

Income Assistance, Marriage, and Child Poverty: An Assessment of the Family Security Act

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Abstract

The Covid-19 pandemic has brought about changes in key income support programs, reigniting a debate about the design of financial aid to low-income households with children. In this study we assess the Family Security Act—a proposal presented by Senator Mitt Romney (R-UT) on February 4, 2021 to reform the tax/transfer system—in terms of its efficacy to achieve the stated objectives of increasing marriage rates and cutting child poverty at no cost to the government. The assessment is carried out through a structural microsimulation approach, using a dynamic model of savings, labor supply, household formation, and marital status. We find that while the plan would be highly effective at increasing marriage, it would reduce child poverty at the expense of increasing poverty among single-mother families and child deep poverty. Furthermore, the plan would entail a substantial cost to taxpayers. (JEL E21, H24, H31, J12)

Keywords: Income Support; household decisions; cohabitation and marriage; poverty.

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1 Introduction

The \$1.9 trillion Covid-19 relief package—passed into law on March 11, 2021 as the American Rescue Plan Act (ARPA)—includes an expansion of the Child Tax Credit (CTC) for one year, increasing the tax credit per child and making it fully refundable. The cost of this one-year expansion is projected to be roughly \$110 billion.¹ Since this relief package was first unveiled there have been calls for the expansion of aid to families with children to be made permanent, arguing that the deterioration of the earnings potential of millions of U.S. workers caused by the Covid-19 outbreak may be long lasting.² Responding to these concerns, President Biden’s American Families Plan—presented to Congress on April 28, 2021—extends the CTC expansion through 2025.

The expansion of the CTC has stirred a debate about the overall design of the tax/transfer system, in particular about the extent to which aid to low-income families should be in the form of work incentives (tax credits to low-wage earners) and/or in out-of-work income support (minimum guaranteed income). As part of this debate, and possibly in anticipation of the expiry of the current expansion of the CTC, various proposals to reform the tax/transfer system are already being put forth and discussed.

In this study we present an assessment of the Family Security Act (FSA), a proposal presented by Senator Mitt Romney (R-UT) on February 4, 2021. Understanding the effects of this proposal is important not only because it has received a great deal of attention among politicians and policy experts, garnering endorsements from notable individuals and organizations, but also because the proposal is in line with a general trend in U.S. transfer policy which has decreased income support for single-parent households and increased support for married households.³

The FSA, as stated in the proposal, would enhance equal treatment for working and stay-at-home parents, and its main objectives are to:

- Promote marriage.
- Reduce child poverty.

¹See Estimated Revenue Effects Of H.R. 1319, The American Rescue Plan Act of 2021, JCX-14-21, March 09, 2021 (Committee on Taxation of the U.S. Congress).

²Among those raising concerns that the effects of the Covid-19 pandemic on workers’ earning potential may be long lasting is Treasury Secretary Janet Yellen (in testimony to Congress on March 23, 2021). von Wachter (2020) estimates the loss of lifetime earnings for a subset of vulnerable workers who lost their jobs as a result of the Covid-19 pandemic to be \$2 trillion.

³Senator Romney’s plan can be accessed at <https://www.romney.senate.gov/romney-offers-path-provide-greater-financial-security-american-families>. For an analysis of the evolution of the U.S. welfare system since the 1960s and the patterns of support for families of different type, see Moffitt (2015).

The plan would overhaul the federal income support system for low- and middle-income households with children. Specifically, the plan would:⁴

- Replace the Child Tax Credit with a Child Benefit with no minimum income requirement or phase-in (so that families with no income would still be eligible for the child benefit).
- Simplify the Earned Income Tax Credit (EITC) through a family benefit independent of the number of children.
- Eliminate the Temporary Assistance for Needy Families program (TANF).
- Eliminate the *head of household* tax filing status. Non-married individuals must file as *single*, regardless of whether or not they have dependents.

To assess the Family Security Act we use a structural microsimulation approach, in which a dynamic model of the savings, labor supply, living arrangement, and marital status decisions of non-college educated workers with children is calibrated to a sample of U.S. households and simulated. The model is presented in Section 3 below (the model builds on the one in Ortigueira and Siassi 2021). We then compare the demographic and economic outcomes under the 2019 tax/transfer system (from now on referred to as the benchmark) with the outcomes that would emerge under the policies proposed in the FSA. It should be stressed that in our model household formation and marital status are endogenously chosen by utility-maximizing individuals, and consequently both choices are affected by the tax/transfer system they face. This makes our model especially suitable for assessing policy reforms aimed at promoting marriage. We can therefore offer predictions on how the Family Security Act would shape not only labor supply, income, and poverty, but also the composition of the population by household type: single mothers, cohabiting couples, and married couples.⁵ The model also embeds in great detail the elements of the U.S. tax/transfer system, for both the benchmark and the FSA, including all the kinks and non-convexities stemming from individual income taxation, payroll taxes, and the means testing of transfers, as well as the differential treatment of filers/applicants according to their living arrangement and marital status.

Our study builds on and contributes to an extensive empirical literature, too large to review here, on how transfer programs affect labor supply, family structure, and poverty. A large number of papers in this literature have assessed the effects of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). For example, Bitler et al. (2004) find that this reform had effects on family

⁴A more detailed description of how these changes would be implemented is provided in the next section.

