests, skills, and life circumstances of the target Head Start population served, and the needs of local employers. We considered a

1. The proposed model includes estimated conditional cash incentives at a rate of 15 percent of average Head Start parent income (see Program Costs). We do not account for the fact that this benefit could increase program take-up beyond our estimated 10 percent, and could increase career training completion rates above our estimated 76 percent (see Program Benefits). Future evaluation efforts could experimentally test the effect of cash incentives on take-up and completion rates among program participants.

Table 1. Program Costs Over Five Years for Four Annual Cohorts of Participants

	Per Participant Cost	Total Program Cost (N=307,640)
Career certification		
Head Start supports	$4,475	
Community college tuition	3,691	
Additional community college supports	3,974	
Career exploration		
Head Start supports	701	
Career employment		
Community college supports	1,114	
Total	13,955	$4,293,116,200

Source: Author's calculations based on CAP Tulsa, personal communication, January 3, 2017; U.S. Department of Health and Human Services 2006, 2014; Hendra et al. 2016; Sabol et al. 2015; Tulsa Technical College 2017; Austin Community College 2017; Murray Career Institute 2017; Cape Cod Community College 2017; Daytona State College 2017; Highland Community College 2017; Santa Fe Community College 2017; Shawnee Community College 2017; Miami-Dade College 2017; Metro Technology Centers 2017; Tulsa Community College 2017; Lonestar Community College 2017; McHenry County Community College 2017; Clover Park Technical College 2017; Mt. Hood Community College 2017; Aims Community College 2017.
Note: Career exploration support includes six months of Head Start career coach and administrative program costs based on costs incurred by CAP Tulsa. Career certification costs include tuition (average cost across six credentials in healthcare, information technology, and manufacturing at a sampling of community colleges); additional community college supports (management and administration, recruitment and screening, occupational skills training, employment services) based on the MDRC evaluation of WorkAdvance (Hendra et al. 2016); and Head Start supports (administration, career coaching, wraparound childcare, incentives) (U.S. Department of Health and Human Services 2014; Sabol et al. 2015). Career employment support includes 6 months of community college employment services and administrative program costs based on average costs incurred during year 2 of program participation based on the MDRC evaluation of WorkAdvance (Hendra et al. 2016), with occupational skills training cost based on CAP Tulsa expenses.

range of positions across sectors, including health care, information technology, and manufacturing, and for which many community colleges across the country offer training certification. These programs vary in length, including certified nursing assistant (five months), computer support specialist (nine months), and welder (eighteen months), with an average of eleven months (rounded to one year for simplicity) across the six programs listed (see table A1).

In line with ACF's typical funding approach, we propose a five-year grant period in which new cohorts are added each year for four years, allowing all parents who enter the program to complete the two-year program during the grant cycle. We would then expect 307,640 parents (76,910 parents per year for four years) to participate over the grant period.

Program Costs

We use the sample program model described to estimate costs (and forecast potential benefits).

Career Exploration

Costs for this phase-in period include career coaching and administration, namely salaries for a career coach and program staff, for a total estimate of $701 per participant over six months based on CAP Tulsa expenses (see table 1). In-kind Head Start services in which families are

participating, estimated at about $8,700 per family annually (Administration for Children and Families 2015), are not included in cost calculations.

Career Certification

Head Start supportive services during the credentialing period—career coaching, conditional cash incentives, and wrap-around childcare, including administrative costs—total $4,475 per participant (see table A2). These are estimated based on CAP Tulsa's CareerAdvance model (Sabol et al. 2015). One exception is conditional cash incentives, which CAP Tulsa provided through financial incentives totaling $1,800 annually on average (Sabol et al. 2015), and which we suggest should be higher to account for the lost wages many parents experience when they add schooling to work and raising young children. Our estimate is $2,523 per participant, or approximately 15 percent of the average annual earnings of a Head Start parent, or $16,283 (U.S. Department of Health and Human Services 2010, 2014).

Average per participant tuition costs total $3,691, based on data across a range of career pathway training credentialing programs offered in rural and urban communities of varying population size and living costs (see table 1, table A3). Grantees would need to conduct a local market analysis to determine which career credential programs to involve. Additional services per participant include preparatory skills training, employer engagement, and career retention and advancement, which are accompanied by administrative costs (such as participant recruitment and screening and program management), for a total of $3,974 (Hendra et al. 2016).[2] The total annual per participant costs of community college career certification and supportive services equals $7,665. In sum, we estimate the cost of the credentialing year to be $12,140, approximately $4,475 that will be administered by the Head Start agency and $7,665 by the community college.

Career Employment

The final phase includes six months of employment services ($280 per participant) and management and administration ($834 per participant) for a total of $1,114 per participant per year (Hendra et al. 2016).

Overall Program Costs

Across the two years of program participation, we estimate a per participant cost of $13,955. Assuming 76,910 participants entering the program annually in each of four years, the total program costs are approximately $4.3 billion (see table 1). Under a model that does not include conditional cash incentives, the per participant cost would total $11,432, for an overall program cost of $3.5 billion.

Program Benefits

Our focus in this analysis is on earnings gains of participants as the primary program benefit. For simplicity, other potential benefits to society are excluded (such as increased tax revenue and reduced use of social benefit programs). We use Head Start Impact Study data to estimate the average household income among Head Start families, inflated to 2015 dollars, and then draw on 2014 Head Start Program Information Report data on family composition and parental employment status to estimate the average Head Start parent's income ($16,823). To estimate participant earnings after program completion, we use Bureau of Labor Statistics data on annual earnings at the tenth percentile across six credentials in health care, information technology, and manufacturing as a proxy for a starting salary with a given credential. We use this lower-bound estimate so as not to be overly optimistic about earning potential in the short term. We estimate an overall average salary with certification of $26,260. The estimated gain in annual income is then $9,437 per participant (see table A4).

We follow participants for five years in estimating total program benefits, with the first two years serving as the program period. We assume that earnings benefits (the difference between the credentialed starting salary and the average Head Start parent's annual income) begin accruing one year after career certification (or 2.5 years after program entry) and that 76 percent of participants achieve certification

2. Author's calculations; personal communication, CAP Tulsa.

Table 2. Program Earnings Benefits

	Annual Earnings Benefits, Five-Year Window	Annual Earnings Benefits, Ten-Year Window
Year 1	$0	$0
Year 2	0	0
Year 3	582,645,549	275,805,762
Year 4	1,165,299,072	827,417,286
Year 5	1,747,948,608	1,772,206,188
Year 6	1,747,948,608	3,110,172,468
Year 7	1,165,299,072	4,172,332,986
Year 8	582,645,549	4,958,687,742
Year 9		5,351,865,120
Year 10		5,351,865,120
Year 11		4,013,898,840
Year 12		2,675,932,560
Year 13		1,337,996,280
Total (N=307,640)	5,510,839,475	6,991,786,458
Per-participant benefit	17,913	22,727

Source: Author's calculations based on CAP Tulsa, personal communication, January 3, 2017; U.S. Department of Health and Human Services 2006, 2014; Hendra et al. 2016; Sabol et al. 2015.

Note: Benefits during a five-year window are calculated as the difference between the average credentialed starting salary (10th percentile) for six healthcare, information technology, and manufacturing credentials and the average Head Start parent's income (U.S. Department of Health and Human Services 2006, 2014). Benefits begin to accrue 1 year after credentialing (or 2.5 years after program entry). Benefits during a five-year window are calculated similarly, with earnings assumed to increase to the average credentialed income two years after earnings benefits begin to accrue (U.S. Department of Health and Human Services 2006, 2014). Seventy-six percent of participants are assumed to receive credentialing based on rates observed at CAP Tulsa (Sabol et al. 2015).

and career employment (Smith and King 2011; Hendra et al. 2016; Sabol et al. 2015). The total per participant benefit is thus estimated at $17,913 within the five-year window, for a total benefit across participants of $5.5 billion with four program cohorts (see table 2). To better understand a participant's earnings trajectory over time, we also extend our analysis to allow parents to obtain the average credentialed salary ($39,713) two years after earnings benefits begin (or 4.5 years after program entry), and follow each program cohort for ten years. The total per participant benefit within this ten-year window is estimated at $110,025, for a total benefit across participants of $33.8 billion.

Benefit-Cost Ratio

Given a per participant benefit of $17,913 within a five-year window and a per participant cost of $13,955 (assuming that costs of early childhood education are covered by the Head Start program), we estimate a benefit-cost ratio of 1.3. Expanding to a ten-year window and allowing for higher earnings over time, the estimated benefit-cost ratio increases to 7.9 (see table A5). We also conducted a similar analysis for each of the six credentials, assuming for each estimate that all participants enroll in a single credentialing program. After adjusting for differential program length, tuition costs, and earnings benefits, we find benefit-cost ratios

that range from 0.7 (welder) to 3.1 (certified nursing assistant) within a five-year window, suggesting that not all credentials would yield net benefits under the more conservative assumptions. However, under a ten-year window and allowing for earnings growth over time, we find that benefit-cost ratios are all greater than one, ranging from 6.2 (medical assistant) to 16.4 (computer support specialist).

Limitations and Extrapolations

Our analysis represents cost estimates of one proposed program model. Other innovative models are likely to involve a range of costs according to the targeted career sector and training certification field (and length), as well as the combinations of supportive elements and financial incentives or conditional cash incentives involved. Benefits may also vary depending on the average earnings among a targeted population of Head Start parents, the likelihood of certification and employment in the particular career field, and the value of earnings in the local economy. We also do not estimate the future earnings benefits to children, which are likely to result from improved educational outcomes among parents and children over the life course. Other excluded benefits include enhanced physical and psychological health of parents and children, increased tax revenue resulting from higher employment and earnings among participants, and reduced spending on public benefit programs and other services for parents who may be underemployed or unemployed without participation in a two-generation human capital program.

CONCLUSION

This article advocates for federal investment in two-generation human capital approaches as a way to reduce poverty among children in the near and long term. Theories in developmental science and economics, combined with limited but promising experimental evidence, motivate our policy that intentionally and intensively pairs Head Start services for children with innovative career pathway training programs for parents. Two-generation programs have the potential to increase educational and motivational synergies among parents and children, reduce logistical and financial burdens for parents in workforce development or early childhood education programs alone, promote parents' social capital, and improve service efficiencies.

Current research evidence cannot tell us how much more effective quality career training targeted to low-income mothers and fathers will be when paired with quality early childhood education, and likewise does not tell us how much more effective early childhood education will be when combined with innovative career training programs for parents. However, recent research evidence from a model sector-based career training program targeted to Head Start parents, CAP Tulsa's CareerAdvance program, compares favorably, and in some cases better than, sectoral career pathway programs targeted to nonparents. Thus, we argue for further model testing under the direction of the Administration for Children and Families, U.S. Department of Health and Human Services as an essential first phase. Next steps would involve examining the impact of various program models, followed by their scale-up. Program variations to evaluate could include: comparisons of rural and urban settings, co-located and separately located Head Start services and community college programs, designated college classes for Head Start parents and integrated classes with other low-income students, the use and non-use of financial incentives and conditional cash incentives, and the location of wrap-around childcare at either Head Start or community colleges. The goal would be to test a range of approaches for achieving the greatest anti-poverty benefits for children and parents at the lowest cost.

APPENDIX

Table A1. Examples of Average Length of Career Certification Programs in Growing Labor Market Sectors

Healthcare	
Certified nursing assistant	5 months
Medical assistant	9 months
Licensed practical nurse	18 months
Information technology	
Computer support specialist	9 months
Manufacturing	
Welder	18 months
Certified machine operator	7 months
Average	11 months

Source: Tulsa Technical College 2017.

Table A2. Per-Participant Annual Costs of Supportive Program Elements to be Administered by Head Start

Program administration	$603
Career coaching	798
Conditional cash incentives	2,523
Wraparound childcare	551
Total	4,475

Source: Author's calculations based on CAP Tulsa, personal communication, January 3, 2017; U.S. Department of Health and Human Services 2006, 2014; Hendra et al. 2016; Sabol et al. 2015.
Note: Administrative and career coaching costs are based on annual operating expenses of CAP Tulsa's CareerAdvance program. Administrative costs include salary for a program director and two staff members. Conditional cash incentives are calculated at 15 percent of the average Head Start parent's income (U.S. Department of Health and Human Services 2006, 2014). Costs of wraparound childcare are adjusted to represent costs incurred during one program year (U.S. Department of Health and Human Services 2006, 2014; Sabol et al. 2015).

Table A3. Exemplar Community College Per-Participant Tuition Costs Across Career Pathway Program Credentials

	Certified Nursing Assistant	Medical Assistant	Licensed Practical Nurse	Computer Support Specialist	Welder	Certified Machine Operator	Average
Tulsa Technical College (Tulsa, OK)	$1,311	$3,318	$7,509	$3,078	$4,764	$2,767	
Austin Community College (Austin, TX)	784	4,700	7,800		5,718		
Murray Career Institute (Marietta, GA)	520						
Cape Cod Community College (West Barnstable, MA)	580						
Daytona State College (Daytona Beach, FL)		2,907					
Highland Community College (Freeport, IL)		4,800					
Santa Fe Community College (Santa Fe, NM)			6,068				
Shawnee Community College (Ullin, IL)			4,653				
Miami-Dade College (Miami-Dade County, FL)				1,773			
Metro Technology Centers (Oklahoma City, OK)				2,300			
Tulsa Community College (Tulsa, OK)				2,920			
Lonestar Community College (The Woodlands, TX)							
McHenry County College (Crystal Lake, IL)							
Clover Park Technical College (Lakewood, WA)							
Mt. Hood Community College (Gresham, OR)						5,385	
Aims Community College (Greeley, CO)						4,758	
Average	799	3,931	6,508	2,518	5,156	3,234	$3,691

Source: Author's calculations based on Tulsa Technical College 2017; Austin Community College 2017; Murray Career Institute 2017; Cape Cod Community College 2017; Daytona State College 2017; Highland Community College 2017; Santa Fe Community College 2017; Shawnee Community College 2017; Miami- Dade College 2017; Metro Technology Centers 2017; Tulsa Community College 2017; Lonestar Community College 2017; McHenry County Community College 2017; Clover Park Technical College 2017; Mt. Hood Community College 2017; Aims Community College 2017.

Table A4. Average Earnings Increases Across Credentials, 2015

	Average Starting Earnings	Average Earnings	Average Increase in Earnings When Achieving Credentialed Starting Salary	Average Increase in Earnings When Achieving Credentialed Average Salary
Healthcare				
Certified nursing assistant	$20,040	$26,820	$3,217	$9,997
Medical assistant	22,870	31,910	6,047	15,087
Licensed practical nurse	32,510	44,030	15,687	27,207
Information technology				
Computer support specialist	29,440	52,430	12,617	35,607
Manufacturing				
Welder	25,900	40,970	9,077	24,147
Certified machine operator	26,800	42,120	9,977	25,297

Source: Author's calculations based on U.S. Department of Health and Human Services 2006, 2014; U.S. Bureau of Labor Statistics 2017.

Note: Starting earnings are assumed to be the 10th percentile in earnings for individuals with a given credential (and averaged across six credentials in healthcare, information technology, and manufacturing) (U.S. Bureau of Labor Statistics 2017). Average earnings increases are given by the difference between the starting/average earnings for the average credential and the average Head Start parent's annual earnings (U.S. Department of Health and Human Services 2006, 2014).

