

Beyond Head of Household:  
Rethinking the Taxation of Single Parents

Jacob Goldin and Zachary Liscow\*

March 2017

**Abstract:** Under current law, unmarried taxpayers with children can take advantage of the head of household filing status (HHFS) to reduce their federal income taxes. We argue that the design of the filing status is largely obsolete, geared toward alleviating a “marriage penalty” in the tax code that is much less important than when the filing status was first established. At the same time, the growth in the fraction of Americans raising children outside of traditional two-parent households has dramatically raised the cost of the filing status to the fisc.

In this article, we highlight two features of the design of HHFS that undermine its goal of providing support to single parent households. First, because it is designed as a filing status, HHFS provides a larger tax break to high-income taxpayers than to low-income ones: in 2011 HHFS saved qualifying taxpayers in the 25th percentile of the income distribution approximately \$23 a year compared to approximately \$1,573 a year for qualifying taxpayer in the 75th income percentile. Second, the tax savings provided by HHFS bear no relation to the number of children a taxpayer supports, even though taxpayers supporting more children would likely benefit more from child-related subsidies than taxpayers supporting a single child. We propose reforming HHFS by replacing it with an expanded child tax credit for single parents and estimate that a revenue neutral reform along these lines would support a refundable tax credit of approximately \$294 per child for households headed by single parents.

---

\* Assistant Professor of Law, Stanford Law School, [jsgoldin@law.stanford.edu](mailto:jsgoldin@law.stanford.edu); Associate Professor of Law, Yale Law School, [zachary.liscow@yale.edu](mailto:zachary.liscow@yale.edu). We thank Anne Alstott, Ellen Aprill, Conor Clarke, Adam Cole, Daniel Feenberg, Brian Galle, David Gamage, Jed Glickstein, Daniel Halperin, Yair Listokin, Louis Kaplow, Austin Nichols, Jason Oh, Katherine Pratt, Erin Scharff, Larry Zelenak, and participants at Duke Law School, Georgetown Law School, Harvard Law School, Loyola Law School, and the National Tax Association Annual Meeting for helpful conversations and suggestions. Taylor Cranor and Michael Loughlin provided outstanding research assistance.

## Table of Contents

I.	Introduction .....	3
II.	The Origins of the Head of Household Filing Status.....	7
III.	Basic Features of the Head of Household Filing Status.....	9
A.	Eligibility .....	9
B.	Tax Benefits from the Filing Status.....	12
C.	Other Family Tax Benefits .....	13
1.	Child Tax Credit .....	14
2.	Earned Income Tax Credit .....	15
3.	Child and Dependent Care Credit .....	16
4.	Dependent Deduction .....	17
IV.	Descriptive Statistics .....	19
A.	Data .....	19
B.	Who Files as Head of Household.....	19
C.	Aggregate Cost .....	20
D.	Distribution of HHFS Benefits by Income .....	21
V.	Normative Framework.....	27
VI.	Shortcomings of the Head of Household Filing Status.....	34
A.	Vertical Equity .....	34
B.	Horizontal Equity .....	36
C.	Simplicity and Administration .....	36
VII.	The Head of Household Credit.....	37
A.	Mechanics of the Head of Household Credit.....	39
B.	Policy Simulation .....	43
C.	Distributional Effects of Switching to the HHC .....	44
D.	Alternative Policy Options.....	45
VIII.	Other Considerations .....	49
IX.	Conclusion .....	52
	Appendix.....	54

## I. Introduction

Since 1951, unmarried taxpayers with qualifying dependents—usually children—have been able to claim the head of household filing status (HHFS) and take advantage of its beneficial rate schedule.<sup>1</sup> The filing status was enacted to reduce the burden on single parents at a time when the tax code created a “marriage bonus.” Today it continues to exist (largely unchanged) even though estimates from the most recently available data suggest that only about half (54%) of married households continue to receive a marriage bonus and over a third (38%) actually pay a marriage penalty.<sup>2</sup>

Throughout its long history, HHFS has managed to fly beneath the radar of most tax scholars and policymakers.<sup>3</sup> And indeed various tax policy proposals discard

---

<sup>1</sup> Section 1(b) of the Internal Revenue Code establishes the head of household filing status, which establishes a separate rate schedule for certain households defined in Section 2(b). Unless otherwise noted, all cited statute sections refer to the Internal Revenue Code.

<sup>2</sup> James Alm & J. Sebastian Leguizamon, *Whither the Marriage Tax?*, 68 NAT'L TAX J. 251, 259-61 (2015). The decrease in the number of couples benefitting from a marriage tax since the late 1990s occurred as a result of the Economic Growth and Tax Relief Reconciliation Act of 2001 and the Jobs and Growth Tax Relief Reconciliation Act of 2003. *Id.* 262. For other recent discussions of marriage penalties and bonuses across the income distribution, see Emily Y. Lin & Patricia K. Tong, *Marriage and Taxes: What Can We Learn from Tax Returns Filed by Cohabiting Couples?*, 65 NAT'L TAX J. 807 (2012); Lawrence Zelenak, *For Better and Worse: The Differing Income Tax Treatments of Marriage at Difference Income Levels*, 93 NC L. REV. 783 (2015).

Also, note that prior to the tax cuts enacted the beginning of President George W. Bush's administration, nearly two thirds of married households (63%) paid a marriage penalty. Alm & Leguizamon 259-61.

<sup>3</sup> There are several important exceptions. Deborah Schenk proposed reforms to HHFS as part of a broader simplification of the tax treatment of family status. Deborah H. Schenk, *Simplification for Individual Taxpayers: Problems and Proposals*, 45 TAX L. REV. 121 (1989). Because it is not classified as a tax expenditure, the budgetary costs of HHFS are infrequently estimated. The most recent estimate we could find, using 1999 data, concluded that its budgetary cost was \$3.9 billion in 2001 dollars. David Ellwood & Jeff Liebman, *The Middle-Class Parent Penalty: Child Benefits in the*

the filing status, seemingly without considering its purpose.<sup>4</sup> That neglect is unfortunate: as its original purpose has eroded, HHFS has quietly grown in size and expense as more children are raised outside of traditional two-parent households. In 2011, more than 13.5 million people filed their taxes as head of household<sup>5</sup> compared to just 1 million that did so in 1960.<sup>6</sup> And as HHFS has become more important over time, a number of problems in its design have grown more pronounced as well. In this article, we argue that the current design of HHFS undermines its ability to relieve the tax burden on single parent households—but that relieving the tax burden on single parent households remains an important goal. In its place, we propose an expanded child tax credit for single parents and argue that this reform would improve tax policy along a number of dimensions.

Because the head of household filing status has been the focus of so little attention by academics, our first goal is primarily descriptive. Drawing on a sample of federal income tax returns, we investigate the aggregate cost of the filing status to the fisc. We estimate that eliminating HHFS would have resulted in \$9.4 billion more

---

*U.S. Tax Code*, 15 TAX POLICY AND THE ECONOMY 1, 8 (2001). More recently, the Tax Policy Center has considered the distribution of benefits from HHFS along with other provisions across the income distribution, <http://www.taxpolicycenter.org/numbers/displayatab.cfm?DocID=3986>, but these estimates do not isolate the benefits stemming from HHFS as opposed to other provisions of the tax code. The Urban Institute also discusses the income distribution of all child-related benefits. <http://blog.metrotrends.org/2013/05/child-benefits-tax-code-current-system-sense>. See also Elaine Maag, *Simplicity: Considerations in Designing a Unified Child Tax Credit*, 63 NAT'L TAX J. 765, 770 (2010) (containing simulations of the distributional consequences of various child-related benefits).

<sup>4</sup> For example, at least one of President Trump's campaign tax proposals eliminated it. See Lily L. Batchelder, *Families Facing Tax Increases Under Trump's Tax Plan*, TAX POLICY CENTER, Oct. 28, 2016, at 3. See also *infra* notes 65-67 (describing earlier plans eliminating the HHFS as part of larger reforms).

<sup>5</sup> IRS, Tax Stats, at <http://www.irs.gov/uac/SOI-Tax-Stats---Individual-Statistical-Tables-by-Filing-Status>.

<sup>6</sup> From own analysis of 1960 analysis of SOI data.

in revenues in 2011, a vast increase from its 1960 cost of \$301 million (in 2015 dollars).

After documenting the magnitude of HHFS's budgetary cost, we turn to the distribution of its benefits. Although the conventional wisdom is that HHFS is primarily a tax benefit for low income families, we highlight an important sense in which the opposite is true. Because the tax benefit is designed as a filing status, high income taxpayers who file as head of household are guaranteed a larger tax reduction than low income taxpayers who do so. We investigate the magnitude of this disparity as well as whether it has changed over time. The results are striking: in 2011, a household earning in the 25th percentile of the income distribution saved \$23 annually by filing as head of household. In contrast, the annual tax savings from HHFS were \$1,573 for a household earning in the 75th percentile of the income distribution.<sup>7</sup>

We then turn to policy design. We begin by developing a utilitarian framework that shows why there *should* be differential tax treatment by marital status for those with children, arguing against those who wish to eliminate the differential treatment. Then, motivated by current law's regressive design, its failure to take into account the number of children a household has, the erosion of its original purpose, and its unusual position within the tax code as an entirely different rate schedule, we propose eliminating the head of household filing status and replacing it with an expanded child tax credit for single parents.

---

<sup>7</sup> See Section IV for the sources of data and calculations leading to these numbers.

Under current law, taxpayers with children can receive up to a \$1,000 tax reduction per child under the Child Tax Credit (CTC).<sup>8</sup> Under our proposed reform, the Head of Household Credit (HHC) would scale up the size of the tax benefit for single-parent households. The two main arguments in favor of the reform are simple. First, if the tax code is going to provide additional tax relief to single parents, the amount of that relief should not be greater for higher income taxpayers. Second, the amount of relief for single parents should be linked to the number of children they support, but under current law a household receives the same tax benefit from HHFS whether it supports one, two, three, or more children. Using the tax return data, we estimate that the cost savings from eliminating HHFS would accommodate a refundable single-parent child tax credit of \$294 per child per year (approximately 30 percent of the existing child tax credit). In addition to avoiding the regressive features of the current HHFS, the tax benefit provided by the HHC would be linked to the number of children the taxpayer supports, which we argue is more consistent with the goals of sensible tax policy.<sup>9</sup>

This paper proceeds as follows. Section II describes the history of HHFS. Section III describes its operation today. Section IV investigates the budgetary cost and the distribution of its benefits, including how those quantities have changed over time. Section V lays out a normative framework for evaluating the design of HHFS,

---

<sup>8</sup> 26 U.S.C. § 24.

<sup>9</sup> As described below, the reform would actually reverse current policy, which provides a smaller child tax credit to some single than married taxpayers with the same income, because the tax credit's phase-out begins earlier for single taxpayers than for married ones.

and Section VI uses that framework to critique existing policy. Section VII describes our proposed reform, the HHC, and investigates the consequences of replacing HHFS with it. Section VIII concludes.

## II. The Origins of the Head of Household Filing Status

The head of household filing status was established with the Revenue Act of 1951.<sup>10</sup> The origins of the modern filing status were in the 1930 Supreme Court case *Poe v. Seaborn*.<sup>11</sup> At that point in U.S. history—and from the beginning of the income tax in 1913 until 1948—each individual was generally taxed separately on his or her own income regardless of marital status<sup>12</sup> (apart from the personal exemption, which was affected by marital status).<sup>13</sup> *Seaborn* held that each member of a marriage was taxable on one-half of community income, even if the income in question had been earned solely by the other spouse. This decision advantaged married couples in community property states over married couples in other states—because the tax code is progressive, income-splitting reduces a couple’s total tax liability. Many states that lacked community property regimes when *Seaborn* was decided responded to the

---

<sup>10</sup> Arthur H. Goodman, *Observations on the Revenue Act of 1951*, 20 FORDHAM L. REV. 273, 274-77 (1951) (providing a description and critique of the adoption of the filing status).

<sup>11</sup> 282 U.S. 101 (1930).

<sup>12</sup> For additional description, see Boris Bittker, *Federal Income Taxation and the Family*, 27 STAN. L. REV. 1389, 1399-1416 (1975) and *Druker v. Commissioner*, 687 F.2d 46 (2d. Cir. 1982, J. Friendly), cert. denied 461 U.S. 957 (1983) (holding it constitutional to apply higher rates to married taxpayers filing separately than the rates the taxpayers would have faced had they been single).

<sup>13</sup> The original 1913 income tax allowed a \$3,000 personal exemption to an unmarried taxpayer and a \$4,000 for cohabiting married couples. Revenue Act of 1913, Pub. L. 63-16, § II.C, 38 Stat. 114, 168. The Revenue Act of 1916 allowed heads of families, single people with at least one dependent child, to claim the married couple exemption. Lawrence Zelenak, *A Troubled Relationship from the Start: Marriage and the Federal Income Tax* 3-4, 24-25 (draft). This system of exemptions was erased by the Revenue Act of 1944.

decision by introducing community property, so that their residents could benefit from income-splitting. Although a subsequent Supreme Court decision<sup>14</sup> held that elective community property regimes did not qualify couples for income-splitting, the movement toward community property was slowed rather than stopped.

In 1948, Congress responded to the controversy and confusion in this area by allowing all married couples to split their income, regardless of where they lived. In particular, the Revenue Act of 1948 allowed all couples to split their income equally so that each taxpayer was treated as single—in effect, setting the tax on married couples equal to twice what a single taxpayer would owe if he or she had earned one-half of the married couple’s income. Under the progressive income tax schedule then in place, this created a substantial “marriage bonus” for many federal taxpayers.

The Revenue Act of 1951 addressed this large marriage bonus by creating the head of household filing status.<sup>15</sup> The idea was to give approximately half of the income-splitting benefit gained by married taxpayers to single taxpayers who maintained a household for their dependents.

Subsequently, however, the initial rationale for HHFS was eliminated in the Tax Reform Act of 1969, which replaced the “marriage bonus” with a “marriage penalty” for many taxpayers. It did this by increasing the number of filing statuses

---

<sup>14</sup> *Commissioner v. Harmon*, 323 U.S. 44 (1944).