⁵For the sake of clarity, a single-mother household is one formed by an unmarried mother and her children, with no partner present. By contrast, a cohabiting couple is a household formed by two unmarried parents who live together with their children.

structure, leading to fewer new divorces and fewer marriages. Fitzgerald and Ribar (2004) do not find evidence that this reform affected female headship of families. Moffitt et al. (2020) find that some elements of this reform, implemented during both the waiver period and the TANF period, resulted in increases in single motherhood and decreases in marriage to biological fathers. Low et al. (2018) also study the 1996 reform and show that it reduced divorce, but this reduction was not associated with an increase in marriage. An important lesson from these analyses is that the expected effects of PROWRA (which included the promotion of marriage as one of its main goals) do not always occur as expected. In our study, we show that the effect of Senator Romney’s Family Security Act on child poverty would not occur as expected.

2 The Family Security Act vs. the Benchmark Policy

The child benefit created by the FSA would pay families with children \$4,200 per child under six years of age, and \$3,000 per child for older children. (Our implementation of the child benefit in this study assumes the same benefit per child regardless of the age, namely \$3,400, which is the weighted average of \$4,200 and \$3,000 using the respective durations of the benefit.) The two charts in Figure 1 below compare the benchmark CTC (left chart) with the child benefit in the FSA (right chart). The three main features of the child benefit, relative to the benchmark CTC are: (1) an increase in the payout per child; (2) no minimum income requirement and phase-in (families with no income who do not file taxes or whose income is too low to owe taxes would still collect the full child benefit); (3) it would be administered by the Social Security Administration, whereas the CTC is administered by the IRS.

The reform of the Earned Income Tax Credit proposed in the FSA is illustrated in Figure 2. The left chart displays the benchmark EITC, and the right chart the EITC contained in the FSA. This is a major reform of the EITC, which would remove the dependency of the EITC on the number of children, and would instead create four different schedules according to the type of family: (i) Single and childless; (ii) single with dependents; (iii) married and childless; and (iv) married with dependents. The credit phase-in rates would vary according to marital status but not according to the presence and number of dependents. This would amount to large reductions in the credit phase-in rates, especially for single mothers, which would contribute to increasing low-income workers’ marginal tax rates. The proposed EITC is also less generous than the benchmark. For instance, a family with three children (either married or single) can collect a maximum credit of more than \$6,500 under the benchmark; however, the same family would collect a maximum credit of \$3,000 from the EITC in the FSA.

As already stated, the FSA would eliminate Temporary Assistance for Needy Families (TANF), which prior to the Covid-19 pandemic was the only cash assistance program for low-income families with

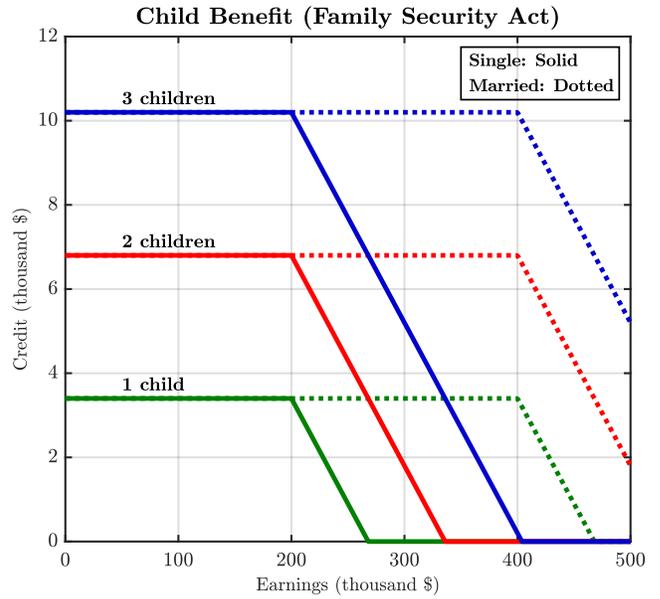
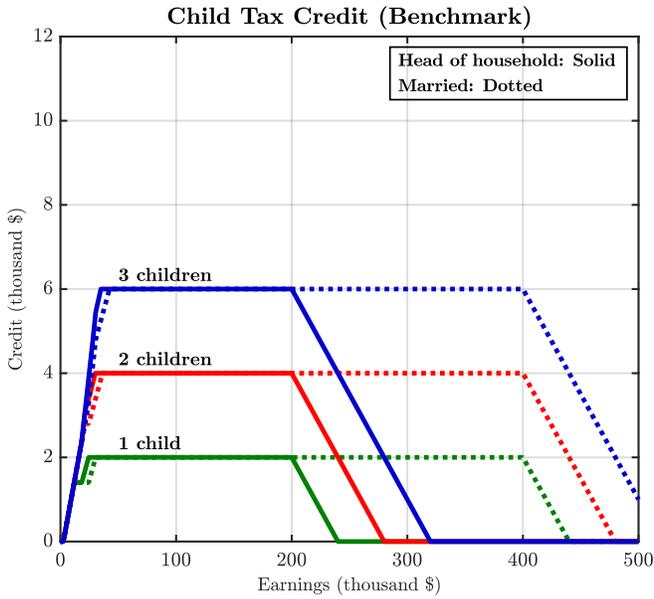