Table A5. Benefit-Cost Ratios Across Credentials, Five- and Ten-Year Windows

	Certified Nursing Assistant	Medical Assistant	Licensed Practical Nurse	Computer Support Specialist	Welder	Certified Machine Operator	Average
Per-participant cost	$6,839	$12,083	$20,997	$10,670	$19,645	$9,274	$13,955
Total C (N=307,640)	$2,103,796,140	$3,717,137,210	$6,459,363,260	$3,282,441,890	$6,043,433,980	$2,852,899,540	$4,293,116,200
Benefits in five-year window							
Per-participant benefit	$21,496	$12,620	$23,831	$26,351	$13,783	$22,727	$17,913
Total benefit (N=307,640)	$6,613,017,930	$3,882,381,840	$7,331,283,648	$8,106,590,976	$4,240,341,888	$6,991,786,458	$5,510,839,475
Benefit-cost ratio	3.1	1.0	1.1	2.5	0.7	2.5	1.3
Benefits in ten-year window							
Per-participant benefit	$50,476	$75,122	$147,909	$174,782	$123,908	$130,519	$110,025
Total benefit (N=307,640)	$15,528,480,577	$23,110,576,404	$45,502,621,839	$53,769,819,444	$38,118,997,269	$40,152,961,801	$33,848,150,352
Benefit-cost ratio	7.4	6.2	7.0	16.4	6.3	14.1	7.9

Source: Author's calculations based on CAP Tulsa, personal communication, January 3, 2017; U.S. Department of Health and Human Services 2006, 2014; Hendra et al. 2016; Sabol et al. 2015; Tulsa Technical College 2017; Austin Community College 2017; Murray Career Institute 2017; Cape Cod Community College 2017; Daytona State College 2017; Highland Community College 2017; Santa Fe Community College 2017; Shawnee Community College 2017; Miami-Dade College 2017; Metro Technology Centers 2017; Tulsa Community College 2017; Lonestar Community College 2017; McHenry County Community College 2017; Clover Park Community College 2017; Mt. Hood Community College 2017; Aims Community College 2017.

Note: Per-participant costs are calculated as the sum of Career Exploration, Career Certification, and Career Employment costs. Career Exploration support includes six months of Head Start career coach and administrative program costs based on costs incurred by CAP Tulsa. Career Certification costs include tuition (average cost across six credentials in healthcare, information technology, and manufacturing at a sampling of community colleges); additional community college supports (management and administration, recruitment and screening, occupational skills training, employment services) based on the MDRC evaluation of WorkAdvance (Hendra et al. 2016); and Head Start supports (administration, career coaching, wraparound childcare, incentives). Phase-out Career Employment support includes six months of community college employment services and administrative program costs based on average costs incurred during year two of program participation based on the MDRC evaluation of WorkAdvance (Hendra et al. 2016), with occupational skills training cost based on CAP Tulsa expenses. Benefits during a five-year window are calculated as the difference between the average credentialed starting salary (10th percentile) for six healthcare, information technology, and manufacturing credentials and the average Head Start parent's income (U.S. Department of Health and Human Services 2006, 2014). Benefits begin to accrue one year after credentialing (or two and a half years after program entry). Benefits during a window are calculated similarly, with earnings assumed to increase to the average credentialed income two years after earnings benefits begin to accrue (U.S. Department of Health and Human Services 2006, 2014). Seventy-six percent of participants are assumed to receive credentialing based on rates observed at CAP Tulsa (Sabol et al. 2015).

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Could We Level the Playing Field? Long-Acting Reversible Contraceptives, Nonmarital Fertility, and Poverty in the United States

LAWRENCE L. WU AND NICHOLAS D. E. MARK

Could we combat poverty by reducing the number of unintended and nonmarital births? This article proposes a federal policy that would provide all women with information about, and free access to, a range of contraceptive services, including long-acting reversible contraceptives; reviews what it is that we do and do not know; discusses several dynamic selection mechanisms by which this policy could lead to poverty reductions; stresses the need for longitudinal randomized intent-to-treat pilots that would provide causal evidence on whether this policy would in fact reduce poverty; and provides rough estimates of take-up, costs, and benefits were such a policy to substantially increase the use of highly effective contraceptive methods.

Keywords: nonmarital fertility, unintended pregnancies and births, long-acting reversible contraceptives, dynamic selection, longitudinal intent-to-treat trial, poverty reduction

In this article we discuss whether a federal policy providing all women with information about, and free access to, a range of contraceptive options, including long-acting reversible contraceptives (LARCs), could lower the number of unintended and nonmarital births, and whether this would reduce poverty in the United States. LARCs have attracted recent attention but also considerable controversy (see, for example, Gomez, Fuentes, and Allina 2014; Gubrium et al. 2016; Northridge and Coupey 2016; Sawhill 2014; Secura 2013). For these reasons, we (1) provide details about a potential federal policy that would provide all women with information about, and free access to, a range of contraceptives, including LARCs; (2)

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review what we do and do not know from research and policy efforts to date; (3) discuss specific behavioral mechanisms by which LARCs could have concrete anti-poverty effects, including dynamic selection mechanisms that, to our knowledge, have not been previously emphasized; (4) stress the need for longitudinal randomized intent-to-treat pilots, which would provide the sort of causal evidence needed to determine whether such a policy would, in fact, reduce poverty and increase well-being, particularly in disadvantaged segments of the U.S. population; and (5) provide rough estimates of take-up, costs, and benefits were such a policy to substantially increase the use of highly effective contraceptive methods by women during their reproductive years.

Modern contraceptive technologies now provide ways for women and couples to avoid a pregnancy, thus allowing considerable, albeit incomplete, control over the timing and number of births. Although some, on religious or other grounds, prefer not to contracept, most Americans have used some form of contraception at some point in their lives. But effective contraception often requires effort—taking a pill every day or reaching for a condom in the heat of the moment. And relative to other advanced industrialized nations, the United States is unusual in having large numbers of unintended pregnancies and births.

LARCs provide a way that we could level the playing field by providing women with a safe and highly effective method of contraception that requires little effort. For example, an intrauterine device (IUD) requires minimal effort to use save for an initial visit to a doctor or health-care provider for initial insertion, coupled with semiannual check-ups to ensure that the IUD remains in place. LARCs are also reversible: those desiring to become pregnant need only to visit a health-care provider to remove the implant or IUD.

As a practical matter, any policy addressing childbearing, pregnancies, contraception, and sexual activity must also contend with the fact that these issues are often highly controversial. Yet, from a policy standpoint, it is also the case that these issues involve private behaviors that are simultaneously central to the public good. When, whether, and with whom to have a child are profoundly personal decisions that society leaves for individuals—whether single, married, divorced, or remarried—to decide for themselves. Yet children represent the future of any society and thus ensuring the well-being of current and future generations is inescapably a critical public good. Finally, we think it critical that policy discussions on these issues cannot and should not ignore a historical legacy in which advocates for birth control in the United States also encompassed a eugenics movement that led to the forced sterilization of targeted groups of women—minorities, immigrants, the "feeble-minded," and the "sexually promiscuous" as evidenced by a nonmarital birth (Gordon 2002; Kline 2002; Stern 2005; Lombardo 2008).

For these reasons, we think it especially important to state an explicit set of principles that, in our opinion, should guide policy:

> Policy should both acknowledge and respect the childbearing preferences, choices, and decisions of individuals.
>
> Policy should likewise both acknowledge and respect the fertility-related preferences, choices, and decisions of individuals, that is, the preferences, choices, and decisions that may or may not lead to a birth.
>
> Policy should, to the extent possible, be responsive to the changing needs and circumstances of individuals.

The proposed policy of providing information about, and free access to, a range of contraceptive methods follows these principles. It thus acknowledges and respects the preferences of those choosing to delay sex until marriage. But it also acknowledges that the majority of women will in fact not delay sex until marriage by further acknowledging, respecting, and addressing the contraceptive needs that may result from such a choice.

The policy we propose takes as given that the preferences and choices of individuals will vary on these and other fertility-related matters. What it does not do is to seek to influence or alter preferences, instead focusing on elim-

inating barriers such as cost or a lack of information that may prevent individuals from achieving their contraceptive preferences and goals.[1]

The proposed policy would achieve these goals in the following ways.

> For women with health insurance coverage from an employer-provided plan, the proposed policy would require insurers to provide, at no cost, counseling and access to U.S. Food and Drug Administration–approved contraceptive methods and services when prescribed by an in-network provider.
>
> For women who lack health insurance coverage from an employer-provided plan, the proposed policy would require insurers and other providers to provide, at no cost, the same counseling and access to FDA-approved contraceptive methods and services as provided by employer-provided insurance. Providers would be reimbursed for these services at the same rate as that for employer-provided plans.

This policy thus puts decisions about these matters in the hands of the individual. It treats with equal respect the decision by some to delay sex until marriage and the decision by others not to do so. It likewise treats with equal respect the decision by some to contracept and the decision by others not to contracept. It seeks to remove from all such decisions barriers such as lack of information or cost, thus allowing those who wish to contracept to choose a course of action that best suits their needs. The goal is thus to level the playing field by providing equal contraceptive access to *all* women, regardless of income, health-care coverage, or marital status. But as was the case for federal policies that sought to encourage sexual abstinence or to promote marriage, states would be allowed to opt in or to opt out, with this policy thus providing federal funding only to those states choosing to participate.

The proposed policy is also far less costly than many other potential and existing policies aimed at reducing poverty, thus providing policymakers with the opportunity to combine it with other policies, including those considered elsewhere in the two *RSF* issues on this subject. For example, estimates of the direct cost of providing no-cost contraception through an employer-provided insurance plan range from a 1998 estimate of $21 per enrollee per year by Buck Consultants, a 2007 estimate of $41 per enrollee per year by Price Waterhouse, and a 2011 estimate of $26 per enrollee per year by the Actuarial Research Corporation (Bertko et al. 2012). These authors also note that these estimates of premium costs are very likely too high because such estimates ignore the costs to employers of unintended pregnancies such as the cost of prenatal care, complications during pregnancy, and delivery. When these costs are included, "the net effect on premiums is close to zero" (Bertko et al. 2012).

Perhaps most importantly, the proposed policy provides a simple message to women—that of no-cost, universal access to contraception. Currently, contraceptive access, particularly for poor women, is highly unsatisfactory from a policy perspective: the current U.S. system poses the most barriers precisely to those most likely to have the greatest unmet contraceptive needs.

BACKGROUND

Although any potential policy concerning contraception and other fertility-related behaviors will affect the lives of all women making decisions about whether, when, and with whom to have a child, policies to date have placed a particular emphasis on nonmarital pregnancies and births. For example, the 1996 Personal Responsibility and Work Opportunity Reconcili-

1. We return later in the article to the issue of how this policy may or may not alter preferences, but in this respect, we follow Isabel Sawhill, who similarly stresses the importance of eliminating cost and information barriers so as to better allow individuals to "align" their preferences with intended outcomes (2014). But Sawhill also argues in favor of stigmatizing unintended births and thus the decision to take an unintended pregnancy to term. We argue instead for the narrower, simpler, and less value-laden policy goal of eliminating barriers that may prevent a woman from achieving that which she prefers on matters such as whether, when, and with whom to have a child.

ation Act (PRWORA) declared that the "prevention of out-of-wedlock pregnancy and reduction in out-of-wedlock birth are very important Government interests" and directed states to "establish goals and take action to prevent and reduce the incidence of out-of-wedlock pregnancies" and to establish numerical goals for reducing the proportion of births that occur outside of formal marriage (Section 402).

We also know that in the United States, childbearing outside of marriage has become an inextricable part of the lives of many poor mothers and their children, as a large and growing body of empirical research has amply documented. There is, however, far less consensus on whether nonmarital childbearing is a *cause* of disadvantage, with this question being the subject of considerable and continuing debate (see, for example, Geronimus 1991; Mayer 1997; McLanahan and Percheski 2008; McLanahan, Tach, and Schneider 2013). What we do know is that such families are very often fragile and poor. We know that childbearing outside of formal marriage now encompasses two out of every five births in the United States and that much of the increase in recent decades is due to births to unmarried parents who are living together. We know that these unmarried parents typically have very high hopes for themselves and the child at the time of the child's birth. Yet we also know that this "magic moment" is often fleeting: only three in ten unmarried parents are still together, on average, five years after the child's birth (McLanahan and Beck 2010; Gibson-Davis 2014). And we know that many of these single-mother families are poor and that poverty is especially acute among never-married mothers. These stylized facts have led to concern within both the research and policy communities.

Could a policy providing universal and no-cost contraception reduce nonmarital fertility in the United States? And would such reductions in turn lead to improvements in the well-being of those segments of the U.S. population most likely to be poor? It is important to note that the research and policy literatures do not provide firm answers for these and other questions. Because of this, we turn to theory, discussing behavioral mechanisms involving dynamic selection via job and relationship churning, stress, and employer learning that suggest how improved contraception could plausibly have concrete anti-poverty effects and thus improve the lives of those most at risk of poverty. But given our current state of knowledge, it will be especially important to conduct longitudinal randomized intent-to-treat pilots that would provide the sort of evidence needed to determine if the policy proposed here would in fact be successful in achieving its intended goals.

The policy we advocate would not target LARC use per se, but would instead provide information about, and free access to, a range of FDA-approved contraceptive methods. For a woman choosing a LARC, this policy would cover the initial cost of insertion or injection, but also the cost of removal, reinsertion, or reinjection at some later date, as well as any costs associated with discontinuing LARC use in favor of a different method. It is likewise important that such a policy be able to respond when a woman's circumstances change, thus allowing individuals to choose different options over time in response to changing needs.

Our proposed policy thus levels the playing field by letting women make informed choices about which method best suits their needs, with choice moreover unconstrained by cost. This stands in sharp contrast with what exists currently, which is that information barriers and the high up-front cost of LARCs may deter the use of such highly effective methods by both married and unmarried women, but perhaps most especially among those most likely to be poor.

Long-Acting Reversible Contraceptive Methods

LARCs refer to a class of birth control methods that are long acting and reversible. LARCs approved by the FDA for use in the United States are the copper IUD; hormonal IUDs, which release small amounts of a progestin hormone contained in many birth control pills; and subdermal contraceptive implants. Although highly effective at pregnancy prevention, LARCs do not offer protection against sexually transmitted infections (STIs) and so should be used with barrier methods such as a condom to reduce STI risks, a point we return to later. LARCs

Table 1. Unintended Pregnancies During the First Year of Use per Thousand Women by Contraceptive Method and by Typical and Perfect Use

Contraceptive Method	Typical Use	Perfect Use
Implant	0.5	0.5
IUD	2 to 8	2 to 6
Pill	90	3
Patch	90	3
Ring	90	3
Diaphragm	120	6
Male condom	180	20
Female condom	210	50
Withdrawal	220	40
Rhythm	240	4 to 50
Sponge	240	200

Source: Trussell 2011, table 1.

require an initial visit to a doctor or health-care provider to insert the implant or IUD. Removing the implant or IUD requires another visit, with fecundability—the term demographers use to refer to the ability to conceive—returning to its previous age-related state for the woman in question, save for instances in which some other intervening event occurs (for example, rare complications associated with LARC use or a STI affecting fecundability; see Hov, Skjeldestad, and Hilstad 2007).

Four hormonal IUDs (Kyleena, Liletta, Mirena, and Skyla), one copper IUD (ParaGard), and three subdermal contraceptive implants (Implanon, Implanon NXT, and Nexplanon) are FDA-approved for use in the United States. The copper IUD, ParaGard, is effective for up to twelve years; among hormonal IUDs, Mirena is effective for up to six years, Kyleena for up to five years, and Skyla and Liletta for up to three years (Espey and Ogburn 2011). Semiannual check-ups are recommended to ensure that the IUD has remained in place. The three subdermal implants (Implanon, Implanon NXT, and Nexplanon) are effective for three to four years.

LARCs require an initial visit to a doctor or health-care provider to insert the implant or IUD, but after this initial visit, LARCs provide a safe and highly effective contraceptive method that requires little effort. Their policy potential lies in the fact that they are safe and extremely effective at preventing a pregnancy.[2] Table 1 reproduces estimates by James Trussell (2011) that show that the far greater effectiveness of LARCs in preventing pregnancies relative to other contraceptive methods is almost certainly due to their ease of use. For example, table 1 shows that for the pill, which is one of the most effective non-LARC methods, an unintended pregnancy during the first year of use is thirty times more likely under "typical" use relative to "perfect" use. This thirty-fold difference reflects inconsistencies such as forgetting to take the pill that occur for the average pill user. By contrast, unintended pregnancies are rare—between ten to 180 times less likely—for LARCs relative to the pill, this difference being due, in no small part, to the virtually identical effectiveness of LARCs under typical and perfect use.