<sup>15</sup> H.R. 4473, 82d Cong., 1<sup>st</sup> Sess. (1951). Specifically, that act extended half of the income-splitting benefit by married taxpayers to single taxpayers eligible for at least one exemption for a child or relative. In 1954, Congress expanded the definition of a “head of household” to include single taxpayers who paid more than half the cost of maintaining the primary residence for their dependent mother or father even if the parent did not live with the taxpayer (Bittker1975).



from two to four (married filing jointly, head of households, single, and married filing separately),<sup>16</sup> and by designing the corresponding rate schedules so that the tax liability of someone filing as single would never exceed 120 percent of the tax liability of a married couple with the same total income filing a joint return. In making these changes, the 1969 Act created a marriage penalty for those—often households with two earners—who would have owed less in taxes had they been unmarried. Despite the elimination of most marriage bonuses from 1969 onwards, HHFS remains an important feature of the modern tax code.

### III. Basic Features of the Head of Household Filing Status

#### A. Eligibility

Eligibility for HHFS is set out in section 2(b) of the Internal Revenue Code. In general, a taxpayer may claim HHFS if he or she is unmarried and lives with a child or other relative in a home that the taxpayer maintains.<sup>17</sup>

Eligibility for claiming HHFS can be broken down into three requirements. First, the taxpayer must be unmarried.<sup>18</sup> As with other parts of the tax code, in some cases a taxpayer is considered to be unmarried if he or she meets the other requirements to file as head of household and lives apart from his or her spouse for the final 6 months of the tax year.<sup>19</sup>

---

<sup>16</sup> *Druker v. Commissioner*, 687 F.2d at 49.

<sup>17</sup> § 2(b)(1). A taxpayer may also claim HHFS by maintaining the household of a parent, even if the parent does not live with the taxpayer. See § 2(b)(1)(B).

<sup>18</sup> § 2(b)(2)(A).

<sup>19</sup> §§ 2(c), 7703(b).

Second, the taxpayer must maintain his or her household. The statute specifies that a taxpayer meets this requirement only if he or she pays for over half the costs of maintaining the household.<sup>20</sup>

Third, a taxpayer may only claim HHFS if he or she lives with a qualifying person.<sup>21</sup> The qualifying person may be either a child of the taxpayer or one of several specified types of relative. Although fairly complicated, understanding the qualifying person rules is critical for understanding the current operation of HHFS as well as our proposed reform.

Since 2005, the requirements for an individual to constitute a qualifying person for HHFS are (for the most part) the same as the requirements for the individual to be claimed on a tax return for the purposes of other provisions of the tax code.<sup>22</sup> In particular, a qualifying person for HHFS purposes may be either a “qualifying child” or a “qualifying relative” of the taxpayer.<sup>23</sup> A qualifying child is usually, as its name suggests, a child of the taxpayer (although siblings, nieces, and nephews can count as well).<sup>24</sup> A taxpayer is not required to be the primary source of support for a qualifying child, but a qualifying child cannot provide more than half of his or her own support.<sup>25</sup> Finally, to count as a qualifying child, the child must be

---

<sup>20</sup> § 2(b)(1).

<sup>21</sup> Specifically, the taxpayer’s home must be the qualifying person’s “principal place of abode.” § (b)(1)(A).

<sup>22</sup> See Pub. L. 108-311, Working Families Tax Relief Act of 2004, Title II. One difference is that members of a taxpayer’s household who are not related to the taxpayer may qualify as dependents but may not qualify a taxpayer for head of household filing status. § 2(b)(3)(B)(i).

<sup>23</sup> § 2(b)(1)(A).

<sup>24</sup> § 152(c)(2).

<sup>25</sup> § 152(c)(1)(D).

under 19 years old for the entire tax year (or 24 years old if the child is a full time student).<sup>26</sup> After becoming too old to meet the definition of a qualifying child, an individual may continue to qualify the taxpayer for HHFS as a qualifying relative, but only if the additional requirements for that condition are met.

Taxpayers who do not have a qualifying child may still qualify for HHFS if instead they have a qualifying relative. There are four main differences between a qualifying relative and a qualifying child. First, a qualifying relative may be related to the taxpayer through a broader range of relationships than a qualifying child (for example parents and grandparents can count as well).<sup>27</sup> Second, there are no age limits for qualifying relatives; thus a taxpayer's child may qualify the taxpayer to claim HHFS when the child becomes too old to count as a qualifying child. Third, qualifying relatives cannot earn too much income of their own. For 2015, the income limit for qualifying relatives is \$4000 per year, with the threshold tied to the size of the personal exemption.<sup>28</sup> Finally, with certain exceptions, the taxpayer must provide over half of an individual's support for that individual to be the taxpayer's qualifying relative.<sup>29</sup>

---

<sup>26</sup> § 152(c)(3). There is no age limit for children who are "permanently and totally disabled." § 152(c)(3)(B).

<sup>27</sup> § 152(d)(2).

<sup>28</sup> § 152(d)(1)(B).

<sup>29</sup> § 152(d)(1)(C).

## B. Tax Benefits from the Filing Status

The head of household filing status provides tax benefits to eligible taxpayers by increasing the income threshold at which new marginal tax rates kick in.<sup>30</sup> For example, single taxpayers<sup>31</sup> cross from the 15 to the 25 percent marginal tax rate bracket once their taxable income exceeds \$37,650. In contrast, taxpayers who qualify for head of household don't face the 25 percent marginal tax rate until their taxable income exceeds \$50,400. Thus a single taxpayer with taxable income of \$45,000 would face a 25 percent marginal tax rate, whereas a head of household filer with the same annual taxable income would face a marginal tax rate of only 15 percent.

The current HHFS statutory tax rates are described in Table 1 and graphically depicted in Figure 1, along with the tax schedules for single filers. The solid line represents the marginal tax rate schedule for a single filer and the dashed line represents the corresponding rates for head of household filers. The ranges where the solid line is above the dashed line correspond to those taxable incomes for which the head of household filers receive a preferential marginal tax rate relative to single filers. The figure illustrates that HHFS is only associated with advantageous marginal tax rates compared to single filing status for certain income windows. As we explain in Section VI, however, this doesn't mean that the tax benefits of HHFS are limited to taxpayers within these income windows. Rather, even head of

---

<sup>30</sup> The tax brackets used in this example are for tax year 2015.

<sup>31</sup> By "single taxpayers" or "single filers", we mean taxpayers whose filing status is single, as opposed to, say, married filing separately. We will refer to taxpayers who are unmarried as unmarried taxpayers or unmarried filers.

household filers facing the same marginal tax rates as single filers will face lower average tax rates, and thus lower tax liability.

Apart from the beneficial marginal tax rate schedule, those filing as head of household also benefit from an advantageous standard deduction. Whereas single taxpayers receive a standard deduction of \$6,100 (in tax year 2015), those claiming HHFS can claim a standard deduction of \$9,250. As with the marginal tax schedule, the standard deduction for HHFS lies between that of single filers and married taxpayers filing jointly, whose standard deduction in 2015 is \$12,600. Note that the standard deduction benefit is over and above the personal exemption of \$4,000 per child that all taxpayers may claim, regardless of marital status.

### **C. Other Family Tax Benefits**

In addition to one's filing status, several other provisions of the tax code are linked to taxpayers' marital status and the number of children they support. In this section we briefly review three of the most important of these: the Child Tax Credit (CTC), the Earned Income Tax Credit (EITC), the Child and Dependent Care Credit (CDCC), and the personal exemption.<sup>32</sup>

---

<sup>32</sup> Other provisions of the tax code relating to family size include: the child and dependent care credit (§21), various education credits and deductions (§25A, §222), the exclusion for employer-provided dependent care assistance (§129), and the premium tax credit (§36B) that was created as part of the Affordable Care Act.

## 1. Child Tax Credit

The CTC provides a tax credit of up to \$1,000 for each of the taxpayer's children.<sup>33</sup> The credit is partially refundable; if the amount of the credit exceeds the taxpayer's liability, a portion of the credit may be applied as a refund.<sup>34</sup>

For a taxpayer to claim the CTC based on a child, the child must satisfy the definition of a qualifying child with respect to the taxpayer.<sup>35</sup> The definition of a qualifying child is generally the same for CTC purposes as for the HHFS. In particular, the child must live with the taxpayer for most of the tax year, satisfy one of several relationships to the taxpayer, and not provide more than half of his or her own support.<sup>36</sup> Unlike the HHFS, however, the CTC is only available for individuals below the age of 17.<sup>37</sup> Thus a mother who lives with her 18 year old son (and no other children) might qualify for head of household but could not claim the CTC. In addition, the CTC is only available for qualifying children of the taxpayer, not for qualifying relatives (unlike the case with HHFS).<sup>38</sup>

---

<sup>33</sup> § 24.

<sup>34</sup> Technically, the CTC itself is not refundable, but the "Additional Child Tax Credit" is refundable. Those with fewer than three children are eligible for a refund of up to 15% of their income beyond \$3,000, up to a maximum credit of \$1,000 per child. (Those with three or more children are eligible for somewhat more). The Additional Child Tax Credit was expanded in the American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, (by lowering the income threshold above which taxpayers are eligible to receive the Additional Child Tax Credit from \$10,000 to \$3,000), and this expansion was extended from 2010 until 2012 by the *Tax Relief and Job Creation Act of 2010* and until 2017 by the *American Taxpayer Relief Act of 2012*. See <http://www.irs.gov/uac/ARRA-and-the-Additional-Child-Tax-Credit> and § 24(d).

<sup>35</sup> § 24(c).

<sup>36</sup> § 152(c).

<sup>37</sup> § 24(c).

<sup>38</sup> *Id.*

Although the amount of the CTC doesn't directly depend on the taxpayer's marital status, the credit phases out for taxpayers whose income exceeds a certain threshold, and that threshold depends on the taxpayer's filing status. For taxpayers filing as single or head of household, the CTC begins to phase out once the taxpayer's income exceeds \$75,000.<sup>39</sup> For married filers, the credit doesn't begin to phase out until the taxpayer's income exceeds \$110,000. This discrepancy means that unmarried parents with incomes in this range receive a smaller credit per child than do married parents with incomes in the same range.

## 2. Earned Income Tax Credit

The EITC provides a refundable tax credit to low-income, working taxpayers.<sup>40</sup> The amount of the credit depends on both the taxpayer's marital status and the number of children the taxpayer lives with. The phase-out range for the EITC depends on both the taxpayer's marital status and the number of children in the household. In contrast, the maximum amount of the credit and the phase-*in* range are the same for married and unmarried taxpayers with children. Like the CTC, the EITC phase-out begins at a lower income threshold for taxpayers who are unmarried, as compared to taxpayers who are married filing jointly, and this discrepancy results in a tax penalty for single relative to married parents.

Like the CTC (and unlike HHFS), the EITC may only be claimed for individuals who meet the definition of a qualifying child with respect to the taxpayer

---

<sup>39</sup> The child tax credit phases out linearly from \$75,000 to \$95,000, with \$50 reduced from the CTC for each \$1,000 increase in income.

<sup>40</sup> § 32.

– it cannot be claimed based on a qualifying relative.<sup>41</sup> However, there are two important differences between the CTC and the EITC with respect to the rules for qualifying children. First, whereas the CTC can only be claimed for children below the age of 17, taxpayers may claim the EITC for children up to the age of 19.<sup>42</sup> Second, children claimed for the EITC are not required to meet the support test that is generally required to be a qualifying child.<sup>43</sup> That is, unlike other provisions in the tax code, an individual can be a taxpayer’s qualifying child even if the individual provides more than half of his or her own support.

### 3. Child and Dependent Care Credit

The CDCC provides a tax credit for child-care expenses incurred by a taxpayer so that the taxpayer could work.<sup>44</sup> The credit is non-refundable, meaning that like HHFS, it only benefits taxpayers who would otherwise have positive tax liability. The CDCC can be claimed for expenses for up to two qualifying individuals, which for this purpose, generally refers to dependents of the taxpayer below the age of 13.<sup>45</sup> Taxpayers who incur child-care expenses that enable the taxpayer to work are able to claim the credit with respect to a portion of such expenses.

Notably, the design of the CDCC differs from the design of the HHFS with respect to the two features of the HHFS that we focus on below. First, the amount of

---

<sup>41</sup> § 32.

<sup>42</sup> § 152(c)(3).

<sup>43</sup> § 32(c)(3)(A).

<sup>44</sup> § 21.

<sup>45</sup> § 21(b)(1). As with the other tax benefits listed in this sections, older individuals may qualify as well if they are physically or mentally incapable of caring for themselves. *Id.*



the CDCC does not increase with a taxpayer's income. Rather, the fraction of expenses covered by the CDCC declines for higher income taxpayers, from a 35 percent reimbursement rate for taxpayers with adjusted gross income below \$15,000 down to a 20 percent reimbursement rate for taxpayers with adjusted gross income above \$43,000.<sup>46</sup> Notwithstanding the declining reimbursement rate schedule, the overall progressivity of the credit is great reduced by the fact that it is non-refundable.

The second feature of the CDCC that differs from the HHFS is that the benefits taxpayers receive under the CDCC varies (to some degree) based on the number of children a taxpayer has. In particular, the maximum number of expenses a taxpayer may use to qualify for the credit is \$3,000 for taxpayers with one qualifying individual and \$6,000 for taxpayers with two qualifying individuals.<sup>47</sup> Although the maximum credit amount does not increase beyond two qualifying individuals, this feature provides a meaningful contrast to the HHFS, for which the benefits do not even vary between taxpayers with one versus two qualifying individuals.

#### 4. Dependent Deduction

Taxpayers receive a deduction for each child that they claim as a dependent, which reduces their taxable income by the personal exemption amount.<sup>48</sup> The personal exemption amount is adjusted annually for inflation; in 2015 it was \$4,000 per dependent.

---

<sup>46</sup> § 21(a)(2).