FIGURE 1. Left chart: Child Tax Credit (benchmark). Right chart: Child Benefit (FSA)

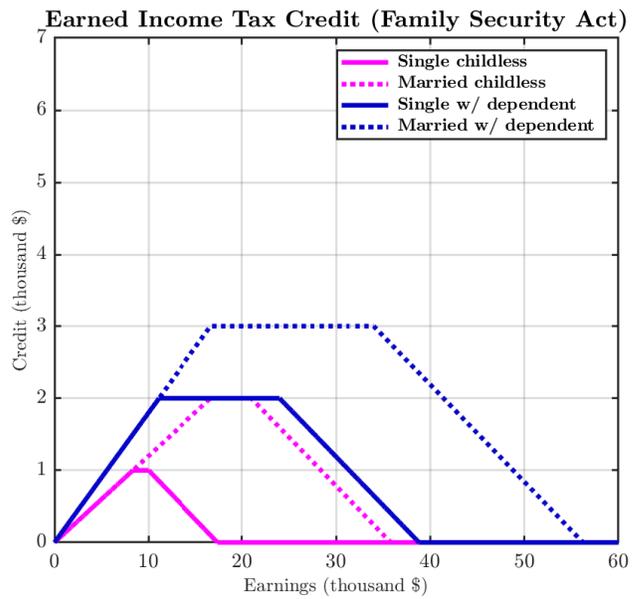
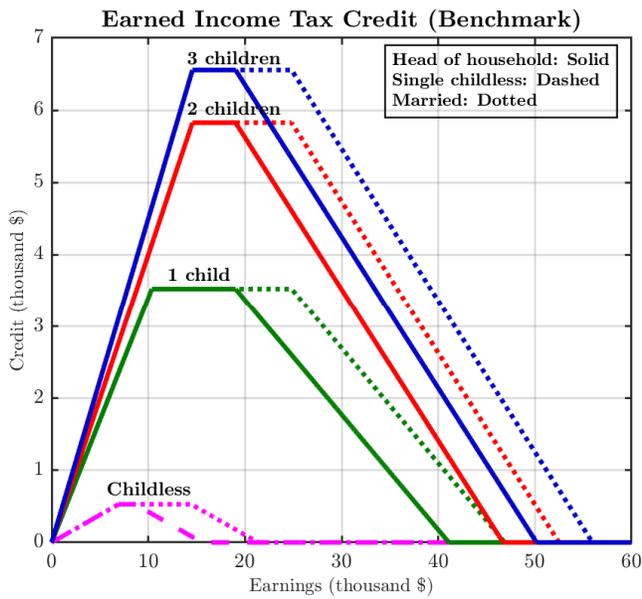


FIGURE 2. Left chart: EITC (benchmark). Right chart: EITC (FSA)

children. Recall that the proposed child benefit in the FSA would not require a minimum income and, hence, would replace TANF as a quasi-universal income transfer to families with children (as shown in Figure 1, the child benefit would be phased out starting at income levels above \$200K for singles and at \$400K for married families). Finally, the FSA would eliminate the *head of household* tax filing status. Non-married individuals, regardless whether they have dependents, would have to file as *single*, which would amount to a lower standard deduction and higher taxable income and tax rates.

3 Our Framework for the Evaluation of the Family Security Act

We now briefly describe the main ingredients of the framework used for assessing the FSA. As noted earlier, in our model savings, labor supply, household formation, and marital status are endogenous choices that respond to changes in the tax/transfer system. We assume a population of adult females (f) and males (g), and children. There are three living arrangements: single (ℓ_s); cohabiting (ℓ_c); and married (ℓ_m). All individuals start out as single with no children ($n = 0$), but females are subject to fertility risk (the number of children, n , follows a Markov chain $M(n, n')$). We assume random matching, where single, unpartnered females receive cohabiting and marriage proposals from single, unpartnered males with probabilities $\pi_n^{\ell_c}$ and $\pi_n^{\ell_m}$, respectively, where the subscript n allows these probabilities to vary with the number of children the single female may have. Conditional on having a proposal, single females learn the suitor's current labor productivity (z_m) and asset holdings (a_m), and either accept or turn down the proposal. Cohabiting couples get married as soon as they are better off than under cohabitation. Adult females and males are subject to idiosyncratic earnings risk: their labor productivities, z_f and z_m , respectively, follow AR(1) processes. Individuals can partially insure against these risks through savings, managing labor supply, and by forming two-adult households (intra-household risk sharing). While the tax/transfer system provides additional insurance against labor market and fertility risks, it may crowd out private self-insurance by reducing savings, labor market participation, and the formation of two-adult households. The endogenous choices of both the living arrangement and marital status allow us to assess how tax/transfer reforms shape the composition of the population by household type. Also, since our model yields distributions of households by savings, hours worked, and earnings, we can assess how the tax/transfer system shapes inequality and poverty. To carry out our assessment of the FSA, we replace the benchmark tax/transfer programs with those proposed in the Act as described above.