Table 2, taken from Amy Branum and Jo Jones (2015), shows that LARC use in the United States is low but has increased in recent years.

2. Because the subdermal implants release progestin, their safety record parallels that of the birth control pill. The Dalkon shield, an early IUD, had a number of safety issues, most notably by increasing the risk of pelvic inflammatory disease. However, modern IUDs, including those approved by the FDA for use in the United States, have been shown to be extremely safe (see, for example, Farley et al. 1992; Hubacher et al. 2002; on findings from large-scale multisite randomized trials, see also WHO 1982, 1990).

Table 2. Period Trends in LARC Use by Date of Survey and Age

Date of Survey	15–24	25–34	35–44
2002	0.6%	2.9%	1.1%
2006–2010	2.3	5.3	3.8
2011–2013	5.0	11.1	5.3

Source: Branum and Jones 2015.

Megan Kavanaugh, Jenna Jerman, and Lawrence Finer find that among LARC users in 2012, 89 percent used an IUD and 11 percent used an implant, with notable increases in LARC use occurring among Hispanic women, those who had not yet given birth, and those with employer-provided health insurance (2015).

One disadvantage of LARCs is that their upfront costs can be as high as $700 to $1,000, depending on the health-care provider and LARC chosen (Trussell et al. 2015). Such upfront costs may pose barriers to LARC use for many women, particularly those with low incomes or who lack health insurance. Eliminating such cost barriers is thus a key component of our proposed policy of universal and no-cost contraceptive access. A second disadvantage, as noted, is that LARCs do not protect against STIs, thus requiring those using a LARC to also use a barrier method, such as the condom, to reduce the risk of an STI.

FERTILITY-RELATED BEHAVIORS AND PAST POLICY

The design of policy requires an understanding of the behaviors of interest, and nonmarital fertility involves behaviors that pose unique challenges to researchers and policymakers alike. To clarify issues, consider a premarital first birth, that is, a first birth to a never-married woman. Then, for social scientists, an immediate challenge is that any understanding of this phenomenon requires confronting the fact that premarital first births will involve, at a minimum, two behavioral processes—one involving marriage and the other involving fertility. That is, at any age *t,* we will observe some childless and never-married women transitioning to a first marriage and others remaining childless and never married; likewise at any age *t,* we will observe some childless and never-married women transitioning to a first birth and others remaining childless and never married (Wu 2015).[3]

For this reason, both research and policy have tended to proceed along two tracks, one focusing on the marriage side of nonmarital fertility and a second on the fertility side of nonmarital fertility. In the United States, marriage promotion and sexual abstinence among the unmarried have been the two policies to date whose goal was to reduce nonmarital fertility. In the case of marriage promotion, Congress in 2005 approved $100 million in annual funding, followed by another $75 million in 2010, for a set of policy interventions aimed at encouraging marriage among unmarried couples with children. One such program, "Building Strong Families" (BSF), featured the random assignment of economically disadvantaged and unmarried parents to an education program designed to improve relationship skills, this program having shown success at strengthening the relationships of married couples from more advantaged groups. However, a rigorous evaluation of BSF showed that for unmarried parents, this effort at promoting marriage failed to increase marriage, relationship stability, or the economic well-being of children (R. Wood et al. 2014).

PRWORA also provided substantial funding for programs that sought to encourage teens and young adults to abstain from sex until mar-

3. Yet a third behavioral process that complicates matters is cohabitation. Much of the increase in nonmarital fertility in recent decades has been due to the increase in births to cohabiting couples. The emerging consensus is that the main policy concern for births that occur in cohabiting unions is the stability of such unions. We return to this issue when discussing empirical findings on marriage promotion.

riage. These programs were also unsuccessful in attaining their stated goals. An evaluation of sites that randomly assigned students to courses that followed abstinence-only guidelines in PRWORA found no difference four to six years after intervention between treatment and controls for a wide array of outcomes, including whether the student had initiated sexual activity, age at onset, recent sexual activity, STIs, pregnancy, and whether the student had given birth or fathered a child (Trenholm et al. 2007).

What might account for the lack of success of policy efforts to date? Consider abstinence, that is, policies intended to encourage young adults to delay sex until marriage or, less ambitiously, to delay the onset of sexual activity. A first difficulty with such policies is the near-universal levels of premarital sexual activity among young adults in the United States (Wu, Martin, and England 2017). Nevertheless, the core argument of abstinence proponents reflects a central demographic principle—that when onset is delayed, exposure to risk will decrease, thus resulting in fewer premarital first births, all else being equal. But post-onset factors such as poorer contraceptive use or knowledge will also lead to more premarital first births, leading skeptics of abstinence policies to argue that reductions in premarital first births would be best achieved by reducing post-onset risks. The empirical policy issue then concerns the relative influence of these factors, with the available evidence to date suggesting little empirical support for the potential role of abstinence in reducing nonmarital fertility (Trenholm et al. 2007; Wu and Martin 2015).

With respect to marriage promotion, one factor that may account for why this policy was unsuccessful is marriage itself—or more precisely, differences between married and unmarried couples with respect to the *quality* of their relationship. This hypothesis relies on two related pieces of empirical evidence, the first being that marriage promotion efforts intended to foster couple skills helped to strengthen the relationships of *married* couples, and the second being that a similar program was unsuccessful in strengthening bonds between *unmarried* couples. Couples who choose to marry are likely to do so because they perceive their relationship as being relatively strong. But if so, this also implies that the relationships of couples who we observe to be unmarried will be, on average, of lower quality than those of married couples. Thus, if the quality of relationships were, on average, higher among married couples than unmarried couples, this could explain why this policy was unsuccessful in strengthening bonds for unmarried couples but was helpful to married couples. But this also raises the possibility that efforts to promote marriage among unmarried couples will, on average, be targeting those in lower quality relationships, thus increasing the difficulty and complexity of policy efforts to promote marriage in such a population. This also raises the possibility that marriage promotion, even were it to be successful, could at the margin serve to encourage marriage among those who would otherwise not have chosen to marry, thus potentially increasing the number of lower quality marriages.

What about the fertility side of nonmarital fertility? The proximate determinants framework used by demographers (Davis and Blake 1956; Bongaarts 1978; Wu and Martin 2015) notes that nonmarital fertility will be influenced by behaviors such as sexual activity while unmarried, contraception, and the formation and dissolution of a relationship, cohabiting union, or marriage. From this perspective, two facts would appear particularly relevant. A first is that large numbers of nonmarital births in the United States are reported as unintended. Half of all U.S. pregnancies are unintended, and unintended pregnancies account for 80 percent of all pregnancies to teens and more than 70 percent of all pregnancies to unmarried women age thirty or younger (Finer and Zolna 2014; Zolna and Lindberg 2012). A second is that nonmarital first births continue to occur at quite early ages. Table 3 shows that in 2015, the modal age at a first birth was twenty for unmarried mothers but twenty-nine for married mothers.

For many social scientists, these patterns suggest that differences in contraceptive behaviors are a likely cause of why some women bear their first child within, and others outside, of marriage. This line of reasoning is not, however, accepted by all. Many economists, for example, see differences in contraceptive behav-

Table 3. Number of First Births (in Thousands) in 2015 by Mother's Marital Status and Age

Age	Not married	Married
<16	9.8	0.1
16	16.9	0.6
17	30.0	1.6
18	48.3	5.1
19	68.9	12.2
20	72.8	18.5
21	66.0	22.7
22	59.4	27.4
23	51.3	32.0
24	44.0	38.9
25	37.2	46.7
26	30.5	53.6
27	25.6	60.2
28	21.5	65.9
29	18.6	69.1
30	16.3	67.9

Source: Authors' tabulations from Vital Statistics on Natality (National Center for Health Statistics 2015).

iors as causally determined by two factors: first, the opportunity cost of taking a pregnancy to term, with greater opportunity costs thus leading to the use of more effective contraceptive methods and in more effort expended in assuring effective contraception; and, second, by how much a future outcome is discounted, with a higher discount thus reducing contraceptive effort and increasing willingness to use a less effective method. Frank Furstenberg provided an early critique of these arguments by noting that they imply that outcomes would be identical under two scenarios, one in which women were required to expend effort to avoid a pregnancy, and another in which they were by nature contraceptively protected, with effort needed to become fecund (1992). LARCs thus provide a way women can effectively minimize their pregnancy risks with little effort, thus changing, as Isabel Sawhill notes, the "default" option by requiring women to expend effort to become pregnant (2014).

What do we know about the actual contraceptive behaviors of young adults in the United States? One clue is the substantial decline in teen births, perhaps because teens and young adults have become increasingly aware of the risk of STIs such as HIV. Yet the United States remains an outlier in having large numbers of unintended pregnancies and births relative to other advanced industrialized nations. Another seeming paradox is qualitative evidence that many unmarried couples say that they are not seeking a pregnancy yet also report that they contracept inconsistently (Edin et al. 2007; England et al. 2016). A study analyzing weekly data on sexual activity and contraceptive use finds that large numbers of female respondents report "pregnancy scares." Many of these women subsequently report an unintended pregnancy (Gatny, Kusunoki, and Barber 2014). Yet another possibility is that individuals may use a condom during initial sexual encounters and in early stages of a relationship, but may then seek STI testing and transition to a different contraceptive method in later stages of the relationship (Sayegh et al. 2006). The picture that thus emerges from these and other studies is one of inconsistent contraception among many who are sexually active while unmarried.

A POLICY PROVIDING INFORMATION ABOUT, AND NO-COST ACCESS TO, A RANGE OF CONTRACEPTIVE METHODS

Two broad goals are at the heart of the policy we propose. The first is to provide women with the simplest possible message—that no-cost coverage is available to *all.* Providing free and universal access thus differs from what exists currently, which is that coverage is not universal and the cost of different methods varies in complicated ways depending on the woman's circumstances and the provider or providers available to her. The second is to provide funding that will allow health-care providers to maintain adequate contraceptive supplies and to ensure that frontline staff have up-to-date knowledge and training. These goals can be achieved via coverage for women with health insurance from an employer-provided plan, coverage for women who do not have health insurance from an employer-provided plan, dissemination of user-friendly information about the advantages and disadvantages of all FDA-approved contraceptive methods, and funding to ensure both adequate contraceptive supplies and up-to-date knowledge and training of frontline providers.

Provisions in the Affordable Care Act (ACA) have moved some distance toward providing women with no-cost access to a broad range of contraceptive methods. Yet, ACA coverage is far from complete, provider compliance with the ACA's contraceptive provisions may vary substantially, and whether the ACA will survive in its current form or if it will be modified, repealed, or replaced is currently unclear. Whatever the fate of the ACA or its contraceptive provisions, the intent of what is proposed here is simple—to provide no-cost and universal access that will address the contraceptive needs of both current and future generations of women.

Coverage for Women with Employer-Provided Health Insurance

For women with health insurance from an employer-provided plan, the proposed policy would follow current ACA guidelines that require insurers to provide, at no cost, counseling and access to FDA-approved contraceptive methods and services. These ACA provisions, which were phased in between August 2012 and January 2013, prohibit co-pays or coinsurance fees when using an in-network provider even for those who have not yet met their deductible. Contraceptive methods covered by the ACA include barrier methods such as diaphragms and sponges, hormonal methods such as the birth control pill, contraceptive sterilizations such as tubal ligations, and all FDA-approved LARCs. Were these ACA provisions to be no longer in effect, the policy proposed here would ensure continued no-cost access to these FDA-approved contraceptive methods, including LARCs.

Two exclusions in the ACA limit access to contraceptive benefits even when a woman is covered by an employer-provided health insurance plan (Bearak et al. 2016). Grandfathered plans are exempted from these requirements if the health-care plan was in place prior to March 2010 and if the plan had no subsequent and substantial changes to other benefits. The ACA also exempts certain religious organizations and employers from these requirements. The policy we propose would require that identical services and benefits be provided to women in such circumstances. Health-care providers would be reimbursed by the proposed policy at the same rate that providers charge to nonexempt employer-provided plans.

Coverage for Women Who Lack Employer-Provided Health Insurance

For women who do not have coverage from an employer-provided health insurance plan, a complicated set of policies currently provides contraceptive services and benefits at no cost to some, with others paying sliding fees and still others the full cost of such services and benefits. By contrast, the policy proposed here would provide, at no cost, the same contraceptive services and benefits as those available to women covered by an employer-provided health insurance plan. It thus would provide, at no cost, the same counseling and access to FDA-approved contraceptive methods as that provided to women from a health-care provider through employer-provided insurance. Funds from this policy would reimburse health-care providers for these services at the same rate as services for employer-provided plans.

Currently, a complicated set of policies provide contraceptive access and services to women who lack coverage from an employer-provided health insurance plan. For such women, benefits are available from two sources: from the ACA or from providers receiving Title X funding. For women receiving health insurance from the ACA—either from an ACA exchange or in states that adopted ACA's Medicaid expansion—contraceptive services and benefits are required by the ACA to be the same as those provided by an employer-provided health insurance plan. For women who lack coverage from either the ACA or an employer-provided plan, contraceptive counseling and services are available from providers funded by Title X. Title X contraceptive services are available at no cost to women who fall below the federal poverty guideline. Women just above this threshold are charged a sliding fee and others the full cost for these benefits and services (Beeson et al. 2014; S. Wood et al. 2014).

From a policy perspective, contraceptive access for this group of women is highly unsatisfactory. Women who lack employer-provided health insurance will be drawn disproportion-

ately from those with low incomes, a disadvantaged group that we know will also be at high risk of unintended and nonmarital births. The current policy landscape thus provides contraceptive services and benefits only to those disadvantaged women who can successfully navigate a highly complex system in which services are available at no cost to some, with availability to others limited to specific providers who can provide services to some at no cost, to others at a sliding fee, and to yet others only at full cost. The current system, in effect, poses the most barriers precisely to those most likely to have the greatest unmet needs.

Disseminating Information About No-Cost Universal Access

A policy of providing a wide range of contraceptive methods at no cost to women would not achieve its goals if women were unaware of the services and benefits provided by such a policy. For this reason, it is important that any such policy also include a dissemination component that would inform a wide audience of policy services and benefits.

The task of informing a wide audience is made easier by the simple and straightforward message that is at the heart of the proposed policy—that access is available to all women at no cost. Social media could also provide a low-cost way of informing large numbers of those in their teens and twenties about available services and benefits as well as providing user-friendly information about the pros and cons of FDA-approved contraceptive methods.

Ensuring Knowledge, Training, and Supplies for Frontline Providers

The policy we propose relies on doctors and other frontline health-care staff to provide both contraceptive counseling and the contraceptive methods themselves. But because discussions between doctors and patients are privileged by custom and law, we think it inadvisable for policy to attempt to dictate the content of contraceptive counseling provided to individuals. Thus, the policy proposed here does not seek to specify any specific protocol for the counseling and information provided to women by doctors or frontline staff.

Nevertheless, a critical component of our proposed policy is that adequate funds be made available to ensure that all providers have up-to-date knowledge and adequate training with respect to the full range of FDA-approved contraceptive methods. We anticipate that this objective will be aided in no small part by ongoing reviews that the medical profession conducts for itself, which is to provide up-to-date guidance and "best practices" that reflect the evolving state of medical evidence and knowledge. For example, the American Congress of Obstetricians and Gynecologists issued a 2012 recommendation that LARCs be made available to adolescents, citing "top-tier effectiveness, high rates of satisfaction and continuation, and no need for daily adherence" but also recommended that "As with all nonbarrier methods, to decrease the risk of sexually transmitted infections (STIs), including human immunodeficiency virus (HIV), health-care providers should advise sexually active adolescents to consistently use condoms along with LARC methods" (American Congress of Obstetricians and Gynecologists, Committee Opinion no. 539, 2012).