<sup>47</sup> § 21(c).

<sup>48</sup> § 151.

Among the provisions of the tax code linked to family size, the rules for which individuals can be claimed as a taxpayer's dependent are most similar to the rules for which individuals qualify a taxpayer to file as head of household. Like the rules for HHFS, taxpayers may claim as a dependent an individual that is either a qualifying child or a qualifying relative.<sup>49</sup> The biggest difference in the eligibility rules between the two tax provisions concerns the rules governing individuals who are unrelated to the taxpayer. For HHFS, only related individuals may qualify the taxpayer for the tax benefit.<sup>50</sup> In contrast, a taxpayer may claim even an unrelated individual as a dependent for purposes of the dependent deduction, provided the individual lives with the taxpayer and satisfies the other requirements to be the taxpayer's qualifying relative.<sup>51</sup>

Although the size of the personal exemption does not depend on the taxpayer's filing status, taxpayers' personal exemptions phase out once their income exceeds a certain threshold, and the size of that threshold does depend on the taxpayer's filing status. In particular, the threshold at which a taxpayer's personal exemptions begin to phase out for tax year 2015 begins at \$258,250 for taxpayers filing as single, \$309,900 for married taxpayers filing jointly, and \$284,050 for taxpayers filing as head of household. As with the CTC, the higher phase-out range for married

---

<sup>49</sup> §§ 151(c), 152(a).

<sup>50</sup> § 2(b)(3)(B)(i). The list of allowable relationships is spelled out in §§ 152(c)(2) and 152(d)(2)(A)-(G).

<sup>51</sup> § 152(d)(2)(H). Another difference between who can qualify a taxpayer for HHFS and who can be claimed as a dependent is that in certain cases a non-custodial parent may claim a child as a dependent, but only the custodial parent may claim a child for HHFS. See §§ 152(e) and 2(b)(1)(A)(i).

taxpayers results in tax savings for married taxpayers with children relative to unmarried taxpayers with children.

#### IV. Descriptive Statistics

In this section we study the characteristics of HHFS filers and the distribution of benefits associated with the filing status.

##### A. Data

We investigate the cost and distribution of the HHFS, and the characteristics of HHFS filers, using the Statistics of Income (SOI) data from the IRS. The SOI data contain a micro-sample of actual tax returns from the U.S. population, stripped of all identifying information such as names, social security numbers, and geographic location. Our sample contains approximately 163,800 tax returns. All analyses are weighted to provide results that are representative of the universe of tax returns received by the IRS.

The most recent year the SOI data is available is 2011. To study the budgetary cost and distribution of benefits for more recent years, we adjust the dollar figures in the SOI data to 2015 dollars using the Bureau of Labor Statistic's Consumer Price Index (CPI).

##### B. Who Files as Head of Household

This section draws on the SOI tax return data to investigate the characteristics of households that file as HHFS. Although the data lacks many demographic variables, Table 2 highlights several interesting patterns. First, HHFS households have moderate incomes—the median filer reports income of \$25,183. Second, the

income distribution of HHFS filers is skewed right, as the mean income of HHFS filers exceeds the median by approximately \$9,000. Third, although on average households claiming HHFS claim 1.6 dependents, only 74 percent of those taxpayers claim a child for the child tax credit. This discrepancy suggests that many of the individuals being used to qualify households for HHFS do not meet the stricter requirements to qualify for the child tax credit—they may be too old, or lack the proper relationship to the taxpayer. And although the child eligibility requirements for the EITC are less stringent than those for the CTC (older children may be claimed for the former but not the latter), only 59 percent of households claiming HHFS claim a child for the EITC.

Figure 2 provides a more detailed look at patterns in filing status by income. On average, HHFS filers have substantially lower incomes than taxpayers filing jointly as married—this is not surprising as married households may have two earners whose income is being reported on the tax return. In contrast, the income distribution of HHFS taxpayers slightly exceeds the corresponding distribution for taxpayers filing as single.

### **C. Aggregate Cost**

This section estimates the budgetary cost of HHFS. To do so, we compare the total amount of taxes owed under current policy with the amount of taxes that would be owed if all taxpayers who file as head of household were instead treated as single

filers.<sup>52</sup> To compute federal income tax liability under this counter-factual policy change, we utilize the National Bureau of Economic Research’s TAXSIM program.<sup>53</sup> TAXSIM computes an individual’s tax liability from the relevant inputs. To compute tax liability under the simulated policy, we simply run the SOI tax return data through TAXSIM after changing the filing status of each HHFS taxpayer in the data to be single. We obtain federal income tax liability under current policy by applying TAXSIM to the original SOI data without modification. The difference in tax liability between these policies provides a rough estimate of the budgetary costs of HHFS.<sup>54</sup> Applying this procedure yields an estimated budgetary cost of HHFS of approximately \$9.4 billion.

#### **D. Distribution of HHFS Benefits by Income**

In this section we consider how the benefits of HHFS are distributed across the population of taxpayers. On one level, the answer to this question is obvious: the

---

<sup>52</sup> Some might argue that the relevant baseline for determining the budgetary cost of HHFS to the fisc is not the rate schedule for single filers but rather the rate schedule for married filers. Such a comparison would show the HHFS saving money rather than costing money. This point reflects a difficulty with tax expenditure analysis more generally in that cost estimates must be made relative to a particular baseline, and the proper baseline for the analysis is often controversial. Nonetheless, although the choice of a particular baseline may be somewhat arbitrary, we focus on the comparison of HHFS to single filers to match our normative model below. Although this choice of baseline is supported by the fact that many have proposed treating current head-of-household filers as single filers whereas we are unaware of anyone who suggests treating current head-of-household filers as married couples, alternative baselines could also be reasonable for a descriptive account of the budgetary cost of HHFS. Note also that the choice of baseline does not affect one’s conclusions about whether a proposed reform is revenue-neutral relative to the status quo – our focus below.

<sup>53</sup> Information on TAXSIM is available at National Bureau of Economic Research, <http://users.nber.org/~taxsim>. We use the version of TAXSIM for STATA. Our estimates using TAXSIM reflect the law as of tax year 2015, the most recent year for which TAXSIM for Stata is available.

<sup>54</sup> One reason these estimates are rough is because they fail to account for behavioral elasticities.

availability of HHFS benefits single parents (and more precisely, the set of unmarried taxpayers with qualifying children or qualifying relatives, as described in Section III). However, because of the way HHFS is designed, the amount of tax savings it provides differs greatly based on the taxpayer's income. In particular, the benefit of HHFS rises dramatically with a taxpayer's income.<sup>55</sup>

To understand why HHFS benefits accrue more to high income taxpayers than to low income ones, it is important to understand the difference between marginal and average tax rates. Although single filers and those filing as HHFS have the same marginal tax rates for most taxable incomes (see Figure 1), the average tax rate for the two groups can differ significantly. Consider two taxpayers with \$15,000 of taxable income, one of whom is single and one of whom files as head of household. Both taxpayers face a marginal tax rate of 15 percent. But because the head of household taxpayer faced a marginal tax rate of 10 percent for his taxable income between \$9,276 and \$13,250, and the single taxpayer faced a marginal tax rate of 15 percent for his income in this same range, the average tax rate for the HHFS filer—and hence that taxpayer's total tax liability—is lower as well. Now suppose our hypothetical taxpayers earned \$55,000 of taxable income. As before, both taxpayers face the same marginal tax rate (25 percent) on additional income that they earn. Now, however, there are two income ranges for which the HHFS taxpayer pays a

---

<sup>55</sup> It is widely recognized that other tax features of the tax code, such as the standard deduction and personal exemption, generate larger benefits to higher income taxpayers to the extent the higher income taxpayers have subject marginal tax rates. In contrast, as we explain in this section, differences in marginal tax rates between high and low income taxpayers are not the source of the skewed benefits associated with the HHFS.

lower tax rate than the single taxpayer: income between \$9,276 and \$13,250 (10 versus 15 percent) and income between \$37,651 and \$50,400 (15 versus 25 percent). As a result, the difference in total tax liability between the HHFS filer and the single filer is greater when those taxpayers earn higher incomes.

Because the tax savings associated with HHFS grow whenever there is a range of taxable income in which the two filing statuses receive different marginal tax rates, the benefits of HHFS grow larger as a taxpayer's income increases. This difference is captured in Figure 3, which computes the tax savings associated with HHFS based on a taxpayer's income—that is, the difference in tax liability between an HHFS filer and a single filer with the same income, neither of whom is subject to the Alternative Minimum Tax (AMT).<sup>56</sup> Figure 3 shows that the savings from HHFS are flat (but positive) over areas in which the marginal tax rates for the two filing statuses are the same, and the tax savings are upward sloping for taxable income ranges in which the marginal tax rates diverge.

Although the most important source of differences in HHFS benefit by income are differences in statutory tax rates, two other features of the relationship between income and HHFS benefit are important to note. The first is that, as described above, HHFS filers receive a larger standard deduction than single filers. As with itemized deductions, the value of the standard deduction rises with a taxpayer's marginal tax rate. Hence, for HHFS filers claiming the standard deduction, the value of this

---

<sup>56</sup> Our calculations assume a hypothetical taxpayer with one child and who claims the standard deduction.

feature of HHFS also tends to increase in the taxpayer's income.<sup>57</sup> On the other hand, fewer taxpayers claim the standard deduction at higher incomes than at lower ones, implying that the fraction of HHFS filers who benefit from this feature of the HHFS declines by taxpayer income.

A second important feature of the tax law to keep in mind when analyzing the distributional benefits of HHFS is the interaction between HHFS and the AMT. In particular, because AMT taxpayers cannot take the standard deduction, taxpayers who fall into the AMT lose this feature of the HHFS benefit. In addition, the AMT tax schedule is the same for taxpayers filing as single and those filing as HHFS, which means that taxpayers subject to the AMT receive no benefit from HHFS.

Figure 4 combines all three of these features—statutory tax rates, variation in standard deduction amount, variation in standard deduction claiming rates, and the AMT—in a single graph. The figure plots the average tax savings from HHFS by income percentile for taxpayers filing as head of household. The data in the figure are obtained by simulating the change in tax liability for each taxpayer under the counterfactual policy in which HHFS taxpayers are forced to file as single and then averaging the results across taxpayers in each income percentile. The figure thus captures differences in the benefits of HHFS not only from the beneficial HHFS tax

---

<sup>57</sup> To the extent that taxpayers' *effective* marginal tax rate—i.e., the combined effect of the statutory tax rate along with income phase-outs of benefits—is actually decreasing at various income ranges, the magnitude of the benefit from the standard deduction reduction is decreasing over these ranges as well.



schedule and standard deduction amount, but also differences in the fraction of HHFS filers claiming the standard deduction and subject to the AMT by income.

So far we have been focusing on the distribution of HHFS benefits among the population of HHFS filers. Table 3 summarizes the distribution of HHFS benefits over the income distribution of all filers, taking into account both differences in the prevalence of HHFS filers by income as well as differences in the amount of benefits associated with claiming the filing status at different incomes. As above, the results in the table are computed by simulating the change in tax liability for each taxpayer under the counterfactual policy in which HHFS taxpayers are forced to file as single. Married taxpayers and those filing as single receive no change in tax liability in this exercise.

Table 3 shows that the fraction of taxpayers filing as HHFS peaks at the 4th income decile, but remains significant in the higher income deciles as well. Particularly striking are the differences in average HHFS benefit for taxpayers in different deciles; the average benefit for taxpayers claiming HHFS in the 8th income decile is over 3.5 times that of taxpayers in the 5th income decile. The difference in the average benefits for taxpayers who qualify is more than enough to offset the fact that a smaller fraction of taxpayers in the higher decile claim HHFS; the largest tax savings from the filing status go to taxpayers in the 8th income decile.

#### **E. Changes in the Distribution of HHFS Benefits Over Time**

Although the basic design of HHFS has remained fairly stable since its creation, dramatic changes have occurred in American marital patterns and in other

aspects of the tax law over this time period. In this section we explore what if any consequence these changes have had for the HHFS.

One source of change has been changes in demography, in particular, marital patterns among American households. Since the enactment of HHFS, many more American families are headed by unmarried individuals. One can clearly see these trends in the share of children born to unmarried mothers, which has steadily increased from 10.7% in 1970 to 41% in 2009.<sup>58</sup> Put differently, “from 1970 to 2002, the percentage of children ‘living in two-parent families fell from 85 percent to 69 percent, while the share living in single-parent families more than doubled, from 11 percent to 27 percent.’ In 2011, 65% of children lived with their married parents, but 35% did not, with 24% living with their mothers only.”<sup>59</sup>

These demographic changes are reflected in the prevalence of HHFS filers. In 1960, two percent of taxpayers filed as HHFS; in 2014 (the most recent year for which this data is available), 15 percent of taxpayers do.<sup>60</sup> Simply put, many more filers are eligible for HHFS because many more are single filers with children.

Another driver of the changing distribution of HHFS benefits are changes in the income profile of taxpayers eligible for the filing status. At the time HHFS was created, single parent status was much less concentrated among low income

---

<sup>58</sup> U.S. Bureau of the Census, Statistical Abstract of the United States, Table HS-14, available at <http://www.census.gov/statab/hist/HS-14.pdf>.

<sup>59</sup> Anne L. Alstott, *Updating the Welfare State: Marriage, the Income Tax, and Social Security in the Age of Individualism*, 66 TAX L. REV. 695 (2013). See generally, Andrew J. Cherlin, *The Deinstitutionalization of American Marriage*, 66 J. MARRIAGE & FAM. 848 (2004).

<sup>60</sup> Calculations from <http://www.irs.gov/uac/SOI-Tax-Stats---Individual-Statistical-Tables-by-Filing-Status> Table 1.6. The 1960 statistic is from our calculations using the SOI.

households than it is today. As a result, the income distribution of those claiming HHFS has shifted dramatically downwards, as depicted in Figure 5.