Before moving on to describe the maximization problems, we introduce some notation. The three filing statuses with the Internal Revenue Service (IRS) under the benchmark policy are: single (s); head of household (\bar{h}); and married filing jointly (x).⁶ The balance with the IRS after tax credits of a tax

⁶Since our focus is on low-income households (non college-educated workers), we do not model the married couples'

filer under filing status $j = s, \bar{h}, x$, is denoted by $IRS^j(a, e, n)$, where e denotes earnings. Note that for married couples the balance with the IRS depends on household earnings, i.e. $e_f + e_m$. For cohabitants, since under the benchmark policy they can choose who files as head of household and as single, we denote the couple's balance with the IRS using two superscripts indicating the female and male chosen filing statuses, respectively—e.g. $IRS^{s, \bar{h}}(\mathbf{a}, \mathbf{e}, n)$, where $\mathbf{a} \equiv (a_f, a_m)$ and $\mathbf{e} \equiv (e_f, e_m)$, would correspond to a couple where the female files as single and the male as head of household. As will be made clearer below, when tax credits are generous and contain phase-in and phase-out regions—like the EITC under the benchmark—the ability of cohabitant couples to choose who claims the children as dependents and files as head of household creates an additional cohabitation bonus for many low-income couples. The FSA's elimination of the head of household filing status and the reform of the EITC would contribute to reduce this bonus.

Provided eligibility for the Supplemental Nutrition Assistance Program (SNAP), the amount of aid received depends on the number of adults and children in the household, as well as its level of income. We denote this benefit as $F^\ell(a, e, n)$, where the superscript identifies the number of adults in the household, i.e. either one or two. The benchmark policy includes Temporary Assistance for Needy Families (TANF), whose benefit to eligible households also depends on the number of adults and children in the household, and the level of income. We denote this benefit as $B^\ell(a, e, n)$. To be clear, we model the tax scheme, tax credits, and welfare programs such as they are, including all the income tax brackets, phase-in and phase-outs, and the wealth and income thresholds for the determination of eligibility and benefits from tax credits and assistance programs.

We now lay out the maximization problem solved by each type of household.

Single females The problem of a single female living alone with her $n \geq 0$ children, labor productivity z , and asset holdings a involves decisions on consumption, savings, labor supply, and, provided she has a cohabitation or a marriage proposal, to accept or reject it. Let us denote the value function of a female in living arrangement $\ell \in L \equiv \{\ell_s, \ell_c, \ell_m\}$ by v_f^ℓ . Then, the value of a single female is given by

$$v_f^{\ell_s}(z, a, n) = \max_{c, l, a'} \left\{ U_f(c, l) + \beta \mathbb{E} \left[\pi_n^{\ell_s} v_f^{\ell_s}(z', a', n') + \sum_{\ell \in L \setminus \ell_s} \pi_n^\ell \max\{v_f^\ell(z', a' + a'_m, n'), v_f^{\ell_s}(z', a', n')\} \right] \right\}$$

s.t.

$$c + \hat{c}^{\ell_s}(n) + \Gamma(h, n) + a' = e_f + (1 + r)a + \vartheta n - IRS(a, e_f, n) + B^{\ell_s}(a, e_f, n) + F^{\ell_s}(a, e_f, n)$$

$$\ln z' = \rho \ln z + \epsilon, \quad \text{with } \epsilon \sim N(0, \sigma_\epsilon^2), \quad a'_m \sim \bar{F}_{a_m}, \quad z'_m \sim LN(0, \sigma_\epsilon / (1 - \rho^2)),$$

$$c \geq F^{\ell_s}(a, e_f, n), \quad 0 \leq l \leq 1 \quad \text{and} \quad a' \in A = [0, \bar{a}],$$

optimal choice between joint and separate filing as they are almost always better off filing jointly. Notice, for instance, that married couples filing separately cannot apply for the EITC.

where $h = 1 - l$ are hours worked, $e_f = h z \omega_f$ are household earnings, ϑ is child support per child (if any), next-period asset holdings are a' if she remains single, and $a' + a'_m$ if she accepts a proposal from a single male with assets a'_m . The wealth distribution across potential suitors is denoted by \bar{F}_{a_m} , and their labor productivity is drawn from the ergodic distribution implied by the AR(1) productivity process. $\hat{c}^{\ell_s}(n)$ represents consumption commitments of a single mother with n children and is parameterized as $\hat{c}_0^{\ell_s} + \hat{c}_1^{\ell_s} \cdot n$, where $\hat{c}_0^{\ell_s}$ and $\hat{c}_1^{\ell_s}$ are parameters. Function $\Gamma(h, n)$ represents the sum of work-related expenses and child care costs paid while working, which we parameterize as $\gamma_1 \mathbb{1}_{\{h>0\}} + \gamma_2 \mathbb{1}_{\{h>0\}} n^\alpha$, where γ_1 , γ_2 and α are parameters. The expectation is taken on her own labor productivity next period, z' , on the labor productivity and the level of assets of potential suitors, z'_m and a'_m , respectively, and on the number of children, n' . The value functions when the children have left the household, $v_f^\ell(z, a, \emptyset)$ for $\ell \in L$, in the maximization problem above, correspond to the values of remaining childless forever.