It will also be the case that some women will have urgent contraceptive needs, thus making it important for providers to have adequate supplies of the full range of methods—including LARCs—covered by this policy. We thus propose that adequate funding be available to frontline providers for maintaining adequate stocks of all FDA-approved contraceptive methods.

Could No-Cost Universal Access Reduce Poverty?

Could no-cost and universal access to effective contraception reduce poverty? Currently, we lack the sort of firm empirical evidence that would provide a conclusive yes or no answer to this question. Given the absence of such evidence, we instead turn to available theory. We begin by discussing how the choice of a contraceptive method and other fertility-related behaviors might be altered by a policy providing no-cost universal access based on expectations from standard economic theory on choice and consumption.

Preferences and Choice Behavior Under a No-Cost Policy

As may be obvious, we believe that the lives of many would be improved were they able to contracept more effectively. But as emphasized in the principles that we believe should guide policy, we believe even more strongly that whether, when, and with whom to have (or not have) a child are matters that policy should and must leave to individuals themselves. For these reasons, the policy we advocate—no-cost universal access—is deliberately designed to *not* incentivize any particular method over another. What the policy does seek to do is to level the playing field by setting the cost of all FDA-approved contraceptive methods to zero.

This also has implications for policy expectation under standard models of choice behavior. Standard economic theory posits that the choice of whether to contracept will be much the same as the choice to consume any market good available to consumers. Theory thus predicts that if the price of good A falls but the price of good B remains unchanged, this will in the aggregate lead some to consume A rather than B, with the increased demand for A not because of changes in preferences but rather because of changes in the relative price of goods A and B. Thus, we would expect a policy of no-cost universal access to lead more to contracept, not because it has altered preferences regarding whether to contracept, but because it has lowered contraceptive costs. We would likewise expect the policy to influence the aggregate mix of FDA-approved methods, again not because the policy has altered preferences, but because the policy has reduced the price of all such methods to zero.

The same logic generates expectations with respect to behaviors known to be correlated with STI risks. To fix ideas, consider a sexually active individual who is not in a monogamous relationship. Caution with respect to STIs will then vary with risk aversion, with those who are less risk averse more likely to engage in risky behaviors such as less consistent condom use, casual sex with many partners, or drug use. Again, standard theory generates expectations that such differences will exist but that changes in the relative price of contraceptive alternatives will not alter an individual's level of risk aversion to STI risks.

It is important to emphasize that these policy expectations are theoretical in nature and thus do not speak to the magnitude of effects or whether there exist other causal factors that could reverse expected relationships. For these reasons and as discussed in greater detail below, we think it extremely important that sufficient funding be available to conduct carefully designed randomized pilots, which would provide firm empirical answers to these and other questions.

Labor Market and Relationship Churning

Policies to improve the earnings of low-skilled young adults in the United States have often pointed to broad structural shifts in the U.S. economy as creating a situation in which those lacking a college degree now face a labor market in which earnings have stagnated or declined as jobs have been subject to global competition or automation. These issues in turn have often motivated policy proposals such as an expansion of the Earned Income Tax Credit to low-income males, increases in the minimum wage, a universal child allowance, or apprenticeship programs that would, for example, connect young adults who are still in school to potential labor market opportunities. More broadly, this perspective sees human capital as the factor most predictive of income and hence of the poverty status of individuals and households. If so, fertility-related behaviors will be a cause of poverty only to the degree that they causally influence the formation of human capital and other related skills and attributes that employers value.

An alternative possibility stems from the fact that there is often substantial "churning" during the schooling to work transition, with churning referring to the rapid movement of recent labor market entrants through a series of jobs (Topel and Ward 1992; Neumark 2002). A standard economic model explains this churning by positing a search and matching model for job seekers. Under this model, churning occurs because on the supply side, labor market entrants possess attributes that may not be well matched initially to those attributes

sought, on the demand side, by employers. Churning will decline with time and labor market experience as workers, either through learning or by chance, find jobs that are better matches to their attributes. Empirical evidence to date has shown positive returns to churning, consistent with the hypothesis that, on average, better matches will occur as labor market entrants move from initial to subsequent matches.

Could the search for a good relationship be at least as complicated as finding a good job? As in the job matching model, this model supposes that each individual brings a different mix of attributes to a potential relationship. Churning will continue until a match occurs that is acceptable to both and that exceeds each person's idiosyncratic threshold. Note in particular that the model predicts that individuals will churn to an eventual match that will be higher in quality, on average, than initial matches. Findings from one study are consistent with this hypothesis (Bzostek, McLanahan, and Carlson 2012).[4]

Could an unintended birth affect a young woman's ability to churn through jobs and relationships? To our knowledge, these questions have been underemphasized in both the research and policy literatures. Yet it is plausible that an unintended birth could decrease a young woman's ability to move from her current job to a subsequent job that could provide both a better match and a higher wage. What we do know is that combining motherhood and full-time employment poses difficulties even for many married women, particularly when children are infants and toddlers. Thus it is plausible that reductions in unintended and nonmarital births could increase the ability of young women who might otherwise have had these births to work full-time and year-round, thus allowing them to gain substantially in labor market experience.[5]

The policy counterfactual of interest, then, is to compare two contraceptive regimes, a *control* regime consisting of the current contraceptive behaviors of sexually active young men and women, and a *treatment* regime, in which young women have better knowledge about, and free access to, LARCs.[6] Under the current control regime, we observe a large number of unin-

4. Note also that this matching model differs from a model proposed by Gary Becker, with the key difference being that Becker posits the existence of some factor that rank orders all individuals in the marriage market (Becker 1981). Matches then occur with the top-ranked male marrying the top-ranked female, and so on. By contrast, the matching model proposed here assumes, as in the job matching model, that matches will be idiosyncratic, thus positing that different criteria will be weighed differently by each participant. This also differs from William Julius Wilson's (1987) influential "marriageable male" hypothesis, which holds that male earnings (or job stability) is the factor weighed most heavily by all females when considering potential mates.

5. Maria Cancian and Daniel Meyer find that although median wages and hours worked increased among former AFDC recipients following welfare reform, only one in four was employed full time. Difficulties with childcare arrangements or illnesses of children were among the most cited reasons for voluntary or involuntary job separations (2000).

6. Note, for example, that studies providing plausibly causal estimates of the effect of a teen birth on subsequent outcomes do not in fact speak to the policy counterfactuals considered here (see, for example, Hotz, McElroy, and Sanders 2005; Rosenzweig and Wolpin 1995). For example, Joseph Hotz and his colleagues employ a natural experiment design that uses miscarriages to estimate effects of a teen birth on a series of later life outcomes. The logic is to use miscarriages as an instrument that, in effect, randomizes the key variable of interest—whether a birth to a woman occurs during her teen years. Such a design thus resembles an experiment that manipulates a single factor while leaving unchanged all other factors—in this case, including the contraceptive behaviors of at-risk populations, the key factor of policy interest here. Thus, for example, with respect to fertility, Hotz and his colleagues find that women with a teen miscarriage "do not delay childbearing much past their early twenties" and that "only 56 percent . . . have not had a child by age 18" and that "by age 24, only between 17 and 19 percent . . . have not had a child" (702). As Hotz and his colleagues note, their miscarriage design is not well suited for evaluating the effects on wages because "wage rates are measured only at ages when women work and our estimation strategy does not account for this source of selectivity" (708).

tended births occurring to unmarried couples. We know that despite their high hopes for themselves and the child, their relationships are often fragile. Under the proposed treatment policy regime, a women choosing a LARC will avert an unintended birth, thus allowing her (and him) to churn to subsequent relationships. This may, in turn, allow both men and women to find better matches while avoiding an unintended birth in an earlier, lower quality, match. Higher quality matches under the treatment regime could plausibly result in a variety of benefits for him, her, and their child. What we do know is that under the current control regime, the relationships of couples who have an unintended and nonmarital birth are not only fragile, but also subject to frequent discord following a break-up, with fathers viewed negatively by mothers and with the formal or informal child support of nonresident fathers often posing a serious financial burden to him.

This does not exhaust the ways that a policy of no-cost, universal contraception could have plausible positive effects. Consider the following example that, although hypothetical and referring to fictional individuals, nevertheless suggest ways in which universal and no-cost contraceptive access could raise incomes and increase well-being in disadvantaged groups.

Consider M, a young woman who grew up in a poor single-mother family, but who is nevertheless a hard worker with a sunny disposition. After graduating from a not very good high school, she found a job at a fast-food restaurant. She and a guy, J, from her neighborhood, have been together for some time and she starts living with him. J, who is older, has two children born to two different women from previous relationships. He works hard to provide for them, but money is tight.

One day, one of M's cousins, who she grew up with, has a bad pregnancy scare, and a few months later, M too finds herself pregnant after missing her period. Then six months after giving birth, M breaks up with J. She still sees J sometimes and he helps when he can, but his finances are now stretched even tighter. At twenty, M now sees that having a minimum-wage job while caring for a newborn is much harder than she ever realized and that this is not what she wants for herself or her newborn. So she decides to try for something better, enrolling in a few classes at the local community college. But the baby girl, like all infants, often gets sick, and M's frequent absences from the classes she is taking means that she's not doing well. J tries to help but when several absences from work because the little girl gets sick lead his boss to fire him, he scales back the time he spends with his daughter and M, in no small part because of the fights that ensue because of his precarious finances. All of this is extremely stressful for M, who reluctantly decides to drop out of classes at the community college, at least for now. But fragile childcare arrangements and times when the baby is sick make things rough. And the job still pays only a minimum wage.

Now consider M in the alternative policy regime in which she has no-cost access to highly effective contraception. In this world, she still ends up working at a local fast-food restaurant after high school and, as before, she still moves in with J. Her cousin has a bad pregnancy scare, but in this alternative policy world, the two of them learn from a Facebook advertisement just how easy it is to get highly effective contraception at no cost. They schedule an appointment with the cousin's OB/GYN and, going there together, both opt for an implant. M now avoids getting pregnant and having the baby at twenty. As before, she grows dissatisfied with a minimum wage job, but she now avoids missing classes and so is getting good grades at the local community college. After two years of classes, she is a state-certified health-care aide and gets a job at a local hospital. Her sunny personality and hard work endear her to her supervisors at the hospital. In addition, J is able to hold onto his job, which allows him to get a promotion and help provide for his two children. At twenty-three, M and a different boyfriend decide to have a baby, and she gives birth to a baby boy. As before, she has to call in sick when the infant catches something, but her job now provides her with sick leave and her supervisors, who also have young children, appreciate her hard work and are therefore understanding.

Our analytical point here is not to assert that M and J are typical, but rather that even when individual attributes and preferences are constant and unchanging, outcomes could differ in the two alternative policy regimes because of dynamic selection due to changing circumstances in ways that could, in turn, generate plausible anti-poverty consequences. Thus M, the hypothetical young woman, is hard working and seeks to improve her human capital in both policy worlds, but an early, unintended and nonmarital birth poses barriers in one world that are not present in the other. As Diana Strumbos, Donna Linderman, and Carson Hicks note, parental responsibilities are a key barrier to successful completion of community college (2018). Similarly, employers are better able to assess her value as an employee—her hard work ethic and sunny personality—in one policy world but less able to do so in the other. For J, avoiding an unintended pregnancy could mean the difference between holding a job and being fired. For both M and J, stress is far greater in one policy world than the other, and this too may have consequences for the ability to maintain steady employment and hence experience on the job and in the labor force.

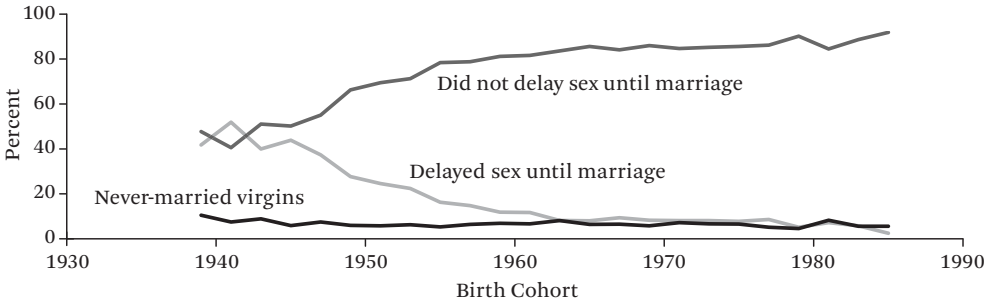
It is again important to emphasize that these arguments are theoretical and that, to our knowledge, there is a general lack of firm empirical findings on these dynamic selection mechanisms.

As Isabel Sawhill (2014) notes, LARCs change the "default option" from requiring action to avoid a pregnancy to requiring action to become pregnant. Other, more commonly used birth control options, such as the pill or condoms, exhibit vastly different failure rates between perfect and typical use (Trussell 2011), indicating a disparity between preferences and experienced contraceptive efficacy that would not exist with LARCs. Thus among those choosing a LARC, yet another policy expectation is that there would almost certainly be fewer unintended pregnancies and births, fewer abortions, and thus also decreases in the complex family forms that arise from multipartner fertility in which couples bring children from previous relationships into their current relationship. And, because the mechanism by which a LARC prevents a pregnancy is biological as opposed to behavioral, it also follows that, stated counterfactually, the effect of the treatment on the treated (for example, reductions in unintended births for those choosing a LARC) would likely be virtually identical to the effect of the treatment on controls (that is, reductions in unintended births were those not on a LARC to have been on a LARC). If true, this would eliminate one important source of policy uncertainty—whether the effect of a policy will be the same for the treated and controls—when attempting to predict how outcomes would be changed under a new policy. What this does not address, however, is take-up—how many might in fact adopt a LARC method were no-cost contraceptive access to be universal.

LARC Take-Up

Would a policy of universal and no-cost contraceptive access increase the use of LARCs? A first answer is that we currently lack the sort of evidence that would definitively answer this question. A second answer is to note, following Charles Manski (1995), that the answer to LARC use will necessarily lie between two bounds, one in which LARC use is unchanged by the policy, and the other in which the policy causes all women to adopt a LARC. Both of these answers are, strictly speaking, correct, but as a practical matter, neither provides much in the way of helpful guidance. But we also know that the decisions that individuals make will be influenced by costs and hence that under current policies, the up-front cost of LARC methods will, all else equal, lead many to adopt non-LARC methods. This implies that a policy providing universal and no-cost access to a wide range of contraceptive methods should, all else equal, increase LARC use, but it also follows that eliminating cost differentials will heighten the role of preferences. Some women may choose not to use any method by abstaining from sex until marriage or by relying on natural rhythm methods. But for those choosing to contracept, providing no-cost access to a wide range of available meth-

Figure 1. Percent by Birth Cohort Who by Age 25: Delayed Sex Until Marriage, Did Not Delay Sex Until Marriage, or Were Never-Married Virgins



Source: Wu, Martin, and England 2017.
Note: Women born between 1938 and 1985.

ods would, in principle, better allow all such women to choose the method that she most prefers. But preferences will be influenced not only by whether failure rates of a particular method are high or low, but also by factors such as her immediate situation coupled with her plans for the future, STI prevention, perceived side effects, what methods peers have chosen, and so forth.

Contraceptive choice is relevant to those who are sexually active and because of this, it is useful to know how many in the United States are sexually active while never-married. Figure 1 presents cohort trends in the percent of women who, by age twenty-five, reported that they delayed sex until marriage, did not delay sex until marriage, or were never-married virgins (Wu, Martin, and England 2017). We see substantial increases in the percent of never-married women reporting that they were sexually active and corresponding decreases in the percent reporting that they delayed sex until marriage. Changes in behavior were especially rapid for women born earlier in the twentieth century, but figure 1 suggests far less change for women born later in the century. What is clear is that the vast majority of U.S. women report being sexually active while never-married, but also that roughly 15 percent of those born after 1965 continue either to delay sex until marriage or to abstain from sex while never married.