Apart from demography, the major source of changes in the distribution of HHFS benefits have been from changes in the tax law. As discussed above, the source of the different tax savings by income are a function of differences in the marginal tax rate schedules for single and head of household filers, which in turn result from differences in the brackets thresholds associated with different filing statuses. Thus as various tax reforms over the years have changed the tax brackets for single and head of household filers, the distribution of HHFS benefits by income has changed as well. These changes are captured in Figure 6, which graphs HHFS benefits for hypothetical taxpayers with income at the 80th and 20th income percentiles.<sup>61</sup> Figure 6 thus captures the changing income distribution of benefits as the tax schedules changed. The figures begin in 1967 and end in 2015, which are the limits of the years for which income percentile information is available from the U.S. Census.

## V. Normative Framework

Thus far our focus has been on describing HHFS and documenting the distribution of the benefits it provides. We now turn to normative questions about how HHFS should be designed. In this section we develop a simple model. We take as the key policy question underlying the HHFS whether and how having children

---

<sup>61</sup> Income percentile data come from US Census, Historical Income Tables: Income Inequality, Table H-1: Income Limits for Each Fifth and Top 5 Percent of Households, <https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-people.html> (last visited Oct.. 5, 2016). The data ultimately come from the Current Population Survey.

should differentially affect single versus married filers. After all, the distinctive feature of the HHFS is that when single filers have a child, they gain access to this more advantageous tax schedule, whereas married filers gain no analogous benefit. (Of course, both married and single filers gain access to the child tax credit and other child-related tax provisions.)

With this goal in mind, our model is designed to offer guidance on three questions. First, how should tax benefits for having a child depend on marital status? That is, should there be what we will call a “marriage-dependent child subsidy”—i.e., should unmarried parents receive a tax benefit for having a child that married parents do not receive? Second, how should a potential marriage-dependent child subsidy vary with households’ income? And third how should the marriage-dependent child subsidy vary with the number of children a household has?

For purposes of the model, we adopt a utilitarian social welfare function. For simplicity, we follow Louis Kaplow’s analysis of the optimal tax treatment of families and ignore behavioral responses to taxation;<sup>62</sup> the income response to taxation is not essential to the issue at hand, and ignoring the issue considerably simplifies the analysis, allowing us to focus on the issues particular to taxation of the family. Changes in subsidies based on marital structure or family size may cause taxpayers to change their behavior in other ways, and we will return to such issues in section VIII.

---

<sup>62</sup> LOUIS KAPLOW, *THE THEORY OF TAXATION AND PUBLIC FINANCE* 319 (2008).

In the model, every person has equal weight, and families split their resources equally among each member of the family. That is, a child has the same welfare weight and utility over consumption as an adult. Also in the model, both children and adults cost a fixed amount of resources to maintain—for housing, clothing, etc. Since we assume a declining marginal utility of income, having another mouth to feed and needing to pay more for the upkeep of either adults or children generates increased optimal transfers from the government.

The model implies that there are two reasons that the government should increase transfers to families if they have children. First, a child is another person with equal weight in the social welfare function. And, given a declining marginal utility of income, splitting the same income between two people rather than one leads to a higher marginal utility of income for the members of the family with the child, suggesting that the government should increase its transfers to the family with the child. Second, children cost money to raise, including feeding, housing, and child care; these expenditures reduce the disposable income available to families with children, increasing the marginal utility of consumption for them and their children.

Specifically, suppose that there are four types of individuals in society: married without kids ( $m$ ), single without kids ( $s$ ), married with one kid ( $mk$ ), and single with one kid ( $sk$ ). The number of households in the population in each of these groups is given by:  $\alpha_m, \alpha_s, \alpha_{mk}$  and  $\alpha_{sk}$  (respectively).

Each couple has a fixed endowment  $y$ . For simplicity, we assume that there is only one earner per household. In married households, one spouse does not work and

is free to provide childcare. The fixed cost of each adult in the household is  $A$ . The fixed cost of each child in the household is  $C$  for singles, but  $\beta C$  for married couples (with  $\beta < 1$ ). One can understand  $\beta$  as representing the reduced cost of childcare for married couples with a stay-at-home spouse, since the spouse who does not work outside the home can provide childcare, and the couple can avoid paying expenses for childcare outside of the home. For couples in which both spouses work full-time,  $\beta$  would represent the fact that a married couple will generally have more non-working hours available for child-care than a single parent who works full-time.

Suppose that each household's utility  $U$  can be represented as:

$$U = n u\left(\frac{\text{after\_tax\_income}}{n}\right)$$

where  $n$  is family size and  $\text{after\_tax\_income} = \text{endowment}(y) + \text{transfers}(T) - \text{family\_costs}$ . So households' take-home income  $\text{after\_tax\_income}$  consists of their endowment  $y$ , a tax (a negative  $T$ ) or transfer (a positive  $T$ ) from the government, and  $\text{family\_costs}$  ( $A$  and  $C$ ). Taxes and transfers  $T$  depend on marital status and number of children, with  $t_s$  for single without kids,  $t_{sk}$  for single with a kid,  $t_m$  for married without kids, and  $t_{mk}$  for married with one kid. The taxes and transfers are negative for a tax and positive for a subsidy. We assume that after-tax income is split evenly among the household members. As a result, the groups have the following household utilities:

$$U_s = u(y - A + t_s) \quad (1)$$

$$U_{sk} = 2u\left(\frac{y - A - C + t_{sk}}{2}\right) \quad (2)$$

$$U_m = 2u\left(\frac{y-2A+t_m}{2}\right) \quad (3)$$

$$U_{mk} = 3u\left(\frac{y-2A-\beta C+t_{mk}}{3}\right) \quad (4)$$

Social welfare is thus given by  $\alpha_{mk}U_{mk} + \alpha_{sk}U_{sk} + \alpha_mU_m + \alpha_sU_s$ .

Finally, the government has the budget constraint of being able to fund the transfers with taxes among the four groups:

$$\alpha_m t_m + \alpha_s t_s + \alpha_{sk} t_{sk} + \alpha_{mk} t_{mk} = 0. \quad (5)$$

We abstract away from other government expenditures.

With this setup, we achieve three results (with proofs in the Appendix). A first question to ask is whether single parents should receive any additional tax benefits over and above parents who are married. After all, we have argued that the original purpose of HHFS is to a significant extent antiquated. Given this, perhaps single parents should simply be treated the same as other unmarried individuals. Indeed, recent policy proposals have suggested eliminating the filing status entirely without a replacement. However, our model suggests a welfarist case for maintaining an extra subsidy for single parents.

***Result 1: The tax benefit to having a child should depend on marital status. In particular, the optimal marriage-dependent child subsidy,  $(t_{sk} - t_s) - (t_{mk} - t_s)$ , is given by  $(1 - \beta)C > 0$ .***

We know that the extra tax benefit  $(1 - \beta)C$  is positive because  $\beta < 1$ . The extra tax benefit for single parents with children compensates for the extra cost of

raising a child as a result of not benefitting from the additional home child care that a partner can provide. Intuitively, because singles need to pay for childcare outside of the home, their marginal utility of consumption goes down by more when they have a child than for married couples, making it valuable for the government to increase transfers singles than for married couples when they have a child.

To answer the other two questions, on how the marriage-dependent child subsidy should vary with income and number of children, it is helpful to expand the model. To address the question whether the marriage-dependent child subsidy should vary with income, we add four new groups to the existing four groups in the population. Each household in one of the new groups has income  $\gamma y$ . This setup yields the following result (proof also in the Appendix):

***Result 2: The optimal marriage-dependent child subsidy does not vary by income.***

This result follows from the fact that the difference in the optimal tax/subsidy between the higher and lower-income groups of the same marital/child type is the same for all of the four marital/child types. As a result, the subsidy for children cannot vary by income, since the tax/subsidy structure for the lower-income groups as the structure for the higher-income groups, just with a constant term subtracted. Intuitively, we first want to solve the problem of distribution within each income level; after that problem is solved (by equalizing marginal utilities across income



levels), there is no reason that singles with children and married couples with children should be treated differently across income levels, since the different incomes have effectively been neutralized in the first, across-income step.

Similarly, the model can be enriched to address the question how the optimal tax/subsidy should vary with number of children. To help address this question, we add two groups to the original four, one with a single parent and two kids and one with married parents and two kids, corresponding to utilities:

$$U_{s2k} = 2u\left(\frac{y - A - 2C + t_{s2k}}{3}\right)$$

$$U_{m2k} = 3u\left(\frac{y - 2A - 2\beta C + t_{m2k}}{4}\right)$$

We assume that childcare costs double with two children and discuss below the results when this is not the case and instead the costs of a second child are less than the costs of the first child. This setup yields the result (proof also in the appendix):

***Result 3: The optimal marriage-dependent child subsidy for single parents increases linearly in the number of children. For each extra child, a single filer should receive  $(1 - \beta)C$  more than a married filer.***

This is result, which is the same outcome as Result 1, is intuitive and is true essentially for the same reason that Result 1 is true: it costs more for single filers to raise a kid than for married filers to raise a kid. Because of the linearity implicit in our model ( $C$  and  $\beta$  remain the same as the number of kids increase) this result stays

true—and true to the same extent—as the number of children increases. Below, we consider the implications of relaxing the assumption of constant costs per child.

The model formalizes notions of vertical and horizontal equity. The model incorporates families of different incomes and expenditures: the lower the per person disposable income (i.e., the lower the income or higher the expenditure), the more the government optimally will transfer to the individual, because of the declining marginal utility of consumption. Incorporating the possibility of differential treatment based on income formalizes a notion of vertical equity based on equalizing the marginal utility of consumption of people of different income levels. And incorporating the costs of raising children formalizes a notion of horizontal equity, in that those costs differentiate who within an income level should pay more or less in taxes in order to equalize the marginal utility of consumption. Together, the model in a sense formalizes a goal of taxing based on “ability to pay”: those with more income and lower child expenses are able to pay less. In the next section, we propose a reform of the HHFS based on these results.

## VI. Shortcomings of the Head of Household Filing Status

This section investigates problems with the current design of HHFS, drawing on the normative framework and the descriptive analysis described above. The next section proposes a reform to address these problems.

### A. Vertical Equity

Our model suggests that the marriage-dependent child subsidy should be constant across the income distribution. One of the primary problems identified by

this article with the head of household filing status is that the size of the tax benefit it provides instead increases with a taxpayer's income. We justified the model's result on utilitarian grounds, motivated by a declining marginal utility of consumption, but liberal grounds, like those provided by Rawls, would also find such regressive spending problematic. As discussed above, this regressive feature of HHFS is a direct result of the fact that the tax benefit is designed as a filing status, with an advantageous marginal tax rate schedule, as opposed to, say, a credit—an alternative design that the next section will consider.<sup>63</sup>

As discussed above, the differences in the size of the benefit by income are dramatic. Single taxpayers with children whose earnings put them in the 25th percentile of the income distribution in 2011 received \$23 in tax reduction from HHFS, whereas those earning in the 75th percentile received a benefit of \$1,573. To the extent that the point of HHFS is to recognize differences in disposable income between married and unmarried parents, there is little reason to think that difference would be larger for those at higher incomes. If anything, to the extent that lower income parents have less leisure time or less flexible work schedules, the difference in the marginal utility of consumption between married and unmarried parents may be even greater for low-income families than for high-income families.

To be sure, it is certainly likely that the average expenditures on a child are higher for higher income families. And so the opportunity cost of time is greater too,

---

<sup>63</sup> Note that the distribution of the HHFS design across the income distribution made more sense under the original rationale for the filing status, because the marriage bonuses being offset were larger for higher income taxpayers.

as well as actual expenditures. Although the actual expenditures of raising a child may tend to be higher on average at higher incomes, that empirical fact is not a justification for designing the tax code to entrench this disparate use of resources under our utilitarian framework.

## **B. Horizontal Equity**

Our model also implies that the extra tax benefit that singles receive for having a child should increase as the number of children increases. A second flaw in the current design of HHFS is a discrepancy in how it treats single parents with different numbers of children, or rather, the lack of any such discrepancy. To the extent that there is an added burden for single parents relative to married parents to raising a child, that burden is increasing in the number of children someone has. This fact is recognized in the EITC and CTC, which both provide greater benefits for taxpayers with more children. Yet HHFS does not; a single parent raising one child receives the same benefit as a single parent raising four children on her own.

As well, to the extent that lower income households on average have more children than higher income ones, this is another way that the current design of the benefit is skewed towards high income families.

## **C. Simplicity and Administration**

Although not part of our model, there are likely some additional administrative costs associated with HHFS by virtue of its unique position as a filing status. Although taxpayers who file through the help of paid preparers or tax preparation software are unlikely to be misled, the very name head of household is probably

misleading to many others. That is, a person who knows nothing about the tax code is likely to believe that they are a “head of household” even if they don’t have children; nothing about the phrase denotes that it is related to being a single parent. Although we lack this evidence, we suspect this causes some number of filing mistakes that could easily be avoided by changing the name.

Additionally, HHFS adds a whole new rate schedule to the tax code. Although the complexities of this are alleviated in a world of online filing, it still increases the complexity of the tax code, making it more difficult for taxpayers to predict their tax burden in advance. An alternative that follows existing features of the tax code for single (and other) tax filers would be desirable on grounds of simplicity.

## VII. The Head of Household Credit

So far we have identified several problems with HHFS. Our question in this section is how the tax benefit should be designed to better accomplish the goals we have identified. There are several options for reform of the head of household filing status.<sup>64</sup>

The first option for reforming HHFS is to completely abolish the filing status. This option would save the government money and eliminate the regressive subsidy,

---

<sup>64</sup> Our proposal could interact with other proposals for reforming the taxation of marriage. *See, e.g.,* Yair Listokin, *Taxation and Marriage: A Reappraisal*, 67 TAX L. REV. 185 (2013) (arguing that the “trilemma” of taxing marriage in a way that is progressive, treats couples that earn the same amount equally, and treats individuals the same regardless of whether they are married should be resolved by sacrificing each of the three goals equally, since the costs to violating each of the three goals may be convex).

but would violate our result that it is desirable to reduce taxes on single parents paying for expenses related to children.