Cohabiting couples The problem of a cohabiting couple with labor productivities $\mathbf{z} = [z_f z_m]$, joint assets a , and n children involves decisions on individual consumptions, savings, labor supplies, tax filing statuses, and on whether to get married or remain as cohabitants. Formally, a cohabiting couple with Pareto weights on individual utilities, η_g for $g = f, m$, solves the following joint decision problem

$$V^{\ell_c}(\mathbf{z}, a, n) = \max_{c_f, c_m, l_f, l_m, a'} \left\{ \sum_{g=f, m} \eta_g U_g(c_g, l_g) + \beta \mathbb{E} \left[\max\{V^{\ell_c}(z', a', n'), V^{\ell_m}(z', a', n')\} \right] \right\}$$

s.t.

$$c_f + c_m + \hat{c}^{\ell_c}(n) + \Gamma(h_f, h_m, n) + a' = e + (1 + r)a - IRS(a, e, n) + B^{\ell_c}(a, e, n) + F^{\ell_c}(a, e, n)$$

$$\ln z' = \rho \ln \mathbf{z} + \epsilon, \quad \text{with } \epsilon \sim N(0, \sigma_\epsilon^2)$$

$$c_f, c_m \geq 0, \quad c_f + c_m \geq F^{\ell_c}(a, e, n), \quad 0 \leq l_f, l_m \leq 1 \quad \text{and} \quad a' \in A,$$

where $IRS(a, e, n)$ is $IRS^{h, s}(a, e, n)$ if the couple chooses that the female files with the IRS as head of household, and $IRS^{s, h}(a, e, n)$ if it chooses that it is the male who files as head of household. $h_g = 1 - l_g$ are hours worked, $\mathbf{e} = [e_f e_m]$, and $e = e_f + e_m = h_f z_f \omega_f + h_m z_m \omega_m$ are household earnings. The function V^{ℓ_c} denotes the value of the cohabiting couple, and the function V^{ℓ_m} denotes the value of a married couple. The expectation is formed over the two labor productivities and over the number of children. The member of the couple filing taxes as single cannot apply for the EITC. Also note that under the benchmark policy TANF eligibility and benefits depend on total household wealth, a . Consumption commitments for couples also depend on the number of children, with parameters $\hat{c}_0^{\ell_c}$ and $\hat{c}_1^{\ell_c}$. For couples, work-related expenses plus child care costs paid while working are parameterized as $\gamma_1 [\mathbb{1}_{\{h^f>0\}} + \mathbb{1}_{\{h^m>0\}}] + \gamma_2 \mathbb{1}_{\{h^f+h^m>1\}} n^\alpha$. Note that this formulation allows couples to reduce child care costs by allocating working hours so that one of the parents is available to take care of the children.

Married couples Married couples solve a problem similar to the one of cohabitants except for the

tax/transfer system they face, the fact that once married they cannot change marital status, and that married couples file with a *married filing jointly* status, $j = x$. They face the same consumption commitments and child care costs while working as cohabiting couples. A married couple with labor productivities $\mathbf{z} = [z_f z_m]$, assets a , and n children solves

$$V^{\ell_m}(\mathbf{z}, a, n) = \max_{c_f, c_m, l_f, l_m, a'} \left\{ \sum_{g=f,m} \eta_g U_g(c_g, l_g) + \beta \mathbb{E} V^{\ell_m}(\mathbf{z}', a', n') \right\}$$

s.t.

$$c_f + c_m + \hat{c}^{\ell_m}(n) + \Gamma(h_f, h_m, n) + a' = e + (1+r)a - IRS^x(a, e, n) + B^{\ell_m}(a, e, n) + F^{\ell_m}(a, e, n)$$

$$\ln \mathbf{z}' = \rho \ln \mathbf{z} + \boldsymbol{\epsilon}, \quad \text{with } \boldsymbol{\epsilon} \sim N(0, \sigma_{\boldsymbol{\epsilon}}^2)$$

$$c_f, c_m \geq 0, \quad c_f + c_m \geq F^{\ell_m}(a, e, n), \quad 0 \leq l_f, l_m \leq 1 \quad \text{and} \quad a' \in A,$$

where $h_g = 1 - l_g$ are hours worked and $e = e_f + e_m = h_f z_f \omega_f + h_m z_m \omega_m$ are household earnings. Importantly, married couples' taxes, tax credits and assistance transfers are based on household income, earnings, and wealth.

Females and males are assumed to have identical preferences over consumption and non-market time, which we represent by the following per-period utility function

$$U(c, l) = \frac{c^{1-\sigma} - 1}{1-\sigma} + \varphi \frac{l^{1-\zeta} - 1}{1-\zeta},$$

where σ is the inverse of the elasticity of intertemporal substitution, $\varphi > 0$ is a utility weight on non-market time, and $\zeta > 0$ affects the Frisch elasticity of labor supply. The model is calibrated to match moments from a sample of one- and two-adult households with children formed by non-college-educated workers drawn from the Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS), a representative survey of U.S. households. Our focus on households formed by non-college-educated workers with children is based on the higher prevalence of both cohabitation and poverty among this demographic group.

Data and Calibration

To carry out the simulations of the model, the tax/transfer system parameters under the benchmark are set to the policy in effect in 2019; and the parameter values under Romney's plan are taken from the outline of the FSA released on February 4, 2021. Remaining parameter values—those describing preferences, the dynamics of labor productivity, fertility, child care costs, etc.—are set as follows. A subset of these parameters are calibrated without solving the model using a priori information, such as the elasticity of intertemporal substitution, the risk-free rate of return, fertility, consumption commitments, and those governing the dynamics of labor productivity. The fourteen remaining parameters are calibrated

to match fourteen moments from a sample of one- and two-adults households with children drawn from ASEC. Specifically, empirical moments used as targets are: the shares of the three household types (single, cohabiting, married); the shares of married couples with 1, 2 and 3 children; employment rates; average hours worked; the Frisch elasticity of labor supply; married households' median net worth; average earnings; the gender wage gap.