Estimates in figure 1 provide potentially important clues that may inform ongoing debates between those advocating abstaining from until sex until marriage versus those far more skeptical of such policies. A potential criticism of no-cost and universal contraception access is that such a policy may well lead to increases in premarital sex among those who would have otherwise chosen to abstain from sex until marriage. Figure 1 shows that any negative consequences would necessarily be limited to the small numbers of those who do in fact choose to abstain from sex until marriage, with this group having declined for successive birth cohorts of U.S. women. Thus in aggregate, negative consequences hypothesized by skeptics will pertain to the smaller numbers who abstain from sex while never married, while positive consequences emphasized by proponents will pertain to the larger numbers not abstaining from sex while never married.

A recent, important study presents findings on IUD use by education and reproductive life cycle for females aged fifteen to forty-four who reported using some form of contraception and who were either married, cohabiting, or in a sexual relationship (Sweeney, Eeckhaut, and Gipson 2016). Using data from the 2006 to 2010 and 2011 to 2013 National Survey of Family Growth, they find that overall IUD use varies little by education. However, they do find substantial education gradients for women at different points in their reproductive life cycle. Among women who have not yet given birth but plan future childbearing, IUD use increases with education, but this educational gradient

reverses for women who have had at least one birth. Among those with less than a high school education who plan future childbearing, IUD use is 0.4 percent for those who have not yet had a birth and 23.0 percent for those who have had one or more births. This nearly 60-fold increase would appear difficult to explain from changes in opportunity costs, but could plausibly reflect the need and desire for more effective contraception among those with fewer years of education. This study, while providing estimates of IUD use under current policies, does not speak to the question of what LARC use would be were there to be universal and no-cost contraceptive access.

Some evidence concerning this question can be gleaned from two sites, St. Louis and Colorado, in which women were provided LARCs at no cost. Beginning in 2007, Jeffrey Peipert and his colleagues conducted a prospective study that followed a sample of 9,253 women in the St. Louis area (2012). Study participants, recruited from an at-risk population, were informed that they could choose a LARC or other contraceptive method at no cost for a two- to three-year period and that they could switch or discontinue any method at any time. Prior to the study, fewer than 5 percent of participants were using a LARC, but when informed about no-cost access to a wide range of contraceptive methods, 74.8 percent chose a LARC. Those choosing a LARC expressed higher satisfaction, had high continuation rates, and had markedly lower contraceptive failure rates compared to those choosing other methods; by contrast, few differences emerged in STIs and other measures of sexual risk-taking behaviors among those who did and did not choose a LARC method (McNicholas et al. 2014). However, design elements in this study may well limit the generalizability of findings. Participants were recruited from specific sites that provided contraceptive counseling and services to at-risk and disadvantaged women. Thus, study participants may not be representative of any larger population of interest. It is also possible that, given study objectives, frontline providers may have been more likely to guide participants to the choice of a LARC as opposed to other methods. Finally, there was no attempt to randomly assign participants into control and treatment groups. For these reasons, this study, although important and highly relevant, is not ideally suited to providing firm causal answers to questions such as what LARC take-up would be were cost barriers to be eliminated by a policy providing free and universal access.

The state of Colorado began a program in 2009 that provided LARCs at no cost to clients at twenty-eight Colorado health-care facilities that received Title X funding (Ricketts, Klingler, and Schwalberg 2014). This program, funded by a private foundation, provided no-cost access to LARCs for clients at these twenty-eight Title X facilities, with other methods available to those above the poverty line at the usual Title X sliding fee. The program also provided funding for Title X staff training on counseling and insertion techniques and for clinics to purchase and maintain current stocks of LARC methods; sixteen of the twenty-eight clinics were thus able to provide LARCs for the first time to clients. Administrative data compiled by Sue Ricketts and her colleagues show that LARC use among fifteen- to twenty-four-year-old Title X Colorado clients was 4.5 percent in 2008, the year prior to this program, but rose to 19.4 percent in 2011, with this trend also accompanied by decreases in births, abortions, and the number of infants served by Women, Infants, and Children (WIC). The Colorado program thus provides population-relevant findings that complement those in the St. Louis study, but these authors do not attempt to disentangle the extent to which increased LARC use was a causal factor in observed trends.

An important recent study provides plausibly causal evidence that increased LARC access led to fewer teen births (Lindo and Packham 2017). Using a quasi-experimental difference-in-difference design, the authors found that in those Colorado counties with clinics receiving funding that increased LARC access there was a 6.4 percent reduction in teen births over five years relative to counties in Colorado and other states in which funding was not provided. The relatively large magnitude of this effect is, to our knowledge, the first plausibly causal evi-

Table 4. Teen LARC Use in 2013 by State

Colorado	25.8%	Arizona	5.8%
Alaska	19.6	Wisconsin	5.6
District of Columbia	17.9	Ohio	5.2
Iowa	16.6	Georgia	4.1
Hawaii	14.4	Delaware	3.9
Vermont	13.8	Nevada	3.8
Rhode Island	11.6	Missouri	3.8
Washington	11.2	Louisiana	3.7
Oregon	11.0	Alabama	3.7
New Hampshire	10.6	Wyoming	3.6
Oklahoma	10.0	Idaho	3.6
Maine	9.5	Utah	3.5
Texas	9.1	North Dakota	3.5
Massachusetts	9.0	Michigan	3.3
California	9.0	Pennsylvania	3.1
Minnesota	8.8	Kansas	3.1
New York	8.5	Montana	3.0
Maryland	8.3	Kentucky	2.6
Illinois	7.7	Florida	2.5
North Carolina	7.4	Arkansas	2.5
New Mexico	7.4	South Dakota	2.2
Virginia	7.3	New Jersey	2.1
Nebraska	7.2	West Virginia	2.0
Connecticut	6.9	Indiana	1.5
South Carolina	6.5	Mississippi	0.7
Tennessee	5.8		

Source: Romero et al. 2015.
Note: Title X clients aged fifteen to nineteen.

dence relevant to the potential policy effects of increased LARC access. Note, however, that the findings from this study are limited to teen births only, thus underscoring the need for carefully designed longitudinal randomized pilots that could provide much-needed causal evidence on a wide range of outcomes of policy interest.

Table 4 presents estimates that provide a snapshot of LARC use in 2013 by state for women age fifteen to nineteen who sought contraceptive services from Title X providers (Romero et al. 2015). Variation in LARC use by state is substantial, ranging from 0.7 percent in Mississippi and 1.5 percent in Indiana to 19.6 percent in Alaska and 25.8 percent in Colorado. It would seem unlikely the 25.1 percentage point difference observed between Colorado and Mississippi reflects differences in preferences; instead, observed differences across states may well reflect other factors, such as knowledge of contraceptive services and benefits available from Title X providers, the number of and access to providers, and the specific services and benefits available from providers receiving Title X funding. Such factors will again complicate any attempt to assess potential LARC demand.

These studies provide no clear-cut answer to the question of how many more women might adopt a LARC under a policy that provides universal and no-cost access to a wide range of contraceptive methods. They also provide a dauntingly wide range of estimates that, if taken at face value, range from increases in LARC use of around 70 percentage points for

participants in the St. Louis study, 23.4 percentage points based on the group comparisons reported by Sweeney and colleagues (2016), 14.9 percentage points from trends in Colorado as documented by Ricketts and colleagues (2014), and a 25.1 percentage point range based on cross-sectional differences across states as estimated by Lisa Romero and her colleagues (2015). Poverty reductions—the goal of this double-issue *RSF*—will also depend heavily on LARC take-up among particular groups, for example, low-income segments of the U.S. population. And as shown in table 2, LARC use in the United States has increased dramatically over the last decade, albeit from very low initial levels, thus suggesting that attempting to estimate LARC demand may be akin to shooting at a moving target. Nevertheless, the weight of available evidence does, we believe, point to a considerable degree of unmet contraceptive need that may be particularly acute among those facing the most disadvantaged circumstances. If forced to forecast unmet demand for highly effective contraceptive methods in this group of women, we would hazard a guess that under a policy of universal and no-cost access, LARC use might increase from anywhere between 5 to 25 percentage points, with the former and latter being highly pessimistic and highly optimistic guesses, respectively.

The Need for Longitudinal Randomized Intent-to-Treat Pilots

Carefully designed experiments assigning individuals at random to treatment and control groups have provided some of the best evidence to date on whether policies work. It is thus important that the policy proposed here include funding to states choosing to participate to conduct carefully designed randomized trials. Such pilots could follow some of the design elements used in previous trials by targeting economically disadvantaged young women and randomly assigning participants to control and treatment groups.

Answering these questions would ideally require a panel study that followed not only women over time, but also the children born to these women and men fathering these children. One possible design would be to target never-married young women who have not yet had a birth. Such a pilot could then be designed to follow study participants over time, thus allowing comparisons between controls and treatments on outcomes such as satisfaction with the control and treatment contraceptive protocols, unintended pregnancies and births, labor force attachment and earnings, the formation and dissolution of intimate relationships, and, when children are born, measures assessing child development and well-being.

COSTS AND BENEFITS

When not covered by health insurance, the up-front cost of a LARC to a woman can be as much as $1,000. Because LARCs remain effective over periods ranging from three to twelve years, LARCs are cost effective over the long run and provide a method whose failure rate is several orders of magnitude lower than methods such as the birth control pill or the condom (for detail on the cost of LARCs, see Trussell et al. 2015, table 2). And as noted previously, the up-front cost of implants and IUDs may have led many providers to not maintain sufficient stocks of LARCs, thus preventing some from providing the full range of available contraceptive options to women. A final note regarding projections of costs is that contraceptive sterilization through procedures such as a tubal ligation are a surprisingly common contraceptive method for women who have completed their childbearing and who thus do not desire another pregnancy. Typical costs of a tubal ligations can range anywhere from $1,500 to $6,000, whereas LARCs can for many women provide a similar degree of protection from a pregnancy at a lower cost while also providing reversibility should wishes, desires, or circumstances change. (Current contraceptive provisions in the ACA cover both LARCs and tubal ligations, but not vasectomies for men.) It is thus possible that a policy providing universal and free access to a wide range of contraceptive methods could result in some women opting to choose a LARC rather than a tubal ligation. These issues also imply that a full assessment of the estimated direct cost of providing no-cost contraception to all women would require,

ideally, estimates of these direct costs over a woman's full reproductive life cycle.

A potentially highly attractive element of a policy providing no-cost and universal access is that the direct costs of the contraceptives themselves are very low, both in absolute terms and when compared with both current and possible future policies that seek to reduce poverty. The cost an individual woman faces in choosing the most expensive contraceptive method—the birth control pill—can be as much as $50 per month or $600 per year. This then provides a hard upper bound on the per capita direct costs of providing no-cost contraception, given that in practice, program costs for methods such as the birth control pill will be far lower than the market price charged to women lacking coverage. Moreover, the per capita direct costs under the policy we propose would occur only for women who currently do not have health insurance from an employer-provided plan. Under the proposed policy, per capita direct costs would thus be incurred only when a woman lacks coverage from an employer-provided plan or for the small numbers of women with employer-provided insurance but whose coverage involves a grandfathered insurance plan or for those whose employer has been exempted from providing contraceptive coverage. In cross-section, program dollars would thus be directed to those subgroups lacking health insurance, thus in effect targeting program resources to those with low incomes and other disadvantaged segments of the U.S. population who may also have serious and unmet contraceptive needs. But in life cycle terms, proposed program dollars are directed to those times when a woman does not have employer-provided health insurance, for example, those periods when she may be employed part time or when she is ineligible for coverage from a parent, spouse, or partner. Put another way, these provisions mean that this proposed policy is, in effect, simultaneously universal *and* targeted. It is universal by mandating that contraceptive access be available at no cost to any woman who requests these benefits. Yet it is, in effect, targeted by directing program dollars to those without employer-provided health insurance who will be, on average, more disadvantaged than those with it.

Costs per woman could be affected and would depend on the cost of staffing programs providing comprehensive contraceptive information, the numbers of women choosing a LARC or other contraceptive method, and the cost of providing the contraceptive method(s) chosen over a woman's reproductive life cycle. These costs are nevertheless likely to be substantially less than many policies, current or proposed, that have sought to reduce poverty.

What might be the potential economic benefits from such a program? Any such exercise requires a series of counterfactual assumptions, but Emily Monea and Adam Thomas provide what is perhaps the most comprehensive exercise of this sort to date (2011). Using their estimates, Robert Plotnick puts projected savings at $80,000 per teen birth (2016). Sawhill, also citing Monea and Thomas, estimates that current contraceptive services receiving public funding avert more than 2 million unintended pregnancies per year at a savings of $7.6 billion and that "If we did more to eliminate all unwanted and mistimed pregnancies, we could save an additional $6 billion" (2014, 124). Simulations conducted by Sawhill and colleagues suggest that were a woman able to delay a mistimed birth, outcomes for the child whose birth was delayed would be improved, with increases in high school graduation of 7 percentage points, decreases in teen childbearing of 3 percentage points, increases in college graduation of 8 percentage points, and increases in lifetime income of around $52,000 (Sawhill, Karpilow, and Venator 2014).

DISCUSSION

In this article, we have proposed a policy that levels the contraceptive playing field by providing universal and no-cost access to the full range of FDA-approved contraceptive methods, including long-acting reversible contraceptives, which are both safe and highly effective. By guaranteeing the same access to low-income women as that enjoyed by many high-income women, this policy would lead to fewer unintended and nonmarital births, particularly among the most disadvantaged segments of

the U.S. population, which would in turn, we argued, increase well-being and reduce poverty.

For policymakers, the proposed policy has a number of distinct advantages. Its modest costs allows it to be combined with other anti-poverty programs. It provides women and couples with the simplest possible policy message—that of universal and no-cost access. It addresses information and cost barriers that are likely to deter the use of highly effective methods of contraception. It is unusual by being both targeted and universal—providing universal access yet simultaneously targeting funding to those likeliest to have the greatest unmet needs. It adheres to a set of principles that acknowledges and respects individual preferences, choices, and behaviors while providing resources that let individuals better align behavior with preferences on whether, when, and with whom to have a child.

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Assessing the Potential Impacts of Innovative New Policy Proposals on Poverty in the United States

CHRISTOPHER WIMER, SOPHIE COLLYER, AND SARA KIMBERLIN

This article provides estimates of the potential anti-poverty impacts of eight proposals presented in this double issue of RSF. Using the 2016 Annual Social and Economic Supplement to the Current Population Survey and the Census Bureau and Bureau of Labor Statistics' Supplemental Poverty Measure, we first discuss the simulation approach taken for each proposal and then provide a consistent set of poverty estimates across proposals that include reductions in the poverty and deep poverty rates and the poverty gap; demographic differences; and net direct government costs. Anti-poverty impacts are largest for the most costly proposals, but less costly and more targeted proposals still have substantial potential impacts for key subgroups.

Keywords: poverty, microsimulation, policy

The articles in this double issue each answer the call and challenge laid out by the Russell Sage Foundation to "showcase a collection of innovative and specific policy proposals intended to reduce poverty in the short- and/or long-term or improve economic well-being." Authors were given wide latitude to think outside the box in crafting proposals, and the results are striking in both their diversity and creativity. Given this diversity, it is potentially difficult to compare the proposals to assess how they differ in their impacts, costs, and scope. This article is designed to provide an admittedly crude first attempt to make such comparisons. Using a common dataset, the Census Bureau's Current Population Survey, and measurement tool, the Supplemental Poverty Measure (SPM), this article provides, for eight of the policy proposals in this double issue, a set of estimates to consistently capture the impacts of each on poverty, deep poverty, and the poverty gap; demographic differences; and total direct costs to the government.