Second, the government could replace HHFS with an expanded child tax credit for all taxpayers with children. This option would continue helping children, consistent with our utilitarian calculus. However, it would not differentiate the treatment of HHFS filers and married filers; rather, it would ignore differences in those taxpayers' per person disposable income. This option is similar to a reform offered in 2014 by the then-Chairman of the House Ways and Means Committee<sup>65</sup> and offered in 2005 by the President's Advisory Panel on Federal Tax Reform set up by President George W. Bush<sup>66</sup>, as part of broader consolidations of family-related credits.<sup>67</sup> However, as argued above, single taxpayers with children have a higher per person marginal utility of consumption than couples with children. They also have more need, since they do not have a second individual to provide child care, justifying

---

<sup>65</sup> See, for example, the plan developed by the Chairman of the House Ways and Means Committee, Representative David Camp, known colloquially as the "Camp Plan." *The Tax Reform Act of 2014*, HOUSE WAYS & MEANS COMMITTEE 14, [http://waysandmeans.house.gov/uploadedfiles/tax\\_reform\\_executive\\_summary.pdf](http://waysandmeans.house.gov/uploadedfiles/tax_reform_executive_summary.pdf), ("our plan collapses six different family tax benefits (basic standard deduction, additional standard deduction, personal exemptions for taxpayer and spouse, personal exemptions for dependents, child tax credits, and head of household filing status) into three simple family tax benefits: a larger standard deduction, an additional deduction for single parents, and an expanded child and dependent tax credit of \$1,500 per child and \$500 per dependent"). See also a description of the HH filing status aspects of the Camp Plan at <http://www.taxpolicycenter.org/UploadedPDF/413176-Camp-Plan-Description-and-Analysis.pdf>.

<sup>66</sup> The President's Advisory Panel on Federal Tax Reform, set up by President George W. Bush in 2005, also suggested consolidating the standard deduction, personal exemption, dependency exemption, HH filing status, and CTC with a "Family Credit." President's Advisory Panel on Federal Tax Reform, *Simple, Fair and Pro-Growth: Proposals to Fix America's Tax System*, Chp. 5 (2005).

<sup>67</sup> The Republican Staff of the Senate Finance Committee offers additional recent analysis in Republican Staff Committee on Finance United States Senate, *Comprehensive Tax Reform for 2015 and Beyond* (Dec. 2014), available at <http://www.finance.senate.gov/newsroom/ranking/download/?id=41af09bb-e75d-4246-9313-98eb5b9de7bc>

a larger tax preference for children for single tax-payers—and making this option undesirable.

Finally, a third possibility for reform is to replace HHFS with a new tax credit covering single parents. This is our preferred option. The new credit would continue to provide a larger benefit for having a child to single taxpayers, but would equally benefit lower-income households who also bear the expense of raising children. Like the other options, it simplifies the tax code.

### **A. Mechanics of the Head of Household Credit**

Since the optimal size of a marriage-dependent child subsidy is beyond the scope of the paper and because of the political desirability of a budget-neutral proposal, we operate within the constraints of the existing expense of HHFS. Our proposal is to eliminate HHFS and to apply the budgetary savings from doing so towards the creation of an expanded child tax credit for single parents.<sup>68</sup> We refer to the new proposed credit as the Head of Household Credit (HHC).<sup>69</sup>

#### **1. Size of Credit**

---

<sup>68</sup> The reform would also replace the other provisions in the tax code linked to HHFS, such as the expanded standard deduction.

<sup>69</sup> Our proposal would eliminate benefits for those with non-child dependents who currently benefit from the HHFS. There may be reasons that raising children may be more of a merit good than taking care of (say) elderly adults—for example, because society benefits from increased later earnings of children in a way that it does not for elderly adults. But other reasons apply equally well to both children and elderly adults. We make this choice not because of an underlying normative commitment distinguishing taking care of children from taking care of elderly adults, but rather to parallel the tax treatment of married couples who have such dependents. For married couples, taking care of an elderly person would entitle one to a dependent exemption, but not to a child tax credit—we follow that follow here. Subsection D considers two alternative proposals that would maintain HHFS eligibility for unmarried taxpayers supporting adult dependents.

For taxpayers who qualify, the amount of the HHC would depend only on the number of children the taxpayer has. Consequently, the credit would not vary based on a taxpayer's income. This design feature has two important advantages relative to the current design of HHFS. First, the size of the benefit would not increase with a taxpayer's income, promoting vertical equity. Second, taxpayers with more children would receive a larger benefit, consistent with the notion that the goal of the benefit is to recognize the greater marginal utility of consumption of those with more children. These are the key features of the HHC. In order to simulate the policy, we must resolve the remaining design questions as well, but the simulation considers the robustness to different ways of answering them.

## 2. Eligibility

Like HHFS, eligibility for the HHC would depend on meeting two conditions. First, the taxpayer must be unmarried. Second, the taxpayer must have an eligible child. Recall from Section II that the criteria for an eligible child differs between HHFS and the CTC—in general, only children under 17 qualify for the CTC, whereas most dependents (who may be older than 17) can qualify a taxpayer for HHFS. Which individuals should be eligible for the HHC? The choice will affect several categories of households: those whose children between the ages of 17 and 19; those with children between the ages of 19 and 24 who are full-time students; those with children of any age who are permanently disabled; or those supporting relatives who live with the taxpayer and who earn less than \$4,000 a year.



If we think back to the purposes of the HHFS, recall that an important one of its goals is to recognize the non-financial resources that a taxpayer puts into supporting the people who live with them, and that these resources will have to be greater when the taxpayer is responsible for the care on his or her own.<sup>70</sup> Therefore, on average it seems reasonable that the benefit might be more important for taxpayers who support children who are totally disabled—who likely require the spending of large amounts of non-financial resources—and less important for older

---

<sup>70</sup> This proposition depends upon filing as a head of household (as “unmarried”) being equivalent to being “single”—that is, un-partnered for the purpose of raising children. Of course, the two are not equivalent, especially given rising rates of cohabiting, but unmarried, parents raising children together. Indeed, between 2011 and 2013, 25.9% of children were born into households with parents that were cohabitating at birth, nearly double the rate of 14.3% from 2002. Neil Shah, *U.S. Sees Rise in Unmarried Parents*, WALL ST. J., Mar. 10, 2015. With cohabitation, the normative rationale for a bonus child tax credit for “singles” is undercut because the cohabitating partner can also take part in childcare, providing time and financial resources. Of course, the issue of cohabitation is a problem for the single filing status itself, not just the HHFS or our proposal.

It is beyond the scope of the paper to address the issue of cohabitation. Nevertheless, we sketch out how the IRC might target aid to single, but not cohabitating, individuals if policymakers wished to do so. In discussing the issue, however, without taking stand either way on these provisions or on whether the tax code should incentivize marriage over cohabitation. First, though, a note on the scope of the issue of cohabitating parents taking advantage of HHFS or another child-related benefit for single filers: Though the rate of cohabitation has increased substantially at *birth*, many of the couples do not stay together, so that among couples with children in 2012, only 11.6% were cohabitating but unmarried, amounting to 3.2 million couples with one partner potentially claiming HHFS out of 13.4 million that claimed the status in 2012. Jonathan Vespa, Jamie M. Lewis & Rose M. Kreider, *America’s Families and Living Arrangements: 2012*, US CENSUS BUREAU 22 (2013); SOI Tax Stats - Individual Statistical Tables by Tax Rate and Income Percentile, INTERNAL REVENUE SERVICE, Table 3.6, available at <https://www.irs.gov/uac/SOI-Tax-Stats-Individual-Statistical-Tables-by-Tax-Rate-and-Income-Percentile>.

As to the ways to target tax provisions to single but not cohabitating individuals, there are a couple of possible tweaks to the IRC. Take the example of a cohabiting couple, one of whom earns 60% of household income and the other of whom earns 40% of household income. Under current law, the partner earning 60% of household income can claim a child to use the HHFS. One change to prevent this would be to tweak § 2(b)(1), which requires that a taxpayer using the HHFS pay for over half the costs of maintaining the household. Increasing this 50% threshold to, say, 65%, would prevent one member of this couple from taking the status and generally reduce the likelihood that one of two cohabitating, but working, parents can claim the status. This change not would deal with the issue of cohabitating partners, one of whom does not work; to address that issue, a direct provision on cohabitation or time spent providing childcare could be added. Any of these, though, could discourage cohabitation, which could be advantageous if the discouragement led to higher marriage rates or disadvantageous if it led to less cohabitation without an increase in marriage.

children (between 17 and 19, or older full-time students) who may be more capable of taking care of themselves (at least in non-financial ways). This reasoning suggests treating totally disabled children as eligible children for the HHC, but not the other categories of dependents who qualify for HHFS but not the CTC.<sup>71</sup> Similarly, elderly parents living in the households of their adult children may require care-taking and other resources that are easier to provide in households headed by a married couple as opposed to a single taxpayer. Consequently, we propose that the HHC include as a qualifying individual parents of the taxpayer living in the taxpayer's home.

### 3. Refundability

As described in Section II, the benefits of the current HHFS are not available to taxpayers who would otherwise lack positive tax liability. In contrast, the CTC is partially refundable. By making the HHC refundable, taxpayers with lower incomes would benefit from it. On the other hand, refundability would increase the cost of the credit, reducing the amount that could be provided in a budget-neutral manner. Our proposed HHC would be fully refundable, which accords with our utilitarian theory; if it were non-refundable, low-income parents wouldn't gain any extra spending power.

### 4. Phase-out

---

<sup>71</sup> Although including children with permanent disabilities and parents living at home in the scope of individuals covered by the scope of individuals covered by the HHC is consistent with its purpose, one downside is that doing so pushes the credit further away from the traditional CTC, and by doing so, potentially introduce a new source of complexity.

Following our model, we do not phase out the HHC as incomes increase. The HHFS benefits do not phase out as income rises (except at very high incomes as a result of the AMT). To be consistent with the model and parallel the HHFS where it does not conflict with our model, as our default we do not phase out the HHC with income. We alter this assumption in our alternative simulations.

## **B. Policy Simulation**

Our goal in this section is to determine the maximum feasible size of the HHC—designed according to the specifications in the previous section—by applying the savings from replacing the HHFS to the new credit. From the previous analysis, we know the budgetary cost of HHFS is approximately \$9.4 billion. To determine the maximum feasible size for the HHC then, we simply identify the size of the credit that would generate \$9.4 billion in tax savings for eligible taxpayers.

Our procedure for answering this question is as follows. First, we calculate each individual’s tax liability using the SOI data assuming that the HHFS has been eliminated—that is, any taxpayer who filed as HHFS is assumed to file as single instead. Next, we choose a hypothetical value for the HHC and compute the size of each taxpayer’s HHC according to this potential value. As described above, apart from marital status and refundability, eligibility for the HHC includes individuals who are treated as eligible individuals for the CTC, as well as certain older dependents who are not eligible for the CTC (such as children who are permanently disabled or

parents living at home).<sup>72</sup> Because the proposed HHC is refundable, the amount of the credit does not need to be reduced for taxpayers with negative tax liability.

After computing the size of the HHC for each taxpayer, we sum the credit across all taxpayers to calculate its aggregate cost. If that cost exceeds the cost of the HHFS, we repeat the procedure with a smaller HHC amount; if the HHFS cost exceeds the HHC cost, we increase the HHC. Applying this procedure yields a maximum feasible value for the HHC of approximately \$294 per qualifying child.<sup>73</sup>

### **C. Distributional Effects of Switching to the HHC**

Switching from HHFS to the HHC would have important distributional consequences, displayed graphically in Figure 7. The biggest gains from the reform would go to single-parent households supporting multiple children at the lowest part of the income distribution. This is not surprising in light of the previous analysis: under current law, low-income HHFS filers received much less than the average benefit provided by the HHFS. Similarly, households supporting multiple children will benefit more than households supporting a single child — both groups receive the same benefit under current policy, but the former would receive more than the

---

<sup>72</sup> In our data we are unable to directly observe which children are totally and permanently disabled, so we will ignore this (relatively small) group for purposes of the simulation. Similarly, although the HHC only includes dependent parents living at home, we cannot identify in our data which dependent parents live at home and which live in their own household. To be conservative in our calculation of the feasible HHC amount, we assume in the simulation that all dependent parents are eligible for the HHC.

<sup>73</sup> Our estimate of the credit amount is based on it being revenue neutral now. If over time the share of head of household filers that is relatively low-income continues to increase, then the price of our credit would increase at a faster rate than that of the HHFS, since we increase benefits to lower-income and lower those to higher-income households relative to the status quo policy.

latter under the HHC. The flip side to this coin is that higher income taxpayers would benefit less from the HHC than they currently do under HHFS.

The distributional consequences of adopting the HHC are further explored in Table 4, which uses the SOI tax return data to break down the distributional effects of the reform by income decile. A number of effects shape the effect of the reform by income. First, as discussed above, average HHFS benefits are increasing over most of the income distribution. Second, the average number of HHFS and HHC eligible individuals within a household—and hence the household’s tax benefit under the HHC—varies by income decile. Third, the fraction of households itemizing their deductions (and hence foregoing the higher standard deduction associated with HHFS) varies by income decile. Finally, the fraction of households subject to the AMT—an important limit on the benefits available under HHFS—rises over most of the income distribution. Table 4 incorporates the net distributional impact of these various effects. For all but the highest income deciles, the benefit of the reform is declining by income, with the effect becoming negative for taxpayers in the 6th income decile.<sup>74</sup>

#### **D. Alternative Policy Options**

This section considers alternate design possibilities for the HHC. All of these options retain the key features of the reform: that the credit amount depends on the number of the taxpayer’s children and does not depend on the taxpayer’s income

---

<sup>74</sup> Fortunately for the proposal’s political feasibility, roughly half of the income distribution is a net winner—and it is the half that, while perhaps less politically powerful, gains much more from increasing their after-tax income by a dollar.