4 The Demographic and Economic Effects of the Family Security Act

The effects of implementing the Family Security Act are presented in Table 1 below in terms of percentage changes from the values under the benchmark policy. By way of summary, let us start with the effectiveness of the FSA in meeting its stated objectives, namely, the promotion of marriage and the reduction of poverty.

- The FSA would be highly effective at promoting marriage. Our simulations yield a 16 percent increase in the marriage rate. The increase in marriages is explained by a reduction in cohabitation (the population of cohabitant couples falls by 45 percent).
- The effects on poverty are mixed. While the FSA would reduce child poverty from 14.3 to 11.6 percent, child deep poverty would increase. The FSA would reduce poverty among the population of married couples with children. However, poverty among single-mother families would increase from 26.5 to 45.5 percent, and deep poverty would triple.⁷

As shown in Table 1, single mothers' average disposable income would fall by 9 percent under the FSA. The reduction in the EITC rates and generosity, and the elimination of TANF would drastically reduce the fiscal cost of these programs among single mothers. However, the new child benefit, along with the loss in tax revenue induced by the reduction in labor supply, would increase net transfers towards this population. Namely, the net transfer, on a per-family basis, would increase by 17.5 percent. On the other hand, married couples' average disposable income would increase by 3.4 percent, and the net contribution to the federal budget of this type of families, would fall by 84 percent, again on a per-family basis. Overall, the FSA would cost the government \$1,114 per household in our population of interest (non-college educated families with children). This is a significant cost, far from the objective that the FSA would pay for itself.

⁷For the calculation of poverty rates we follow the U.S. Census Bureau's poverty guidelines. For the calculation of deep poverty we also follow the Census Bureau in setting the income thresholds at 50 percent of those used to calculate poverty.

	Bench.	FSA (% change)		Bench.	FSA (% change)
Demographics			Married couples		
Lone mothers (%)	19.42	+0.32	Employment rate (%)		
Married couples (%)	71.22	+5.79	Females	59.80	+4.85
Cohabiting couples (%)	9.36	-44.75	Males	95.69	+0.88
New marriage rate [†]	11.45	+15.97	Two-earner HHs (%)	55.49	+6.76
Out-of-wedlock births (%)	55.91	-3.56	Avg. hours worked [‡]		
Child poverty (%)	14.27	-18.92	Females	1,645	-0.82
			Males	2,080	+0.23
Lone mothers			Avg. disp. income	56,180	+3.42
Employment rate (%)	83.36	-35.26	Poverty rate (%)	8.58	-83.33
Avg. hours worked [‡]	1,528	+7.85	EITC recipients (%)	44.31	+14.52
Avg. disp. income	29,505	-9.07	EITC costs*	1,741	-34.22
Poverty rate (%)	26.54	+71.40	SNAP + TANF costs*	1,150	-55.36
EITC recipients (%)	77.07	-41.23	Net contribution*	1,882	-84.28
EITC costs*	3,032	-73.57			
SNAP + TANF costs*	2,620	-14.57			
Net transfer*	5,482	+17.57			

TABLE 1—LONG-RUN EFFECTS OF THE FAMILY SECURITY ACT. *Notes:* [†]The new marriage rate is the number of new marriages in a given period divided by the number of unmarried mothers in that period. [‡]Conditioning on positive hours. *Net transfer from (resp. net contribution to) federal budget per household in the relevant subpopulation.

We now explain the labor supply and marital status responses to the FSA. The labor supply responses are key to understanding the increase in poverty among single-mother families.

Labor supply. The labor supply responses presented in Table 1 show a large drop in the employment rate of single mothers (a 35 percent reduction from its value under the benchmark policy). By contrast, the employment rate among married mothers would increase by 5 percent, and it would remain roughly unchanged for married fathers. The fraction of two-earner married couples would increase by 7 percent. In short, the FSA would introduce large labor supply disincentives for single mothers, which would reduce their labor income and increase the incidence of poverty among this population. On the other hand, the FSA would incentivize work among married females, increasing their labor market participation and reducing poverty among married families.

To gain more insight on the work disincentives created by the FSA for single mothers we have calculated their participation tax rates at different levels of earnings (Figure 3). Participation tax rates (PTRs) provide a measure of the proportion of earnings taken away from the worker by an increase in

taxes and/or by a reduction in benefits when the worker moves from non-employment to employment. The three charts in Figure 3 display the PTRs for single mothers with one, two and three children, respectively. The FSA would increase their PTRs. For example, under the benchmark policy a single mother of two children can get a work subsidy (negative participation tax rate) as high as 40 percent of her earnings. By contrast, under the FSA the maximum work subsidy would be only 10 percent. Also, under the benchmark policy work subsidies are positive up to \$23K, whereas they already become negative (i.e. a tax) at \$12K under the FSA. Single mothers earning between \$25K and \$30K would see an increase in the PTR of about 15 percentage points.