DATA AND MEASURES

To simulate the proposals, it is important to use a common starting dataset. Doing so provides a basis for having comparable estimates

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 Wimer, Christopher, Sophie Collyer, and Sara Kimberlin. 2018. "Assessing the Potential Impacts of Innovative New Policy Proposals on Poverty in the United States." *RSF: The Russell Sage Foundation Journal of the Social Sciences* 4(3): 167–83. DOI: 10.7758/RSF.2018.4.3.09. Direct correspondence to: Christopher Wimer at cw2727@columbia.edu, 1255 Amsterdam Ave., New York, NY 10028.

across articles such that differences are derived from our simulation methods and not inconsistencies in the underlying data. We use the 2016 Annual Social and Economic Supplement to the Current Population Survey (CPS) as our starting dataset. This dataset is sometimes referred to as the March CPS.

The March CPS is collected every year (primarily in March), and collects detailed income information from a representative sample of households across the United States. Importantly for our purposes, it collects detailed information on multiple sources of income for each person residing in sampled households. The 2016 March CPS is the most current sample available as of this writing. The income data collected references the prior calendar year, in this case 2015. The March CPS is the dataset used by the Census Bureau to calculate annual levels and trends in American incomes and poverty rates, making it an ideal choice to serve as the basis of simulations of the effects of a variety of alternative policy scenarios on incomes and poverty. We use the IPUMS CPS 2015 national dataset (Flood et al. 2016).[1] Note that the dataset we use contains only records of the income as reported by sample members, and thus will contain the substantial underreporting of many types of income that has been documented elsewhere (Meyer, Mok, and Sullivan 2009). This has the potential to affect some of the anti-poverty impacts and costs simulated.

To analyze the anti-poverty impacts of each proposal, we use the SPM of the U.S. Census and the Bureau of Labor Statistics, which is widely considered to be an improved measure of income poverty that builds upon the official measure of poverty (Fox et al. 2015; Wimer et al. 2016). The advantages of the SPM and problems with official statistics have been catalogued more extensively in this double issue and elsewhere so we do not go into extensive detail here (see Citro and Michael 1995; Blank 2008; Short 2011; Renwick and Fox 2016). In brief, however, the SPM accounts for resources that come after taxes, such as tax credits like the Earned Income Tax Credit (EITC) or Child Tax Credit (CTC), as well as income tax and payroll tax liabilities that reduce the amount of available income families have to pay for basic needs. The SPM also includes resources in the form of in-kind benefits or near-cash resources that are not accounted for under the official poverty measure. Because many of the proposals in this double issue put forward changes to tax and in-kind programs, as well as cash assistance programs and earnings, the SPM provides a useful measure to assess changes relative to the status quo.

Using the SPM, we are able to provide estimates of simulated proposals' impacts on the poverty rate of the total U.S. population; the poverty rate of affected proposed program recipients, the deep poverty rates (that is, those falling below 50 percent of the poverty threshold), the reduction in the poverty gap (that is, the total amount of money necessary to lift everyone above the poverty line) for program recipients, the poverty reduction effect of proposed policies for different demographic groups, and the total direct governmental costs of each proposed policy relative to the status quo. To understand how the proposals articulated in the double issue would potentially alter official statistics, we also calculate some measures of poverty reduction under the official measure of poverty. We deliberately include a broad spectrum of metrics of poverty impact in order to capture different types of effects that policy proposals may have at the level of the total population and for direct policy beneficiaries. The change in the poverty rate, SPM and official, is presented as the most traditional measure, but we also include the poverty gap metrics to show changes in the depth of poverty and policies' reach in terms of the number of individuals affected and differential effects for key demographic groups. Last, we show the average total benefit that recipients of each proposal would newly receive. This is defined at the family (SPM unit) level. That is, if a family had three children and each child received $2,000 in new resources, each child would have $6,000 new dollars coming into their family, and this would be the amount of the benefit that we show in our tables.

Despite the limitations to each of these estimates, which we discuss in the concluding

1. Available at https://cps.ipums.org/cps.

discussion, we argue here that using the March CPS and the SPM provides a common starting point for providing a consistent set of poverty estimates. We hope that these estimates will, in turn, help readers understand the trade-offs in considering a very diverse and differentially targeted set of anti-poverty proposals.

THE SIMULATED PROPOSALS

In this section, we outline the proposals that we simulated in our analyses and the approach we took for each. We did not simulate seven of the proposals, including those in which the policy was not designed to alter total family resources, for which the microdata provided no clear method for simulating an anti-poverty impact, or for which the assumptions required to do so were deemed too great. The eight proposals we did simulate were explicitly geared toward income poverty reduction and provided parameters that allowed for a consistent, plausible, and credible set of estimates on poverty reduction and cost. We briefly outline each proposal and its simulation. The proposals and simulations are detailed in the order they appear in this double issue. A summary of each proposal is also featured in table 1. Unless otherwise specified, we do not model macroeconomic or behavioral changes that may result from the proposals or affect their outcomes.

Cash Child Allowance (#1)

Luke Shaefer, Sophie Collyer, Greg Duncan, Kathryn Edin, Irwin Garfinkel, David Harris, Timothy Smeeding, Jane Waldfogel, Christopher Wimer, and Hiro Yoshikawa's article proposes a universal monthly child allowance (2018). Under it, all families would receive a child allowance of $250 per month, per child for all children under age eighteen. The allowance would be taxed at the marginal tax rate of the parent(s) or guardian(s). The proposal also calls for the elimination of the Child Tax Credit, the Additional Child Tax Credit (ACTC), and the tax exemption for dependent children. To simulate this proposal, we provided all families with children under the age of eighteen an allowance of $250 per month per child ($3,000 per year). The allowance value was then "taxed back" at the parent's marginal tax rate. We then added the net value of the child allowance for each SPM unit to their SPM unit's resources. To account for the elimination of the CTC and ACTC, the total value of the CTC and ACTC received by each SPM unit, as reported in CPS data, was subtracted from its resources. To account for the elimination of the tax exemption for dependent children, we calculated the amount of additional federal tax that tax filers who received this tax exemption would owe if the exemption was eliminated. We determined this amount by constructing tax units using the CPS data, identifying the number of dependents under the age of eighteen that each filer claimed, calculating the value of each filer's child exemption using the Internal Revenue Service (IRS) guidelines, and taxing their exemption at their marginal tax rate.[2] The 2015 exemption for dependent children reported by the IRS was $4,000 per dependent child for all filers with adjusted gross incomes (AGI) below the 2015 exemption phase-out thresholds. The exemption decreased by 2 percent for each $2,500 in AGI a filer claimed in excess of their exemption phase-out threshold.[3] The marginal

2. In some cases, including the exemption value in a filer's AGI might increase their marginal tax rate. We did not make this adjustment in this simulation, meaning the cost saving from eliminating the child exemption might be underestimated. We constructed tax units using a modified version of Stata code created by Judith Scott-Clayton, which is available on the TAXSIM website of the National Bureau of Economic Research (http://users.nber.org/~taxsim, accessed November 17, 2017).

3. We used each filer's AGI and the number of dependents under eighteen they claimed, as reported in the CPS, to calculate their exemption value. In 2015, the exemption phase-out thresholds began at $258,250 and ended at $380,750 for single filers, $390,900 and $432,400 for joint filers, and $284,050 and $406,550 for heads of household. Filers with AGIs greater than the upper bound of the phase-out thresholds did not receive exemptions for dependent children. For a description of the exemption for dependent children and exemption phase-outs for 2015, see the IRS's "Publication 501(2015): Exemptions, Standard Deduction, and Filing Information" (https://www.irs.gov/pub/irs-prior/p501--2015.pdf, accessed November 17, 2017).

Table 1. Summary of Simulated Proposals

	Recipient Population	Simulated Proposed Policy
Shaefer et al.	All children under eighteen	Guarantee a universal child allowance for $3,000 per year, per child, for children under eighteen. Offset the costs of the allowance by eliminating the Child Tax Credit, the Additional Child Tax Credit, the tax exemption for dependent children, and by taxing the child allowance at the marginal tax rate of the individual or couple that claims the child as a dependent.
Bitler, Hines, and Page	Citizen children under eighteen	Guarantee a child allowance of $2,000 per year, per child for citizen children under eighteen. Offset the costs of the allowance by eliminating the Child Tax Credit, the Additional Child Tax Credit, the tax exemption for dependent children, and the part of the EITC that is calculated based on the number of dependent children that EITC recipients claim.
Herd et al.	All individuals age sixty-five and over that are receiving Social Security payments and have an individual or joint income (if they are married) that is below the official elderly poverty line ($11,367 for individuals, $14,326 for couples)	All eligible recipients collect a benefit equivalent to the difference between the elderly poverty line for individuals or couples and their individual or joint income (if they are married), effectively bringing their income to the official poverty line for the elderly.
Cancian and Meyer	All child support recipients with payments less than $150 per month and 12 percent of unmarried parents who do not receive any child support	Guarantee child support payments of $150 per month for eligible recipients. The amount of support provided by the policy is the difference between the guarantee and the amount of child support parents receive, if any. Assume that 12 percent of unmarried parents not currently receiving child support will apply for the guaranteed payments.
Gundersen, Kreider, and Pepper	All households with at least one member who receives SNAP benefits	Lessen food insecurity by providing additional SNAP benefit of $41.62 per week to all eligible households.
Kimberlin, Tach, and Wimer	Tax filers that rent their housing unit	Provide recipients with a refundable renter's tax credit designed to reduce rent burden to 40 percent of after-tax income.
Romich and Hill	All workers earning $12 per hour or less	Increase hourly wages of 93.5 percent of eligible workers to $12 per hour and assign remaining 6.5 percent of eligible workers to disemployment. Recalculate all recipients' federal taxes and credits, FICA payroll taxes and SNAP benefits based on their altered employment status and income from wages. Offset program costs with additional income and payroll taxes paid by workers with increased wages.
Dutta-Gupta et al.	10 percent of eligible program participants, defined as individuals that have been unemployed for sixteen+ weeks, are involuntarily working part-time for economic reasons, or are working age and marginally attached to the labor force	Provide full-time minimum wage job opportunities to eligible program participants at their state's minimum wage rate. Assume that 10 percent of eligible participants will take up the job opportunity. Adjust participant's federal taxes and credit, state taxes and credits and FICA taxes based the additional income they received from the program.

Source: Authors' compilation.

tax rate values we used came from the CPS and were calculated by the Census Bureau using their tax model and the income values reported in the CPS. We then subtracted the total amount of tax owed on the child exemption by each SPM unit from their unit's resources. Post-reform poverty was then measured using the SPM unit's altered total resources and the SPM thresholds.

To evaluate the reform's effect on poverty measured using the official measure, we added the total value of the unit's pre-tax child allowance to their resources. These resources were not adjusted in any other way because official resources are measured before taxes.

Cash Child Allowance (#2)

Marianne Bitler, Annie Hines, and Marianne Page's proposal (2018) guarantees a child allowance that would increase the cash resources of families with children. The allowance, set at $2,000 per year for all citizen children would, in part, be financed by eliminating the CTC, the ACTC, the tax exemption for dependent children, and the child portion of the EITC, that is, the part of the EITC calculated based on the number of dependent children that recipients claim. We took a similar approach to that taken with the Shaefer and colleagues child allowance proposal to simulate this proposal. To begin, we calculated each unit's total allowance value based on the number of citizen children under the age of eighteen in the unit and the proposal's allowance value of $2,000 per citizen child. The total allowance value for each SPM unit was then added to their total SPM resources. We then calculated the value of the each unit's CTC, ACTC, and tax owed on the tax exemption for dependent children using the same method outlined in the explanation of the Shaefer and colleagues simulation. To simulate the suggested changes to the EITC, we excluded children under eighteen from the number of dependents that tax filers claimed and then recalculated the value of their EITC using the National Bureau of Economic Research's TAXSIM tax calculator (for a description, see Feenberg and Coutts 1993). We then subtracted their original EITC value from their SPM unit's resources and replaced it with the adjusted EITC value.

We determined the post-reform poverty rate using the SPM resources that took into account each unit's child allowance, the elimination of the CTC, the ACTC, the tax owed on the unit's child exemption(s), and the adjusted EITC. To measure the benefit's impact on poverty under the official measure, the child allowance was added to total resources used under the official measure. Because the official poverty measure is measured pre-tax, we did not update the resources based on the proposed changes to the CTC, ACTC, the child exemption, or the EITC.

Minimum Benefit Plan for the Elderly Poor

Pamela Herd, Melissa Favreault, Madonna Harrington Meyer, and Timothy Smeeding propose a Social Security–based minimum benefit plan (MBP) that safeguards Social Security recipients against falling into poverty (2018). Under the plan, elderly Social Security recipients living in poverty receive additional benefits that bring their resources up to the level of the official poverty threshold for an elderly single individual or couple.

To measure the poverty effects of this proposal, we identified eligible recipients, defined as individuals age sixty-five and over that received Social Security payments and had an individual or joint income (if married) below the official elderly poverty line ($11,367 for individuals, $14,326 for couples in 2015). The income of other individuals living with the potential recipient(s) was not included when evaluating eligibility status. The value of the benefit was calculated as the difference between the official poverty line and their individual or joint income. For example, if a single recipient's total income was $10,000, they would receive an additional benefit of $1,367; if a couple's joint income was $10,000, together they would receive a benefit totaling $4,326.

To measure the benefit's impact on poverty under the SPM, the benefit was added to the total resources of each recipient's SPM units. Each unit's total resources with the benefit were measured against their SPM threshold to determine whether it was below the SPM poverty line post-benefit. We followed the same steps using the resources and thresholds used

for official poverty statistics to measure the post-reform poverty under the official measure.

Note that the MBP benefit effectively brings poor recipients' resources up to the official poverty threshold and therefore "out of poverty" if they live on their own or only with their spouse, according to the official measure.[4] However, for recipients living in family units with other members besides a spouse, total family resources under the official poverty measure include the resources of all family members and the corresponding official poverty threshold for the family is larger than the threshold for a single person or couple. Thus, for these poor seniors, the MBP may not increase total family resources enough to lift the family over the official poverty threshold. SPM thresholds are often higher than the official poverty thresholds, both overall and in different geographic areas of the country, as described earlier, meaning that the MBP similarly may not increase family resources above the poverty threshold when calculating post-reform poverty statistics under the SPM.

Guaranteed Child Support Payment

Maria Cancian and Daniel R. Meyer's proposal addresses child poverty by way of a government-provided guaranteed child support payment of $150 per month, per child (2018). Under their plan, all single custodial parents, including those that do not receive child support, are entitled to the guarantee. To simulate this proposal, we first increased the child support received by families with child support income less than the guarantee, as reported in the CPS, to $150 per month, per child. For example, if a parent in the March CPS reported $1,200 in child support income over the calendar year, our simulation would assume they already received $100 per month and we would add $600 to his or her annual income in the form of this newly proposed benefit.

We then assume that some single custodial parents not currently receiving any child support income would also benefit from the guaranteed payment. Following Cancian and Meyer, we assume that 12 percent of these parents would enroll in the program, so we randomly selected 12 percent of this group and allotted them $150 per month per child.

The additional child support that families received was then added to their SPM unit's resources and measured against the SPM thresholds to determine the post-reform poverty rate. The child support was also added to the unit's resources used in the official measure and compared to official thresholds.[5]

Additional Supplemental Nutrition Assistance Program Benefit Payments

Craig Gundersen, Brent Kreider, and John Pepper's proposal (2018) provides all households receiving Supplemental Nutrition Assistance Program (SNAP) benefits with an additional benefit of $41.62 per week to lower household food insecurity (an important correlate of poverty). This is based on the fact that SNAP recipients report a monetary shortfall from their SNAP allotments relative to the money necessary to meet their routine food expenditures, and based on their analyses, the authors find that a little over $40 per week would be enough to meet most recipients' budget shortfalls. To simulate the effect of this policy, we identified all SPM units with at least one SNAP recipient and added $2,164.24 ($41.62 × 52 weeks) to their total SPM unit resources (the value of the additional SNAP subsidy for one year). We then recalculated the poverty rate and associated metrics after the additional SNAP resources were included. We did not make any changes to resources when calculating poverty under the official measure because SNAP benefits are not included in the definition of total resources under this measure.