(other than through a potential phase out). The analysis in this section shows how other features of the design of the HHC affect the maximum feasible credit size and the distributional effects of the reform.

### 1. Eligibility

Instead of mirroring eligibility for the CTC, the HHC could be based on all dependents currently qualifying for HHFS (see Section II). The effect of this change would be to expand the number of households eligible for HHC and to raise the average number of qualifying individuals among eligible households. The households that would benefit most from this change are those who can claim a child for purposes of HHFS but not for purposes of the CTC. For example, this would include households who support children over the age of 19 who are full-time students (and under the age of 24) or who live at home without meaningful incomes of their own.

Repeating the analysis from the previous section with this modification would result in a smaller HHC credit of \$229 per dependent. This difference reflects the fact that unmarried taxpayers on average claim 0.30 individuals who would qualify for the HHC under the CTC eligibility rules and 0.42 individuals who would qualify them under the “any dependent” rule. The distributional effects of a HHC with the modified eligibility rules are reported in Column 2 of Table 5. Relative to the baseline eligibility rules, this option would result in relatively similar benefits across income deciles.

### 2. Phase out

Our proposed HHC does not phase out. In this alternative, we follow the same phase-out schedule as the existing CTC, which begins to phase out at \$75,000 for

unmarried taxpayers; the phase-out occurs at the rate of a \$50 loss of benefit for each additional \$1000 earned. Adding the phase-out would decrease the budgetary cost of the credit, increasing the maximum feasible credit size to \$311 per child. Column 3 of Table 5 documents the distributional effect of this policy. The benefit of the reform is decreasing by income, but the redistributive effect of the reform is slightly increased relative to the baseline proposal (Column 1).

### 3. Refundability

Unlike the other modifications considered so far, making the HHC non-refundable would reduce its budgetary costs by reducing payments to households who owe no income tax. Because many of the beneficiaries of the policy change fall into this category, a non-refundable HHC would support a substantially larger maximum credit, specifically \$1,158 per child. Column 4 of Table 5 documents the distributional effect of a reform along these lines; not surprisingly, the analysis shows the benefit of the reform would be smaller for those in the lowest income deciles, many of whom would be unable to benefit from a non-refundable credit. In contrast, taxpayers in the 6th and 7<sup>th</sup> income deciles would benefit from this change because they are able to take advantage of the full value of the HHC, but do not receive the full value of the current HHFS.

### 4. Linearity of Child Care Costs

Our model assumed that the costs of raising children scale up linearly with children. Raising a child costs  $C$  for single couples and  $\beta C$  for married parents—and those costs are multiplied by two for two children, by three for three children, etc. As

a result, our per child subsidy scales up linearly with the number of children. However, we need not adopt that linear cost structure. Suppose, for example, that we think of the main differentiator of costs between married and single parents as the costs of child care. A single parent has to use paid childcare, while a married couple with only one spouse working outside the home can take care of the children at home without paying for childcare. Then, for the first child, the costs might be  $C$  for single parents and  $\beta C$  for married parents, but—for subsequent children—the costs might be  $\beta C$  for all children after the first, representing the costs of food, space, etc. that do not vary depending upon marital status. Under that set of assumptions, childcare costs do not increase at all for a single parent as he has more children. In that case, the HHC should not scale up linearly with the number of children, under the notion that it costs the same amount to get a babysitter for one child as for two children. Under those assumptions, the HHC should not increase as the number of children in a family increases.

More likely, the truth is between these two extremes, and the HHC should increase when unmarried parents have more children but not by the full  $(1 - \beta)C$  per child. We do not take a strong position on the cost structure of children as the number of children increases, beyond the argument that the first child is plausibly costlier for single parents due to childcare responsibilities.<sup>75</sup>

---

<sup>75</sup> In addition, the costs associated with additional children likely differs for households across the income distribution. For example, lower income families may be more likely to rely on daycare services, whose rates would typically increase linearly per child.

A related consideration is that the costs per child may differ dramatically by the child's age – for example, the ideal subsidy amount may be lower for children once they've reached school age.



Column 5 of Table 5 considers the results of a simulation in which we assume that the cost of each child beyond the first is equal to one-half the cost of the first child,  $0.5 C$ . The simulation shows that this change accommodates an increase in the maximum size of the credit for one child from \$294 to \$305, and reduces the credit amount for the second child from \$294 to \$147.

### VIII. Other Considerations

While capturing important features for the design of taxation of the family, our model did not consider every possibly relevant factor. In this section, we briefly sketch a variety of other goals tax policy might hope to achieve in this area.

First, children may be considered “merit goods,” goods that society deems as particularly valuable of government encouragement.<sup>76</sup> For example, policymakers may believe that it is inherently good for parents to spend money on children or may want to encourage spending on children in order to increase their human capital and future tax payments or reduce future crime rates or use of public benefits (none of which parents are likely to sufficiently take into account). Of course, none of the CTC, HHFS, or HHC actually specifically subsidizes spending on children (unlike the CDCC). An increased tax credit for child care or subsidies for housing or food for children would do that, but parents are free to choose how to spend these subsidies.

---

<sup>76</sup> Richard A. Musgrave, *A Multiple Theory of Budget Determination*, 23 PUB. FIN. ANAL. 333 (1957); RICHARD A. MUSGRAVE, *THE THEORY OF PUBLIC FINANCE* 13–15 (1959). Of course, one could argue that expenses for raising children are not merit goods—that raising children is like any other consumption good not deserving of differential treatment by the tax code.

In the case of expenses like housing and food that would look similar to the government if spent on adults or children, it may be difficult for the government to target spending on children specifically. So these tax credits may be viewed as a second-best, constrained-optimal way of increasing spending on children, not through subsidizing spending on children, but rather increasing spending by merely increasing resources for those with children.<sup>77</sup> With that view of the purpose of HHFS, it is unclear how subsidies for children should vary, since the optimal policy would depend upon behavior on which we do not have good estimates. If a dollar transferred to single parents with a child yields more child-related spending than a dollar to married parents of the same income with a child, that would be a reason to transfer more to the single parent on the basis of merit goods. However, we do not know of good studies showing this either way, so we cannot make conclusions about how the merit good aspect of spending on children should affect an optimal subsidy structure for children.

Another possible goal is encouraging child-rearing. That is, not spending on children but rather *having* children is a merit good. The idea here is that the government wants to encourage more child-bearing, perhaps with a goal of having a demographic structure that allows younger workers to pay for public benefits for older workers like Social Security or promoting another positive externality. Subsidies associated with having children do directly target that activity. With this goal, the government ought not disproportionately subsidize different family structures: if the

---

<sup>77</sup> Effectively the policy has an income effect but not a substitution effect.

positive externality associated with having a child is \$1,000 per child, then the government should subsidize \$1,000 at per child, and the more responsive families will respond more and collect more of the subsidy. Of course, if the positive externality depended upon family income or family structure, then the subsidy should be adjusted depending upon the size of the externality.

A third social goal affected by the structure of child-related subsidies is encouraging marriage. Because eligibility for the HHC is linked to marital status, replacing HHFS with the HHC would change the tax incentives surrounding marriage—positively for middle- and upper-income taxpayers whose HHFS benefits would be reduced by the reform and negatively for low-income taxpayers who would gain the most from the reform.<sup>78</sup> And, having any additional subsidy for having children for single parents could discourage marriage, though the available evidence shows little if any impact of the tax treatment of marriage on marriage rates.<sup>79</sup> To

---

<sup>78</sup> Thus the proposal would exacerbate the marriage penalties that currently exist for low-income taxpayers but lessen the substantial marriage penalties that currently exist for high-income taxpayers. See Lawrence Zelenak, *For Better and Worse: The Differing Income Tax Treatments of Marriage at Difference Income Levels*, 93 NC L. REV. 783 (2015).

<sup>79</sup> See, e.g., Anne Alstott, *Tax Policy and Feminism: Competing Goals and Institutional Choices*, 96 Columbia L. Rev. 2001, 2011 (1996) (reaching a similar conclusion); James Aim & Leslie A. Whittington, *Does the Income Tax Affect Marital Decisions?*, 48 NAT'L TAX J. 565, 565 (1995) (finding mixed evidence of the existence of effects and, when finding effects, finding small ones); David L. Sjoquist & Mary B. Walker, *The Marriage Tax and the Rate and Timing of Marriage*, 48 NAT'L TAX J. 547, 547 (1995) (finding some impact in the timing of marriage, but no impact on marriage rates); David T. Ellwood, *The Impact of the Earned Income Tax Credit and Social Policy Reforms on Work, Marriage, and Living Arrangements*, 53 NAT'L TAX J. 1063, 1063 (2000) (finding that the EITC and welfare reforms have “no discernable effect on marriage” rates); Edward Fox, *Do Tax Rates Affect Marriage?*, Mimeo (2015) (finding modest but statistically significant effects of a marriage bonus on marriage rates). *But see* Katherine Micheltore, *EITC and Union Formation: The Impact of Expected Spouse Earnings*, Mimeo 28 (2014) (finding significant effects of the EITC on marriage rates among low-income women).

Interestingly, despite the attention paid to marriage penalties in the development of the 1969 legislation, marriage penalties associated with HHFS do not appear to have been received much (if

the extent that the HHC discourages marriage and to the extent that encouraging marriage is an important social goal, the HHC becomes less desirable.

A fourth social goal is efficiency. Like other simulations of this form, we abstract away from behavioral responses to differences in tax rates. Eliminating HHFS would raise marginal tax rates and potentially reduce labor supply for some taxpayers. Since lower tax rates lead to lower distortions (*ceteris paribus*), changing from a lower rate schedule to a credit could reduce efficiency through higher marginal tax rates, which would in turn make the switch from the HHFS to HHC less appealing. That said, we are unaware of any evidence suggesting that single parents should have a lower MTR than other groups on the basis of efficiency. That is, there is little reason to think that their elasticity of income is higher; indeed, it may be lower since they need to pay for the costs of their children.

## IX. Conclusion

The head of household filing status was adopted at a time when there was a substantial marriage bonus. It has persisted despite the elimination of much of the marriage bonus and the emergence of the marriage penalty, as well as demographic changes greatly increasing the number of unmarried individuals with dependents. In this paper we reassess this large and growing expenditure and question whether it fulfills the goals of the tax code and of the treatment of families in particular. We argue that, though there could be many potential alternatives, one good option is

---

any) attention in the development of that legislation. We are grateful to Daniel Halperin for pointing this out to us.

replacing HHFS with an expanded child tax credit for single parents. This change would target those most in need of disposable income for raising children.

## Appendix

Result 1:

From equations (1) – (4), we have the following first-order conditions:

$$t_s: u'(y - A + t_s) = -\lambda \quad (5)$$

$$t_{sk}: u'\left(\frac{y-A-C+t_{sk}}{2}\right) = -\lambda \quad (6)$$

$$t_m: u'\left(\frac{y-2A+t_m}{2}\right) = -\lambda \quad (7)$$

$$t_{mk}: u'\left(\frac{y-2A-\beta C+t_{mk}}{3}\right) = -\lambda \quad (8)$$

From this, we can see that the marginal utility of each group must be the same, so the term inside the parentheses must also be the same. Setting the terms from the parenthesis in (6)-(8) equal to the term in parenthesis in (5), for single taxpayers without kids yields:

$$y - A + t_s = \frac{y-A-C+t_{sk}}{2} \Rightarrow t_{sk} = y - A + 2t_s + C \quad (9)$$

$$y - A + t_s = \frac{y-A+t_m}{2} \Rightarrow t_m = y + 2t_s \quad (10)$$

$$y - A + t_s = \frac{y-A-\beta C+t_{mk}}{3} \Rightarrow t_{mk} = 2y - A + 3t_s + \beta C \quad (11)$$

Plugging the term for single taxpayers without kids as well as these three terms into equation (5) yields the result for  $t_s$ , which can then be plugged into equations (9)-(11), yielding:

$$t_s = \frac{A}{4} - \frac{y}{2} - \frac{(1+\beta)C}{8}$$

$$t_{sk} = -\frac{A}{2} + \frac{3}{4}C - \frac{\beta C}{4}$$

$$t_m = \frac{A}{2} - \frac{(1+\beta)C}{4}$$

$$t_{mk} = -\frac{A}{4} + \frac{y}{2} - \frac{3}{8}C + \frac{5\beta C}{8}$$

As a result:

$$\begin{aligned} t_{sk} - t_s &= -\frac{A}{2} + \frac{3}{4}C - \frac{\beta C}{4} - \left( \frac{A}{4} - \frac{y}{2} - \frac{(1+\beta)C}{8} \right) \\ &= -\frac{3A}{4} + \frac{y}{2} + \frac{7C}{8} - \frac{\beta C}{8} \\ t_{mk} - t_m &= -\frac{A}{4} + \frac{y}{2} - \frac{3}{8}C + \frac{5\beta C}{8} - \left( \frac{A}{2} - \frac{(1+\beta)C}{4} \right) \\ &= -\frac{3A}{4} + \frac{y}{2} - \frac{1}{8}C + \frac{7\beta C}{8} \end{aligned}$$

Arithmetic yields the result that  $(t_{sk} - t_s) - (t_{mk} - t_s) = (1 - \beta)C$ .

Result 2:

To be clear, the four added groups to (1)-(4) have utilities:

$$\begin{aligned} U_s &= u(\gamma y - A + t_s) \\ U_{sk} &= 2u\left(\frac{\gamma y - A - C + t_{sk}}{2}\right) \\ U_m &= 2u\left(\frac{\gamma y - 2A + t_m}{2}\right) \\ U_{mk} &= 3u\left(\frac{\gamma y - 2A - \beta C + t_{mk}}{3}\right) \end{aligned}$$

This result follows from the fact that setting the within-parenthesis term from any one of equations (1)-(4) to the term from its corresponding group with a different income yields the result that the difference in taxes between the two groups is equal

to  $y - \gamma y$ . Since that is true for all of the household types, the child subsidy cannot depend upon income.