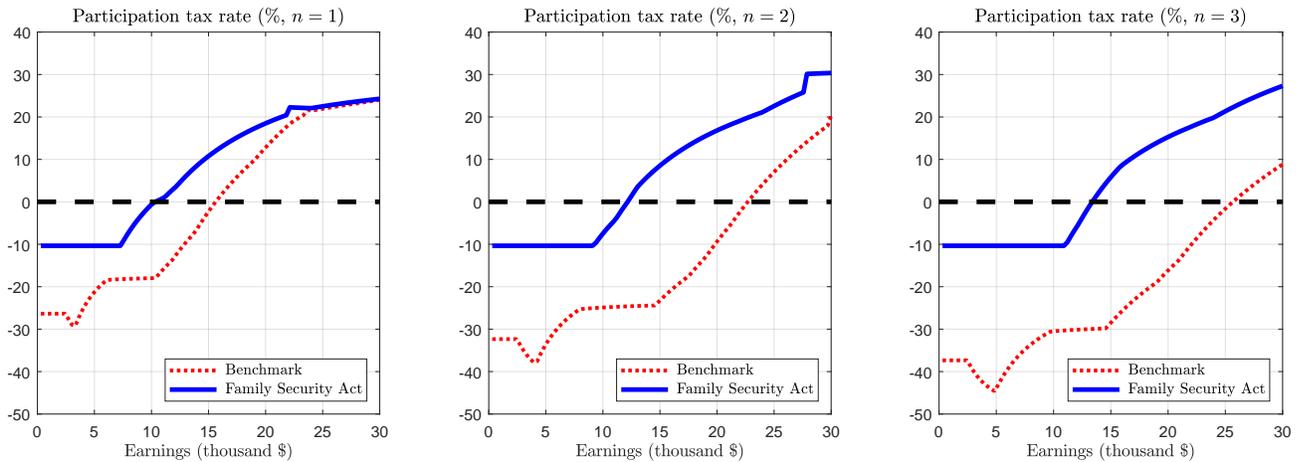


FIGURE 3. PARTICIPATION TAX RATES FOR SINGLE MOTHERS. *Notes:* For the calculation of the PTRs in this figure single mothers were assumed to be asset-eligible for TANF and SNAP. Single mothers with: one child (left chart); two children (middle chart); and three children (right chart).

The elements in the FSA that reduce single mothers' work incentives are:

- The replacement of the Child Tax Credit by a Child Benefit that does not depend on work. As is clear from the left chart of Figure 1, at low levels of earnings the amount a tax filer collects from the CTC increases with earnings, thus reducing the marginal tax rate. In other words, since the amount of the CTC increases with the level of earnings, there is a positive substitution effect on the labor supply of low-earning single mothers. By contrast, under the FSA the amount collected from the Child Benefit (right chart of Figure 1) does not change with the level of earnings for those in the left tail of the earnings distribution. Out-of-work single mothers collect the same Child Benefit as working single mothers (up to \$200K in earnings). This removes the positive substitution effect on the labor supply of low-earning mothers.
- The reduction in the EITC phase-in rates. The FSA would reduce the EITC phase-in rates by

more than half (Figure 2). For example, for a single mother of two children the EITC phase-in rate would fall from 40 percent under the benchmark to 18 percent under the FSA, thus increasing marginal tax rates at low levels of earnings and reducing the positive substitution effects on labor supply.⁸

- The elimination of the *head of household* filing status. Single mothers would have to file as *single* under the FSA, which would reduce their standard deduction, and would increase their income tax rates (due to lower income thresholds for the second and third tax brackets). All this would increase their marginal tax rates and hence would discourage work.

The increase in the labor supply of married mothers that would result from the implementation of the FSA is explained by a reduction in their participation tax rates, especially for those whose husbands earn around \$25K. The reason is that taxes and transfers for married couples are based on family earnings, and not on individual earnings, and therefore the participation tax rate of one spouse depends on the earnings of the other spouse. Thus, if a husband has a level of earnings around the end of the EITC plateau, his wife faces a high participation tax rate, as family earnings would place them in the EITC phase-out region (reducing their tax credit) or even making them ineligible for the EITC. The higher the generosity of the EITC at the plateau the higher the participation tax rate faced by the wife. Since the FSA would reduce the maximum EITC for married couples with children to \$3K (from a maximum of almost \$7K under the benchmark), it would reduce wives' participation tax rates. Note that this would affect mostly low-income married households.⁹

Marriage rates. To illustrate how the FSA would change the marriage/cohabitation decision of couples with children, Figure 4 presents their optimal marital status regions in the space of the couple's labor productivities. There is an expansion of the marriage region relative to the same region under the benchmark policy. Low-income couples (i.e., those with low labor productivity) that are better off as cohabitants under the benchmark policy would marry under the FSA. For instance, low-productive couples where the male has labor productivity below 60 percent of the median choose cohabitation over marriage under the benchmark policy; however, these couples would choose marriage under the

⁸Our findings about the responsiveness of single mothers' employment to the EITC concord with past empirical evidence showing that the EITC expansions of the 1980s and 1990s significantly increased the labor supply of single mothers. For instance, Eissa and Liebman (1996) find that the expansion of the EITC introduced by Tax Reform of 1986 (TRA86) increased the labor force participation of single mothers. Meyer, and Rosenbaum (2001) find that a large share of the increase in the labor supply of single mothers in the early and mid 1990s can be attributed to the expansions of the EITC between 1984 and 1996. They find larger effects for less educated single mothers.