4. The official poverty threshold for couples differs depending on the age of seniors in the couple. For couples where the householder is sixty-four years old or younger and his or her spouse is over sixty-four, the official poverty threshold is $15,871, so under this simulation, these families would not be brought up to the official poverty line with the additional benefit. To bring this couple to the poverty line, their MBP benefit amount would need to be calculated using the poverty line of $15,871.

5. We did not make any adjustments to the unit resources of non-custodial parents responsible for paying child support as we cannot link noncustodial parents to the children for whom they owe support.

Renter's Tax Credit

Sara Kimberlin, Laura Tach, and Christopher Wimer propose a refundable renter's tax credit, designed to address high housing cost burdens among low-income renters as housing costs are a primary driver of poverty under the SPM (2018). The credit is designed to reduce a tax filer's rental housing cost burden to 40 percent of after-tax cash income, a conservative affordability level given that the U.S. Department of Housing and Urban Development (HUD) identifies a 30 percent or less housing cost burden as affordable, and 50 percent is considered severely housing burdened. Caps are applied to the amount of rent that can be claimed in order to target the credit to renters with the most need, and so tax filers cannot claim rent paid that exceeds an assigned fair market rent (FMR) value (determined by the population-weighted mean HUD FMR across metropolitan or nonmetropolitan areas for the tax filer's state). In addition, under the proposal, filers cannot claim rent paid that exceeds 80 percent of after-tax cash income. Tax filers already receiving a housing subsidy cannot claim the credit.

To simulate this policy, we used the methods proposed by the authors to calculate credit amounts. First, tax units were constructed in the CPS data, and total after-tax cash income for all tax unit members was calculated for the tax units living in rental housing using 2015 income and federal income tax or credit amounts from CPS data. Gross rent paid was imputed for each renter household via a regression model using coefficients derived from the American Community Survey (ACS) data, where rent is reported directly, and prorated to the tax unit. To calculate the caps on claimable rent paid, each tax unit was assigned an FMR cap based on the population-weighted mean two-bedroom HUD FMR across metropolitan or nonmetropolitan areas for the tax filer's state. The FMR cap was adjusted for number of bedrooms by applying a multiplier, with the number of bedrooms for each tax unit determined by the number of tax dependents. The claimable share of rent paid was identified as the lowest of actual rent paid, the assigned FMR cap, or 80 percent of after-tax cash income. The renter's tax credit was then calculated as the difference between capped rent paid and 40 percent of after-tax cash income. Tax filers reported in CPS data as housing subsidy recipients were assigned no credit. The credit amount was summed across tax units to the level of the SPM family unit. We then added the renter's tax credit to family resources to calculate a revised SPM poverty status that was used to calculate the post-reform SPM poverty rate. There were no changes to official poverty post-reform because tax credits are not included in the definition of total resources under the official measure.

Increasing Federal Minimum Wage to $12.00 per Hour

Jennifer Romich and Heather Hill's proposal raises the federal minimum wage to $12.00 per hour from the current $7.25 per hour (2018). In accounting for the costs and benefits of their proposal, they assume that the higher minimum wage will trigger some unemployment as employers eliminate some jobs given higher labor costs. They propose increasing employer tax credits available through the Work Opportunity Tax Credit by $1 billion (doubling the current allocation) in order to reduce the expected disemployment rate to 6.5 percent of workers earning less than the new minimum wage pre-reform. They also consider changes in payroll tax revenues, income tax revenues and expenditures, and SNAP outlays in accounting for the policy's total government costs and savings.

To simulate the effect of this policy, we identified all workers earning less than $12 per hour, as calculated from annual wage income, weeks worked, and usual hours worked per week. We randomly assigned 6.5 percent of these workers to become unemployed with revised wage income of $0. The workers remaining were assigned new earnings by multiplying their weeks worked and usual hours per week by the new minimum wage of $12 per hour. We then calculated changes in these workers' income and payroll taxes by constructing tax units in the CPS sample and recalculating their federal income tax liabilities and credits (including the EITC), and federal payroll taxes (FICA) based on new earnings for tax units that included workers with increased or decreased wages. These tax adjustments were calculated using

the NBER's TAXSIM tax simulator (as described earlier). Finally, we simulated changes in SNAP benefits expected to result from implementation of the policy. For workers with increased wages who reported receiving SNAP, we followed the USDA's SNAP benefit calculation formula and reduced annual SNAP benefits by $0.24 for every $1.00 in increased earnings, including the earned income deduction (for the formula, see CBPP 2017).[6] For disemployed workers who reported receiving SNAP, we followed the same formula to increase annual SNAP benefits by $0.24 for every $1 in lost earnings. We also assumed that 85 percent of disemployed workers who did not report receiving SNAP and were not initially income-eligible for SNAP but became eligible due to lost earnings would newly enroll in SNAP. We assigned new SNAP participation randomly within this group and assigned new annual SNAP benefits based on the SNAP benefits calculation formula. These changes in SNAP resources were modeled explicitly given they are a key focus of Romich and Hill's proposal.

After these simulations, we incorporated these changes in family resources from earnings, income tax liabilities and credits, payroll taxes, and SNAP into a revised calculation of family resources to calculate post-reform SPM poverty rates. The family resources were adjusted based only on changes in earnings to measure the post-reform poverty rate under the official measure. To calculate the net government cost for the policy, we summed the aggregate net changes in income tax revenues and expenditures, payroll tax revenues, SNAP outlays, and increased Work Opportunity Tax Credit (WOTC) expenditures. As we show, this procedure produced a net negative government cost (net government savings) associated with the policy. This is because increased tax revenues and decreased SNAP payments from workers with increased earnings exceeded increased tax expenditures for the WOTC and SNAP outlays for disemployed workers.

Guaranteed Minimum Wage Employment Program

Indivar Dutta-Gupta, Kali Grant, Julie Kersick, Dan Bloom, and Ajay Chaudry address the struggle many Americans face when not employed full-time by providing a framework for a national subsidized employment program (2018). The authors argue that subsidizing employment is a cost-effective way to improve the labor market outcomes and well-being of disadvantaged workers and to reduce poverty in the short and long run. The program they propose guarantees a thirty-five-hour per week job at participants' state minimum wage for nine months with the opportunity to reapply for continued participation. Simulating the poverty effects of the program required defining the universe of eligible participants in the CPS data, randomly selecting program participants, estimating their length of program participation, and recalculating their total income with the addition of their new wages from the program.

To be eligible for the employment program, individuals had to be either: long-term unemployed (unemployed for sixteen or more weeks), working involuntarily part time for economic reasons, or marginally attached to the labor force (for definitions, see BLS 2016). In the CPS, marginally attached workers are defined as persons available for work who looked for work in the past twelve months, but not in the four weeks immediately preceding the survey. We identified the group of potential program participants based on self-reported length of unemployment, reasons for working part time, and the interest in securing a job among individuals that were marginally attached to the labor force.[7] Working under the assumption that 20 percent of potential participants would enroll in the program, we randomly selected 20 percent of the universe of potential participants. After random selection, each "new" participant was then randomly assigned a number of weeks of participation. We assumed that the

6. We ignore other allowable deductions for dependent care, child support, medical expenses, and excess shelter expenses.

7. If an involuntary part-time worker worked for fifty-two weeks and their take-home pay was greater than their potential take-home pay from a thirty-five-hour per week job at their state's minimum wage, they were excluded from the group of potential participants.

length of program participation would be normally distributed and have a mean of twenty-six weeks (approximately six months). Participants' potential length of participation was randomly assigned based on this distribution.

For participants who were unemployed or marginally attached to the labor force, we added the number of weeks of participation in the program to their total weeks actually worked for the year.[8] The maximum number of weeks a participant who was long-term unemployed could work after their program weeks were added to their actual weeks worked was thirty-six weeks; for those marginally attached to the labor force, the maximum was forty-eight weeks.[9] For these groups of participants, if the new total weeks when program weeks were included exceeded these maximums, we reduced the number of weeks of program participation so that their weeks worked for the year totaled thirty-six for the long-term unemployed and forty-eight for the marginally attached workers. We then calculated the additional income from the program using their state's minimum wage rate and the number of weeks participants were employed by the program (that is, wage × 35 hours × program weeks) and added it to their annual earnings.[10]

A similar process was followed for those employed part-time for economic reasons. However, the maximum number of weeks in the year that participants from this group could be employed when program weeks were included with their actual weeks worked was fifty-two. When annual weeks worked for this group exceeded fifty-two (including program weeks), we had two approaches. First, if the weekly salary at the part-time job was greater than the weekly salary in the program, we reduced the number of weeks the participant spent in the program, Alternatively, if the weekly salary at the part-time job was less than the program's weekly salary, we reduced the number of weeks the participant spent at the part-time job and replaced it with weeks they participated in the program. The implicit assumption here is that if the part-time job pays less than the new full-time minimum wage job, the worker would rather be in the full-time job (that is, the program). Conversely, if the part-time job pays more than the new full-time minimum wage job, the worker would rather be in the part-time job for as long as they were recorded as having that job in the CPS. Individual annual earnings were updated according to the number of weeks involuntary part-time workers spent in the program.

For all program participants, federal taxes and credits, state taxes and credits, and FICA payroll taxes were recalculated based on their adjusted earnings using the TAXSIM program described earlier. To measure the program's impact on poverty under the SPM, participants' reported annual earnings were subtracted from their SPM unit's resources and replaced with their annual earnings including those from the program. Any additional taxes owed by and credits earned by participants were also accounted for in their unit's total resources. Total SPM resources with these alterations were measured against the SPM thresholds to determine the post-reform poverty rates.

To measure the benefit's impact on poverty under the official measure, the annual earnings of participants, including those from the program, were added to their unit's total resources used under the official measure. Total resources were not adjusted based on additional taxes owed and credits received by participants because these resources are measured pre-tax and are not included in resources under the official poverty measure.

8. The number of weeks they participated was based on the normal distribution detailed above.

9. The long-term unemployed needed to be unemployed for sixteen weeks of the year to qualify for the program. The maximum number of weeks they could work needed to account for their sixteen weeks of unemployment. To qualify as a marginally attached worker, one would need to have not looked for work for four weeks, which also needed to be accounted for in total weeks worked when program weeks were included.

10. Because state minimum wage rates are not reported in the CPS data, we merged a state minimum wage rate dataset onto our CPS dataset (Burnett 2014). The 2015 state-level minimum wages were merged onto the CPS data such that if a worker resided in a higher minimum wage state, that worker would be assigned a higher wage in the simulation.

RESULTS

Table 2 presents our topline simulation results for the eight articles included in the cross-proposal simulation. The first panel provides the total likely effects of each policy on the two groups: the total U.S. population, and all recipients of new resources provided by the policy. The second is an important population to examine given that the policies vary tremendously in how targeted they are at broad versus specific populations. Considering first the total U.S. population, we see that the policy proposals with the largest total impact on the poverty rate are those from Shaefer and his colleagues' universal child allowance and Romich and Hill's increased minimum wage. This makes sense because, aside from Bitler, Hines, and Page's child allowance proposal, resources from these simulations reach the most people, at 158.5 million and 99.7 million, respectively. These proposals also provide some of the largest simulated benefits, as illustrated in the bottom row of table 2. The eight proposals range quite a bit in the average benefit that recipients would see, from approximately $1,000 in Bitler, Hines, and Page to more than $5,000 in Romich and Hill.

Not surprisingly, these proposals with the largest overall impact on the poverty rate also come with some of the largest price tags. The Bitler, Hines, and Page proposal, though also touching many recipients, has a much lower net cost than the Shaefer and colleagues proposal because it is more concerned with containing direct costs of the proposal than the Shaefer et al. proposal. Interestingly, the Romich and Hill proposal is the only proposal that shows a net savings in direct costs, though our estimates of direct costs are only the costs to government programs, and with a minimum wage proposal like Romich and Hill's, other stakeholders (in this case businesses) would potentially bear a larger direct cost. It is important that many of the authors' individual articles consider how these costs could be paid for. Mechanisms for financing these costs could, of course, alter the topline results presented here.

As noted earlier, however, the proposals vary widely in the size of the population targeted. By examining effects on recipients of the proposal, we generally see much larger effects. Take Cancian and Meyer's proposal of a guaranteed child support benefit, for instance. Although it barely budges the total population poverty rate, the proposal is targeted specifically to custodial parents with low child support income and a subset of custodial parents without a child support agreement. For this latter group, the proposal reduces poverty by 22.5 percent. We find that the Dutta-Gupta and colleagues proposal to provide guaranteed jobs to discouraged, marginally attached, and involuntary part-time workers would reduce poverty overall negligibly, but by more than 40 percent among recipients. Again, some of the largest effects are found among those proposals that reach the most people or cost the most money. But we still find fairly substantial effects even among less costly programs.

The second panel of table 2 shows analogous results to the first panel, but with deep SPM poverty rates. The results are largely similar, so we do not dwell on them here. But it is worth noting that the Herd and colleagues MBP for seniors has a large effect on its targeted recipients, reducing poverty among (officially) poor elderly singles and couples by about two-thirds (from 22.5 percent to 7.3 percent). Alternatively, Romich and Hill's minimum wage proposal has less of an effect on deep poverty among recipients than it does on total poverty, most likely because many workers affected originally earned enough to avoid deep poverty while not earning enough to place them above the poverty line.

The third panel reports an alternative statistic, the percent reduction in the poverty gap among recipients of resources stemming from each policy proposal. The largest effects are found among the Dutta-Gupta and colleagues job guarantee and the Herd and colleagues MBP for the elderly, but all of the proposals achieve sizable reductions in the poverty gap among their intended recipients.

We also show, in panel 4, the simulated effects of each proposal on official poverty rates. Of note here is that some proposals, particularly the Herd and colleagues MBP plan for (officially) poor seniors show much larger anti-poverty effects under the official measure than under the SPM. For the MBP plan, this makes sense, as eligibility for the plan is based on be-

Table 2. Poverty Effects Across Proposals

	Shaefer et al.	Bitler, Hines, and Page	Herd et al.	Cancian and Meyer	Gundersen, Kreider, and Pepper	Kimberlin, Tach, and Wimer	Romich and Hill	Dutta-Gupta et al.
Poverty rate percent								
Pre-reform	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Post-reform	11.7	14.3	14.1	14.1	13.3	13.5	12.0	14.0
Pre-reform, recipients	16.1	15.7	65.2	23.1	37.8	71.4	20.9	35.0
Post-reform, recipients	9.7	15.1	46.5	17.9	30.0	56.1	12.2	19.9
Deep poverty rate percent								
Pre-reform	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Post-reform	4.0	4.5	4.7	4.8	4.6	4.4	4.5	4.7
Pre-reform, recipients	4.8	4.7	22.5	7.4	9.5	25.2	5.6	14.2
Post-reform, recipients	2.5	3.5	7.3	4.8	7.1	17.7	4.0	3.7
Poverty gap percent								
Reduction of gap for recipients	45.4	14.0	53.1	26.5	27.7	28.2	32.9	62.2
OPM poverty rate percent								
Pre-reform	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
Post-reform	9.5	10.5	11.5	11.7	12.2	12.2	10.4	12.0
Pre-reform, recipients	17.9	17.6	70.6	32.2	48.6	56.2	15.1	29.5
Post-reform, recipients	11.2	13.3	8.9	26.7	48.6	56.2	9.1	19.8
Costs and number affected								
Direct cost (billions)	$93.1	$8.5	$8.4	$8.2	$31.2	$23.2	-$19.3	$15.9
Number affected (millions)	158.5	155.3	5.9	15.8	40.4	20.1	99.7	7.1
Average yearly family benefit amount of recipients	$3,612	$1,005	$3,036	$3,141	$2,164	$2,076	$5,685	$5,922

Source: Authors' calculations based on the 2016 Current Population Survey.

ing counted as officially in poverty, and the value of the benefit is explicitly tied to the depth of that poverty below the official poverty line. The Bitler, Hines, and Page child allowance proposal also shows a more sizable decline in official versus supplemental poverty. In this case, the difference stems from the fact that the proposed Cash for Kids resources come in the form of cash, savings coming mainly from tax credits not counted in the official measure but counted in the SPM. Two proposals, Gundersen, Kreider, and Pepper's SNAP supplement and Kimberlin, Tach, and Wimer's renter's credit, are shown to have no effects on the official poverty rate because they concern forms of income that are not included as resources under the official poverty measure.