Result 3:

With these six groups, the optimal tax/subsidy scheme is:

$$t_s = \frac{2}{5}A - \left(\frac{1}{5}C\right) - \left(\frac{3}{5}y\right) - \left(\frac{1}{5}C\beta\right)$$

$$t_{sk} = \frac{3}{5}C - \left(\frac{1}{5}A\right) - \left(\frac{1}{5}y\right) - \left(\frac{2}{5}C\beta\right)$$

$$t_{mk} = \frac{4}{5}A - \left(\frac{2}{5}C\right) - \left(\frac{1}{5}y\right) - \left(\frac{2}{5}C\beta\right)$$

$$t_{mk} = \frac{1}{5}A - \left(\frac{3}{5}C\right) + \frac{1}{5}y + \frac{2}{5}C\beta$$

$$t_{s2k} = \frac{7}{5}C - \left(\frac{4}{5}A\right) + \frac{1}{5}y - \left(\frac{3}{5}C\beta\right)$$

$$t_{m2k} = \frac{3}{5}y - \left(\frac{4}{5}C\right) - \left(\frac{2}{5}A\right) + \frac{6}{5}C\beta$$

The amount that married parents get for a second child is:

$$t_{m2k} - t_{mk} = \frac{2}{5}y - \left(\frac{1}{5}C\right) - \left(\frac{3}{5}A\right) + \frac{4}{5}C\beta$$

The amount that single parents get for a second child is:

$$t_{s2k} - t_{sk} = \frac{4}{5}y - \left(\frac{1}{5}C\right) - \left(\frac{3}{5}A\right) + \frac{4}{5}C\beta$$



Subtracting the extra tax benefit for married from the extra benefit for children yields:

$$(t_{s2k} - t_{sk}) - (t_{m2k} - t_{mk}) = C - \beta C.$$

**Table 1: Tax Rates by Filing Status**

Single			Married			Head of Household		
Rate	Min	Max	Rate	Min	Max	Rate	Min	Max
10	0	9,275	10	0	18,550	10	0	13,250
15	9,276	37,650	15	18,551	75,330	15	13,251	50,400
25	37,651	91,150	25	75,331	151,900	25	50,401	130,150
28	91,151	190,150	28	151,901	231,450	28	130,151	21,0800
33	190,151	413,350	33	231,451	413,350	33	210,801	413,350
35	413,351	415,050	35	413,351	466,950	35	413,351	441,000
39.6	415,051		39.6	466,951		39.6	441,001	
Standard Deduction	6,300		Standard Deduction	12,600		Standard Deduction	9,300	

**Table 2: Head of Household Filer Characteristics**

Fraction of Filing Population	0.15
Mean AGI	\$34,467
Median AGI	\$25,183
Fraction Taking Standard Deduction	0.81
Mean Dependents	1.6
Fraction Claiming at Least One Child for Child Tax Credit	0.74
Fraction Claiming at Least One Child for Earned Income Tax Credit	0.59

**Table 3: Distribution of HHFS Benefits by Income**

Income	Fraction Filing as HHFS	Mean Benefit from HHFS	
<u>Percentile</u>		All Filers	HHFS Filers
25th	0.28	\$6	\$23
75th	0.09	\$149	\$1,573
<u>Decile</u>			
1	0.06	\$2	\$38
2	0.18	\$1	\$3
3	0.26	\$12	\$46
4	0.26	\$52	\$198
5	0.24	\$99	\$408
6	0.20	\$110	\$547
7	0.15	\$91	\$630
8	0.10	\$143	\$1,468
9	0.05	\$87	\$1,642
10	0.03	\$59	\$1,939
<u>Overall Population</u>	0.15	\$66	\$428

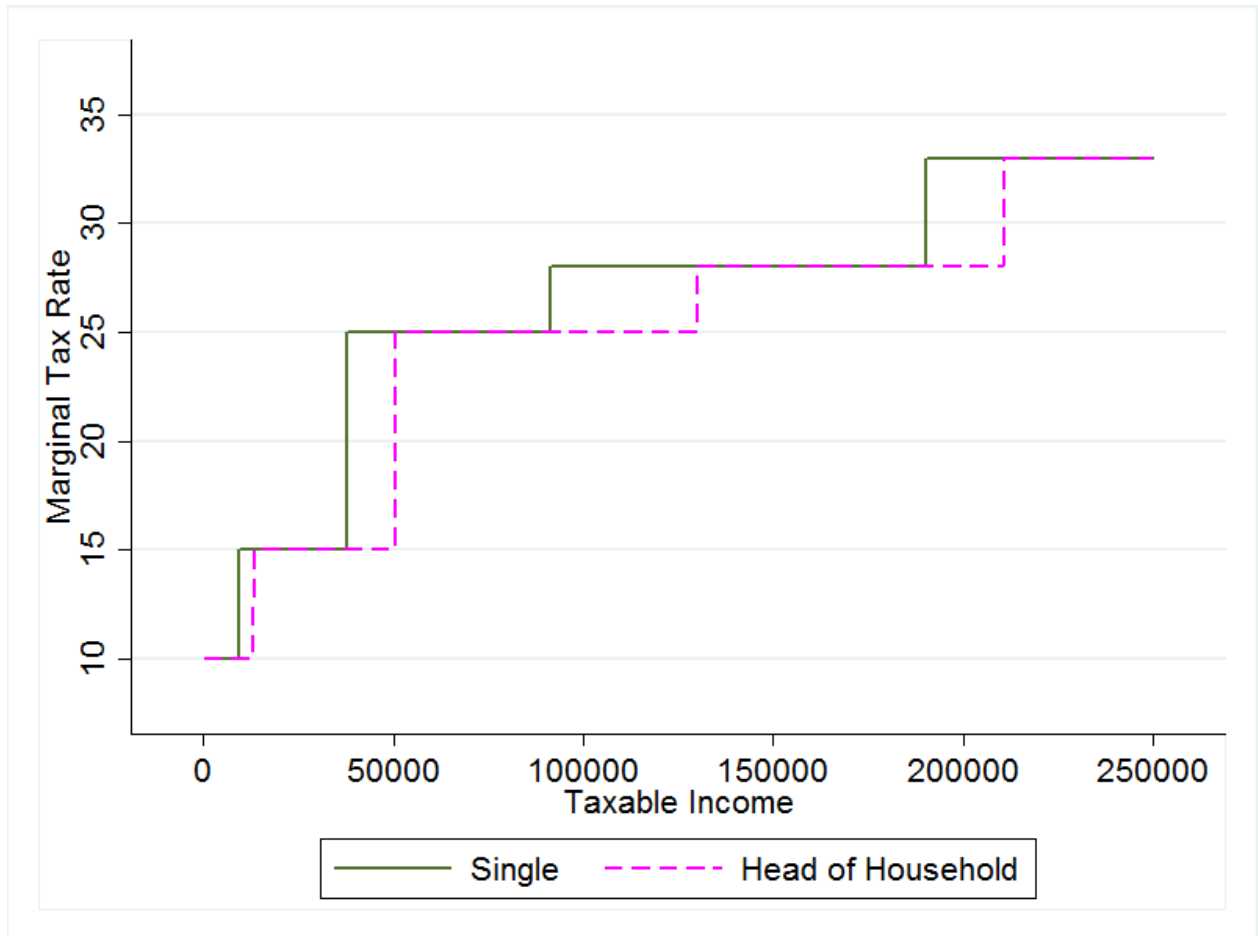
**Table 4: Distributional Impact of Reform**

	HHFS Filers			All Filers
Income Decile	HHFS Benefit Amount	HHC Amount	Net Gain from Reform	Net Gain from Reform
1	\$38	\$360	\$323	\$25
2	\$3	\$350	\$346	\$78
3	\$46	\$407	\$361	\$112
4	\$198	\$401	\$203	\$62
5	\$408	\$398	-\$10	\$5
6	\$547	\$388	-\$159	-\$28
7	\$630	\$371	-\$260	-\$35
8	\$1,468	\$353	-\$1,115	-\$107
9	\$1,642	\$371	-\$1,271	-\$66
10	\$1,939	\$335	-\$1,604	-\$48

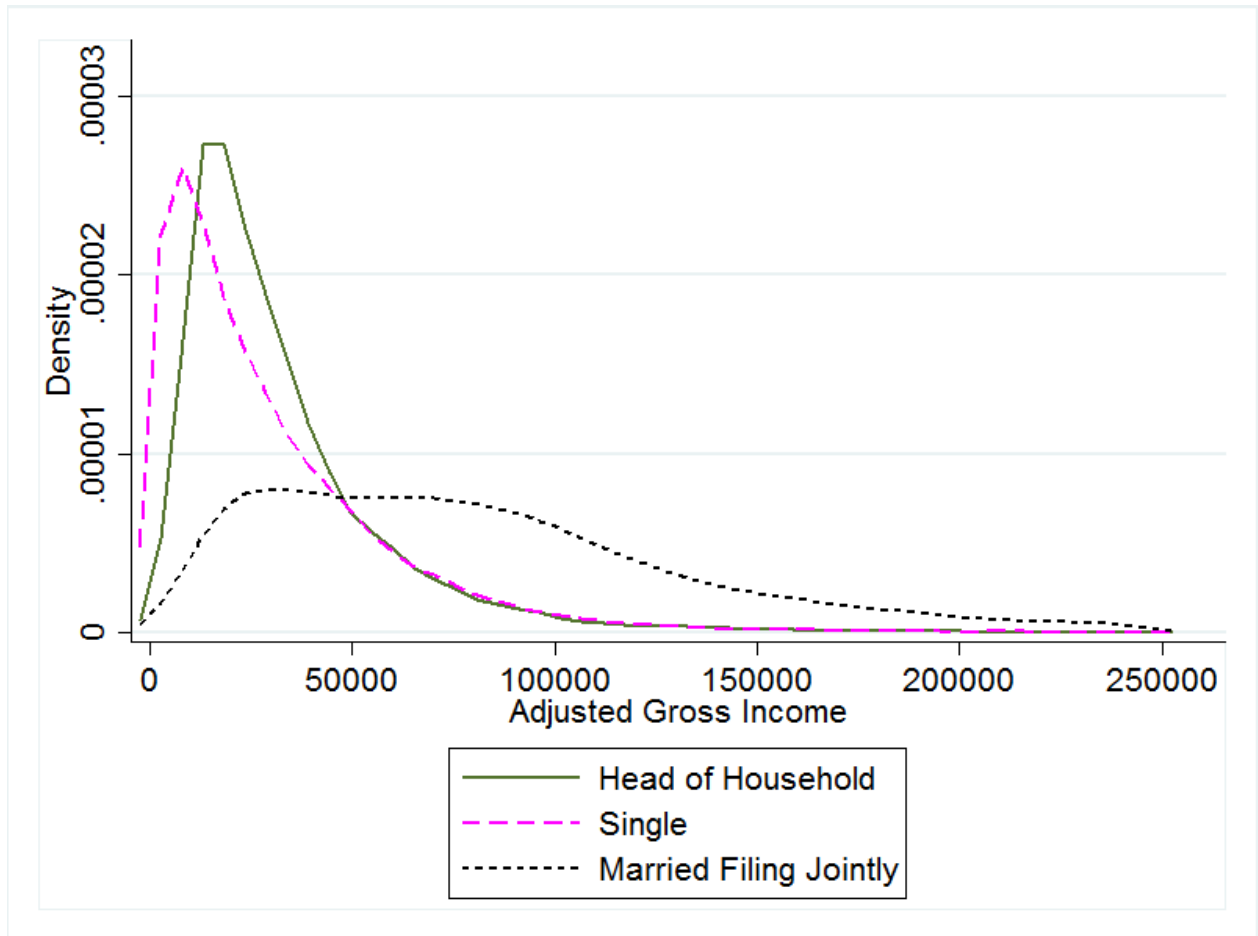
**Table 5: Distributional Effect of Alternative Reforms**

	1	2	3	4	5
Income Decile	Baseline Reform	All Dependents Eligible	Phase-Out	Non-Refundable	Half Credit for Additional Children
1	\$25	\$24	\$27	\$0	\$21
2	\$78	\$77	\$82	\$0	\$68
3	\$112	\$111	\$119	-\$9	\$90
4	\$62	\$65	\$69	-\$41	\$40
5	\$5	\$9	\$11	-\$20	-\$15
6	-\$28	-\$28	-\$23	\$36	-\$44
7	-\$35	-\$36	-\$31	\$77	-\$45
8	-\$107	-\$108	-\$110	-\$11	-\$114
9	-\$66	-\$68	-\$86	-\$12	-\$70
10	-\$48	-\$49	-\$59	-\$19	-\$50
<b>Max Credit Size</b>	\$294	\$229	\$311	\$1,158	\$305
Note: Cells denote mean gain from reform among all filers in the decile.					

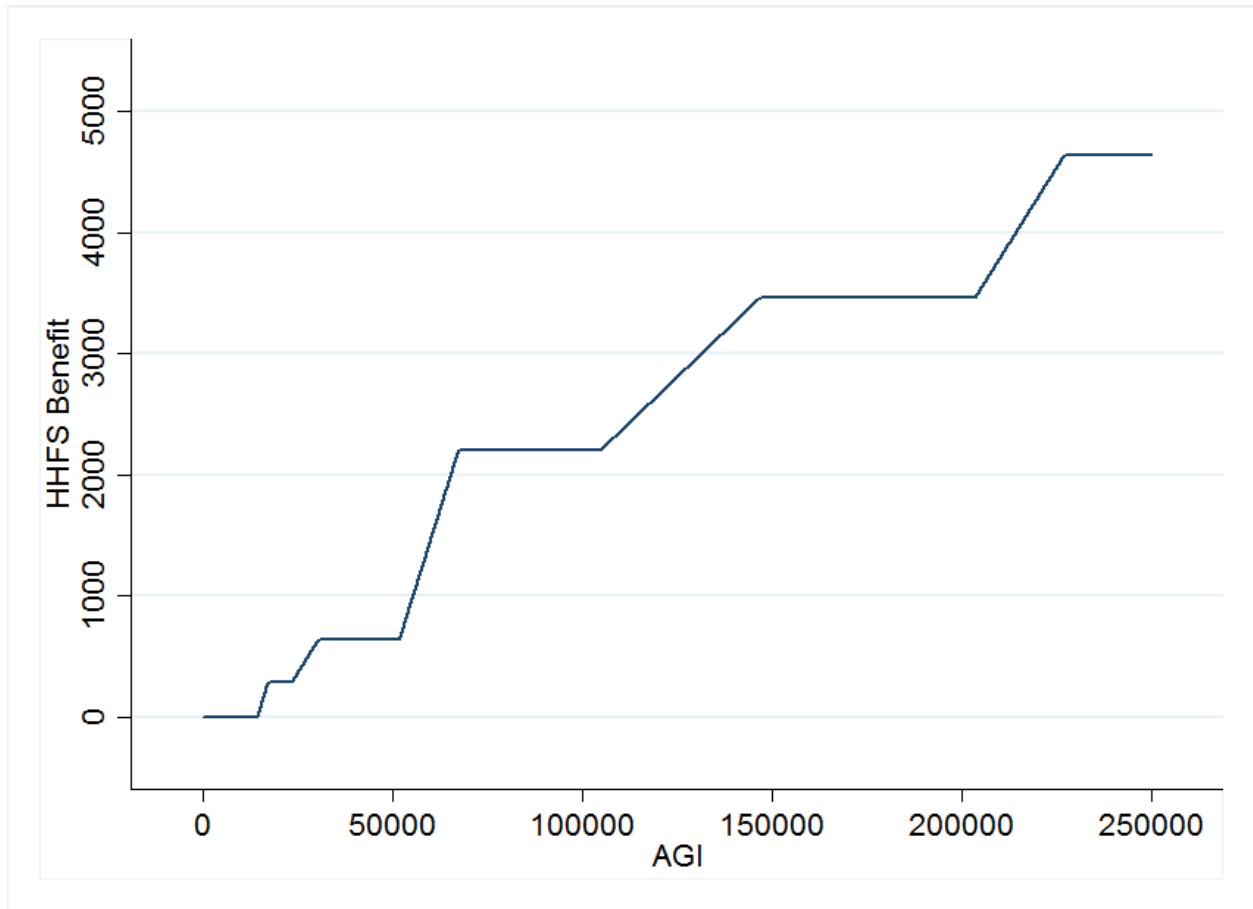
**Figure 1: Marginal Tax Rate by Filing Status**



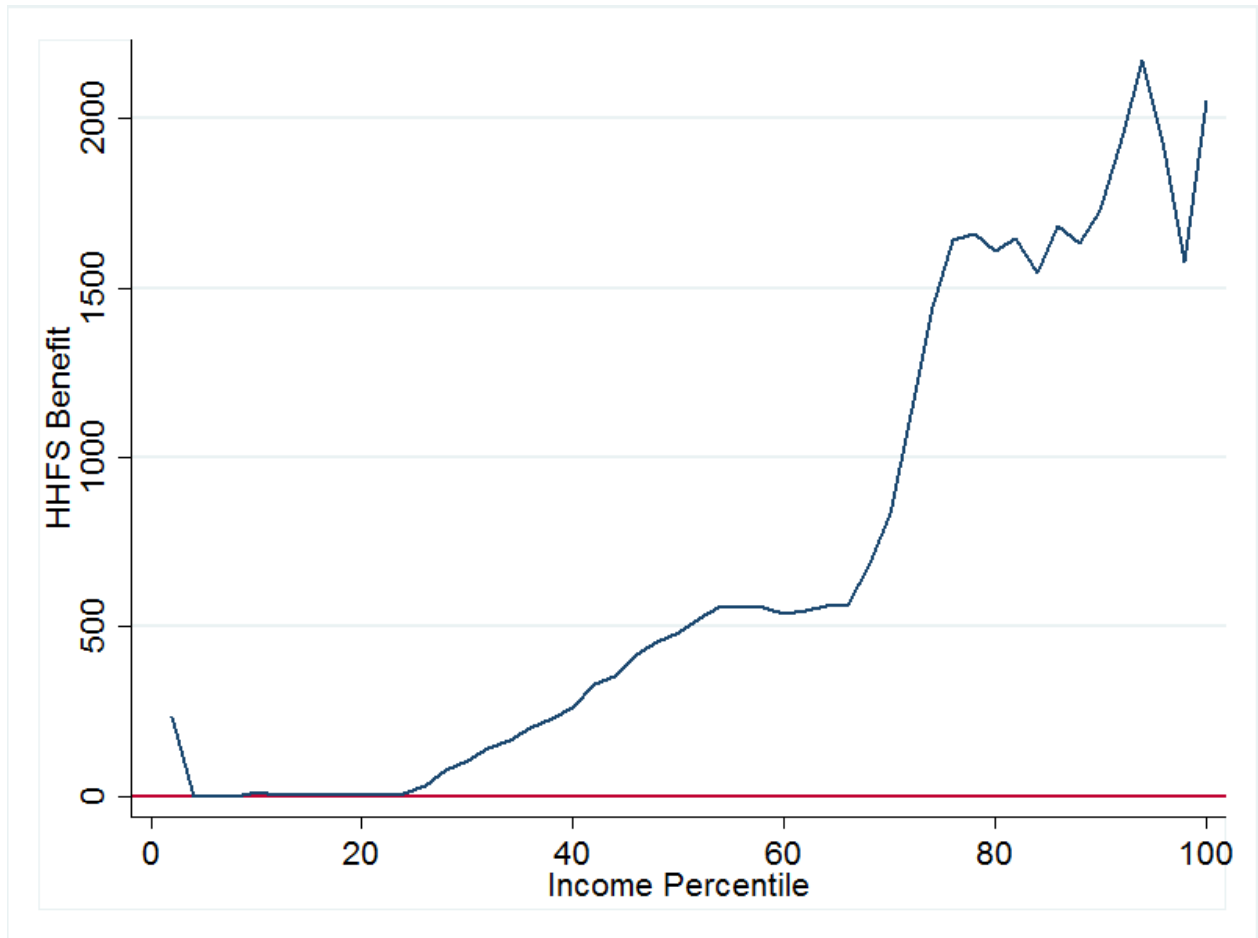
**Figure 2: Filing Status by Income**



**Figure 3: HHFS Benefit by Income**



**Figure 4: HHFS Benefit by Income Percentile**





**Figure 5: HHFS Prevalence by Income in 1960 vs 2011**

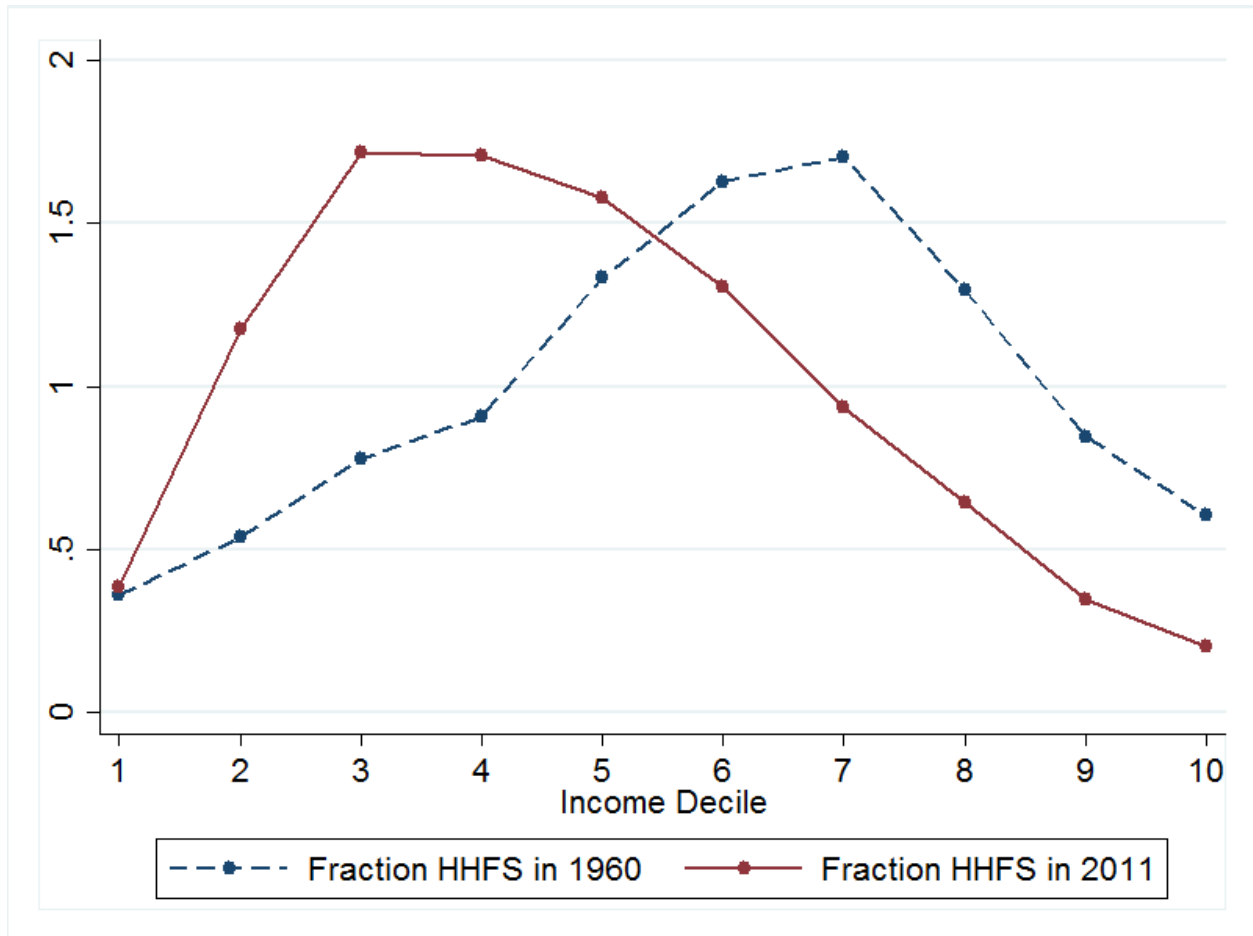
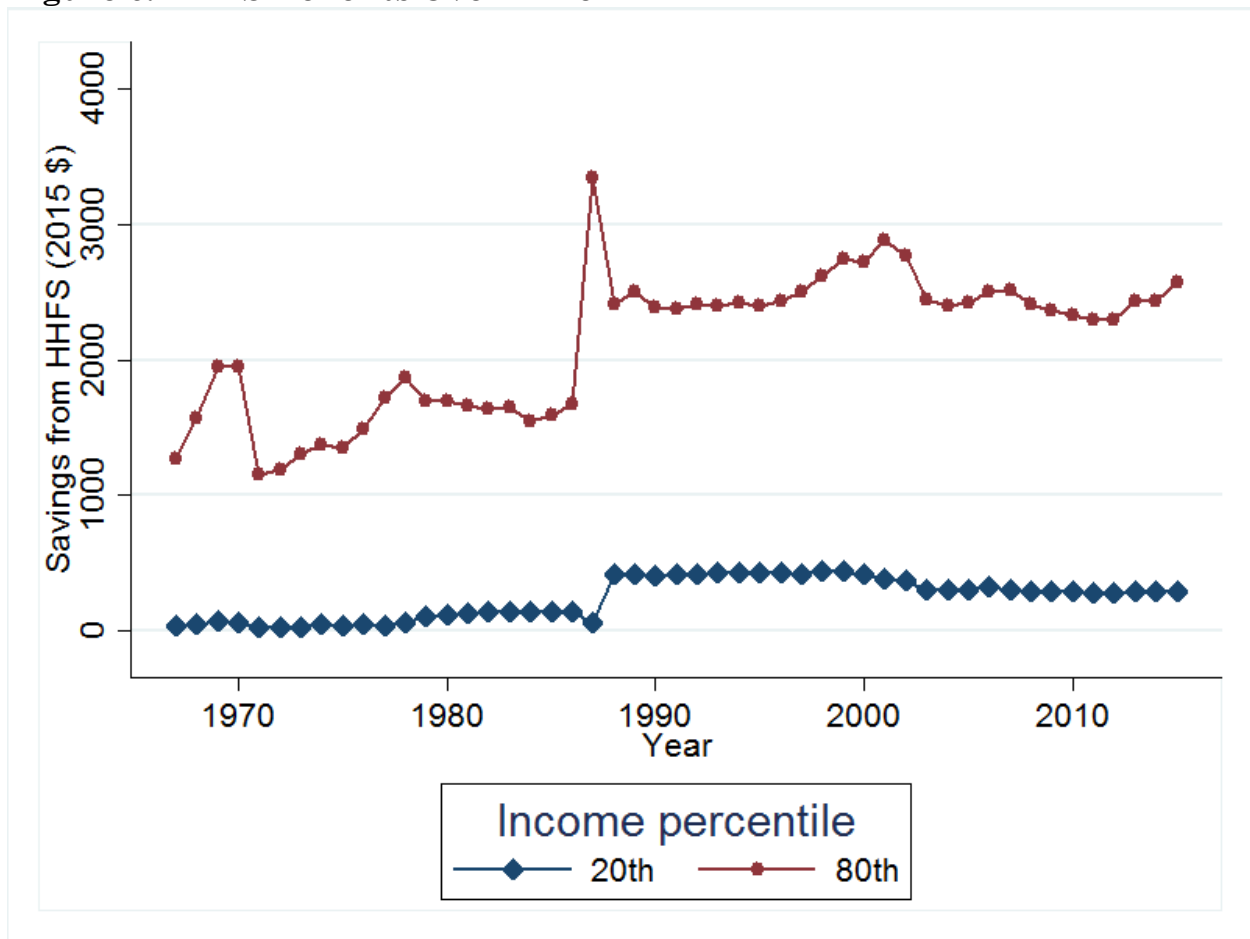


Figure 6: HHFS Benefits Over Time



**Figure 7: Winners and Losers from HHC Reform**