Tables 3 through 6 focus exclusively on poverty reductions using the SPM and the official measure. These tables, however, show the anti-poverty effects of each proposal by four different demographic characteristics: race-ethnicity, gender, age, and family structure. Each table

Table 3. Poverty Effects by Race-Ethnicity

	Poverty Rate (Pre-reform)	Poverty Rate (Post-reform)	OPM Poverty Rate (Pre-reform)	OPM Poverty Rate (Post-reform)	Poverty Gap Reduction for Recipients
White (Non-Hispanic)					
Shaefer et al.	10.0	8.6	7.9	6.5	43.7
Bitler, Hines, and Page	10.0	9.9	7.9	7.0	12.2
Herd et al.	10.0	9.8	7.9	7.2	54.0
Cancian and Meyer	10.0	9.9	7.9	7.5	27.3
Gundersen, Kreider, and Pepper	10.0	9.4	7.9	7.9	30.2
Kimberlin, Tach, and Wimer	10.0	9.4	7.9	7.9	27.1
Romich and Hill	10.0	8.8	7.9	7.0	27.2
Dutta-Gupta et al.	10.0	9.8	7.9	7.8	65.3
Black (Non-Hispanic)					
Shaefer et al.	22.8	18.3	22.5	17.8	48.8
Bitler, Hines, and Page	22.8	21.9	22.5	19.7	13.8
Herd et al.	22.8	22.3	22.5	21.5	55.4
Cancian and Meyer	22.8	22.4	22.5	21.7	19.3
Gundersen, Kreider, and Pepper	22.8	20.6	22.5	22.5	29.9
Kimberlin, Tach, and Wimer	22.8	21.4	22.5	22.5	31.2
Romich and Hill	22.8	18.4	22.5	19.3	39.8
Dutta-Gupta et al.	22.8	22.1	22.5	22.1	66.2
Hispanic					
Shaefer et al.	22.3	16.8	19.6	13.6	47.0
Bitler, Hines, and Page	22.3	23.1	19.6	15.9	10.3
Herd et al.	22.3	22.1	19.6	19.0	48.5
Cancian and Meyer	22.3	22.0	19.6	18.8	28.9
Gundersen, Kreider, and Pepper	22.3	20.8	19.6	19.6	23.6
Kimberlin, Tach, and Wimer	22.3	21.3	19.6	19.6	29.6
Romich and Hill	22.3	17.6	19.6	15.7	37.7
Dutta-Gupta et al.	22.3	21.9	19.6	19.3	53.9

Source: Authors' calculations based on the 2016 Current Population Survey.
Note: All numbers in percentages.

shows effects for the total population within each group.

We begin with race-ethnicity in table 3. The first panel shows the anti-poverty effects of each proposal on the poverty rate of the white, non-Hispanic population. As with the total population the largest anti-poverty impacts are seen for the larger proposals of Romich and Hill and Schaefer and colleagues. Similar results prevail for the official measure, though of course those based on tax or in-kind benefits by definition show no impacts here. The final column shows the poverty gap reduction but focused only on recipients. Some of the smaller and more narrowly focused proposals show more sizable anti-poverty effects. For example, Dutta-Gupta colleagues' guaranteed job proposal reduces the poverty gap among its recipients fairly dramatically (65.3 percent) and Herd and colleagues' MBP cuts the poverty gap by over half among its intended recipients.

The second panel of table 3 shows the results for black non-Hispanics. The results are largely consistent with those for white non-

Table 4. Poverty Effects by Gender

	Poverty Rate (Pre-reform)	Poverty Rate (Post-reform)	OPM Poverty Rate (Pre-reform)	OPM Poverty Rate (Post-reform)	Poverty Gap Reduction for Recipients
Male					
Shaefer et al.	13.7	11.2	11.2	8.7	45.5
Bitler, Hines, and Page	13.7	13.7	11.2	9.6	13.8
Herd et al.	13.7	13.5	11.2	10.8	51.6
Cancian and Meyer	13.7	13.5	11.2	10.7	26.0
Gundersen, Kreider, and Pepper	13.7	12.8	11.2	11.2	27.4
Kimberlin, Tach, and Wimer	13.7	12.9	11.2	11.2	27.6
Romich and Hill	13.7	11.3	11.2	9.5	34.1
Dutta-Gupta et al.	13.7	13.4	11.2	11.0	60.2
Female					
Shaefer et al.	14.9	12.2	13.1	10.3	45.3
Bitler, Hines, and Page	14.9	14.8	13.1	11.4	14.1
Herd et al.	14.9	14.6	13.1	12.2	54.0
Cancian and Meyer	14.9	14.7	13.1	12.6	27.1
Gundersen, Kreider, and Pepper	14.9	13.8	13.1	13.1	27.9
Kimberlin, Tach, and Wimer	14.9	14.0	13.1	13.1	28.7
Romich and Hill	14.9	12.6	13.1	11.2	31.8
Dutta-Gupta et al.	14.9	14.6	13.1	12.9	64.4

Source: Authors' calculations based on the 2016 Current Population Survey.
Note: All figures in percentages.

Hispanics, but are systematically larger, which likely reflects the fact that this group has higher poverty rates in general. The results for Hispanics are again broadly similar despite a few key exceptions. First, both Romich and Hill's minimum wage proposal and Shaefer and colleagues' universal child allowance show somewhat larger effects on poverty rates for Hispanics than for black non-Hispanics, even though both groups begin the exercise showing fairly similar poverty rates. This is likely because both are designed to be universal, including no restriction by citizenship or immigration status. In contrast, the Hispanic poverty rate under the Bitler, Hines, and Page child allowance proposal would rise a bit, likely because of the fact that the allowance they propose is restricted to U.S. citizens, while some noncitizens receive resources from programs that would be replaced or eliminated.

Table 4 repeats the analysis but by gender. The top panel shows the results for males and the bottom for females. What is notable about table 4 is how few major differences there are in the effects of each proposal by gender. As is well known, women in general have higher poverty rates to start than their male counterparts do. But the proposals with the largest effects are very similar by gender and even the magnitudes of the anti-poverty impacts and reduction in the poverty gap are broadly similar.

Table 5 presents the results by age group, children under eighteen, adults eighteen to sixty-four, and adults sixty-five and older. Looking first at child poverty, the Shaefer and colleagues proposal again has the largest effects, which makes sense given that it presents a universal child allowance that would go to every child in the United States. Proposals focused on other groups, such as the MBP and guaranteed jobs programs, show less impact on child poverty, as expected. For adults eighteen through sixty-four, we see less dramatic reduc-

Table 5. Poverty Effects by Age Group

	Poverty Rate (Pre-reform)	Poverty Rate (Post-reform)	OPM Poverty Rate (Pre-reform)	OPM Poverty Rate (Post-reform)	Poverty Gap Reduction for Recipients
Children					
Shaefer et al.	16.1	9.7	17.9	11.2	45.4
Bitler, Hines, and Page	16.1	15.7	17.9	13.7	14.0
Herd et al.	16.1	16.1	17.9	17.9	0.0
Cancian and Meyer	16.1	15.6	17.9	17.1	26.5
Gundersen, Kreider, and Pepper	16.1	14.7	17.9	17.9	23.0
Kimberlin, Tach, and Wimer	16.1	15.2	17.9	17.9	27.8
Romich and Hill	16.1	13.0	17.9	14.8	35.2
Dutta-Gupta et al.	16.1	15.7	17.9	17.7	0.0
Working age					
Shaefer et al.	13.8	12.1	10.9	9.2	0.0
Bitler, Hines, and Page	13.8	13.9	10.9	9.8	0.0
Herd et al.	13.8	13.7	10.9	10.8	33.4
Cancian and Meyer	13.8	13.7	10.9	10.4	0.0
Gundersen, Kreider, and Pepper	13.8	12.9	10.9	10.9	28.9
Kimberlin, Tach, and Wimer	13.8	13.0	10.9	10.9	26.2
Romich and Hill	13.8	11.3	10.9	9.2	33.0
Dutta-Gupta et al.	13.8	13.4	10.9	10.7	61.5
Sixty-five and older					
Shaefer et al.	13.6	13.3	8.6	8.3	0.0
Bitler, Hines, and Page	13.6	13.5	8.6	8.4	0.0
Herd et al.	13.6	12.3	8.6	4.4	51.6
Cancian and Meyer	13.6	13.6	8.6	8.5	0.0
Gundersen, Kreider, and Pepper	13.6	12.8	8.6	8.6	37.6
Kimberlin, Tach, and Wimer	13.6	12.6	8.6	8.6	41.3
Romich and Hill	13.6	13.1	8.6	8.4	28.6
Dutta-Gupta et al.	13.6	13.5	8.6	8.5	73.5

Source: Authors' calculations based on the 2016 Current Population Survey.
Note: All figures in percentages.

tions than when we focus on children. For the poverty gap analysis, though, the Dutta-Gupta and colleagues proposal achieves substantial and large reductions in the poverty gap among the adults that benefit from the proposal. For adults sixty-five and older, the only program that explicitly targets this group (the MBP) of course shows the largest impact in absolute magnitude. But other proposals also make a bit of difference, including the renter's credit and the SNAP supplement.

Last, in table 6, we examine differences by family structure. Everyone in a family was coded as belonging to a single, cohabiting, or married family by first looking for anyone married within a unit, secondarily by looking for anyone cohabiting with a romantic partner, and lastly by finding those where no one was married or cohabiting within a unit. Looking first at people in single families, we see that the Shaefer and colleagues proposal has the largest effect on both the poverty rate and the Dutta-Gupta and colleagues proposal results in the largest poverty gap reduction for direct benefi-

Table 6. Poverty Effects by Family Structure

	Poverty Rate (Pre-reform)	Poverty Rate (Post-reform)	OPM Poverty Rate (Pre-reform)	OPM Poverty Rate (Post-reform)	Poverty Gap Reduction for Recipients
Single					
Shaefer et al.	24.7	21.2	24.0	20.4	47.5
Bitler, Hines, and Page	24.7	24.1	24.0	21.9	21.2
Herd et al.	24.7	24.2	24.0	22.3	58.4
Cancian and Meyer	24.7	24.4	24.0	23.7	26.8
Gundersen, Kreider, and Pepper	24.7	22.6	24.0	24.0	29.4
Kimberlin, Tach, and Wimer	24.7	22.8	24.0	24.0	28.2
Romich and Hill	24.7	21.3	24.0	21.1	30.5
Dutta-Gupta et al.	24.7	24.2	24.0	23.6	65.8
Cohabiting					
Shaefer et al.	15.2	10.9	12.4	8.5	49.3
Bitler, Hines, and Page	15.2	14.0	12.4	9.5	23.0
Herd et al.	15.2	15.0	12.4	12.4	44.7
Cancian and Meyer	15.2	14.5	12.4	7.6	26.9
Gundersen, Kreider, and Pepper	15.2	13.9	12.4	12.4	24.4
Kimberlin, Tach, and Wimer	15.2	14.3	12.4	12.4	28.3
Romich and Hill	15.2	11.5	12.4	9.4	44.6
Dutta-Gupta et al.	15.2	14.5	12.4	12.1	61.6
Married					
Shaefer et al.	9.2	7.2	6.5	4.4	41.4
Bitler, Hines, and Page	9.2	9.6	6.5	5.2	0.8
Herd et al.	9.2	9.1	6.5	6.3	42.0
Cancian and Meyer	9.2	9.2	6.5	6.5	23.6
Gundersen, Kreider, and Pepper	9.2	8.8	6.5	6.5	23.8
Kimberlin, Tach, and Wimer	9.2	8.9	6.5	6.5	28.3
Romich and Hill	9.2	7.6	6.5	5.4	35.5
Dutta-Gupta et al.	9.2	9.0	6.5	6.4	50.0

Source: Authors' calculations based on the 2016 Current Population Survey.
Note: All figures in percentages.

ciaries. This is also true for those in married or cohabiting families. The Romich and Hill proposal generally comes next for all groups in the magnitude of the anti-poverty rate reduction. Those in single families have the highest starting poverty rates and those in married families have the lowest, so the absolute magnitude of the drop in poverty tends to be somewhat larger in the single group, though this is not universally the case, as sometimes the drops are quite large in cohabiting families. Note that the poverty gap reduction for recipients is substantial across virtually all the policies once restricted to the targeted recipients.

Finally, although some policies are explicitly targeted to the demographic subgroups we examined (such as child allowances targeted to children), other policies are targeted to more specific demographic groups that are not captured by the subgroup categories we examined—such as families eligible for child support (Cancian and Meyer) or renters with high rent burdens (Kimberlin, Tach, and Wimer), and we do not compare how the full set of policies

would affect these more specific demographic groups.

A final note of comparison is that the proposals vary substantially in the initial poverty rate and deep poverty rate of their beneficiaries. Some proposals are designed to be universal, and most are targeted based on criteria not directly linked to poverty status, so for some proposals as much as 83.9 percent of beneficiaries are already above the poverty line before receiving any benefits from the new policy. This means that a larger share of total policy benefits and costs are directed to individuals who are already nonpoor than with policies more narrowly targeted to individuals in poverty, potentially reducing the efficiency of anti-poverty impact. Other policy goals can be met by serving nonpoor beneficiaries, however.

DISCUSSION

This article attempts to provide a consistently estimated set of simulations using the most recently available data for as many articles in the double issue as possible. In total, we conducted simulations for eight proposals, providing anti-poverty impact estimates for both the SPM and the official measures, and for poverty rates, deep poverty rates, and the overall poverty gap. One key finding is that the policies simulated vary tremendously in their scope and reach, populations targeted, and cost. Thus we also made it a point of the analyses to look at anti-poverty metrics for the specific population of "recipients" that would receive new resources from the proposed policy. Finally, we considered and presented differences by four key demographic characteristics: race-ethnicity, gender, age, and family structure.

As one would expect, the larger, costlier proposals tended to show the largest aggregate impacts. In most cases, these would be governmental costs, with the exception of Romich and Hill's minimum wage plan, which would direct the new costs to employers. It is worth emphasizing two points on costs. First, we model only what we call the direct costs of what the authors put in their primary proposal. Many authors present alternative policy scenarios, some of which would have very different cost structures than those presented. In addition, some authors focus explicitly on containing costs whereas others discuss the numerous ways one might finance the direct costs presented here. Those choices about how to pay for these direct costs could obviously shape the poverty estimates presented here. The results for the Bitler, Hines, and Page child allowance proposal are instructive on this point. These authors go to great lengths to figure out how to contain costs and pay for their proposal. As a result, the proposal often shows smaller anti-poverty impacts than other proposals that have not fully grappled with the same cost challenge. Fuller consideration of how these costs would be paid for would allow us to make more exact comparisons of the relative pros and cons of various approaches and how these affect the distribution of resources across the total population.

Our approach and resulting estimates have several limitations. First, as noted earlier, our underlying dataset is not corrected for the underreporting of income or benefits. Our estimates may therefore not be fully accurate, though this bias would likely still evince similar patterns across proposals if incomes and benefits were fully reported. Second, our simulations generally do not model behavioral responses, changes in the macro-economy that might result from a proposed policy and thus alter poverty rates in unexpected ways, or cross-program interactions. This is not always the case because in some instances the authors explicitly built such factors and assumptions into their proposal. Third, many of the policy proposals simulated here would provide new resources not only to the poor but also to the near poor and in some cases even the well off. Our focus on the anti-poverty effects and reductions in the poverty gap do not account for these important impacts. Many of the limitations are discussed in more detail in the individual articles in this volume.

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