⁹Again, our results concord with past empirical evidence on the labor supply response of married mothers to the EITC expansions between 1984 and 1996. For instance, Eissa and Hoynes (2004), using quasi-experimental and reduced-form labor supply models, find that the EITC expansions reduced the labor supply of married mothers.

FSA provided the labor productivity of the female is at least 80 percent of the median female labor productivity. There is also a marked increase in marriage among couples with labor productivity above the median.

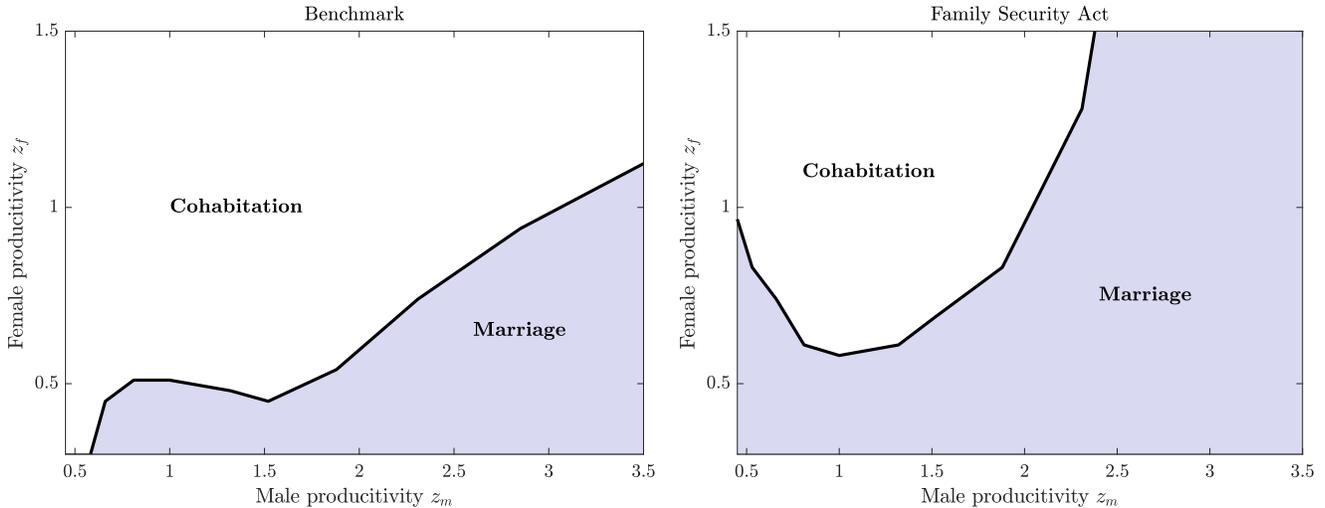


FIGURE 4. THE MARITAL STATUS DECISION OF COUPLES WITH CHILDREN. *Notes:* In the construction of this figure we assumed that couples have two children and pass the SNAP and TANF asset eligibility test.

The elements in the FSA that increase marriage are (1) the reduction in the EITC, and (2) the elimination of head of household filing status. A cohabiting couple can choose who claims the children as dependents. Under the benchmark policy, the one claiming the children files as head of household and, if eligible, can also claim the EITC. The couple member who does not claim the children as dependents must file as single and is not eligible for the EITC. This creates a cohabitation bonus for many low-income couples with children. This bonus increases with the generosity of the EITC and with the differential in the standard deductions and in the income tax brackets between the single and head of household filing statuses. Since the FSA eliminates the head of household filing status and reduces the EITC, it erodes the cohabitation bonus. As an illustration, consider a couple with two children whose only source of income is labor earnings. Assume the male earned \$19K and the female \$12K. Under the benchmark policy, if this couple chooses to cohabit and the male files as head of household and the female as single, the male's taxable income is \$650 (10 percent tax bracket) and he collects \$5,828 from the EITC; the female pays no taxes, as her earnings are below the standard deduction for single filers. If they choose to marry, their combined taxable income is \$6,600 (10 percent tax bracket) and they collect only \$4,521 from the EITC. Under the FSA, if they choose to cohabit and the male claims the children, he has to file as single. His taxable income would be \$6,800 and he would collect only \$2,000 from the EITC. If

they choose to marry, their combined taxable income would be \$6,600 and they would collect \$3,000 from the EITC. Note that this example is given merely for the sake of illustration. In our model, the cohabitation/marriage decision is taken, jointly with the savings and labor supply decisions, to solve a dynamic, expected-utility maximization problem. The decision to marry is assumed to be non-reversible, as couples, once married, can no longer file their taxes using the head of household or single filing statuses.

5 A Discussion of Model Extensions

Although the model used in our analysis embeds a rich set of endogenous variables (savings, labor supply—both along the extensive and intensive margins—, household formation, and marital status), some other ingredients have been assumed to be fixed and non-responsive to policy. Also, while the tax and transfer programs have been modeled in great detail, some elements have been left aside. In this section, we show that our results are robust to two extensions of the model.

The first-birth rate decreases with the FSA. While the empirical literature on the effects of welfare on fertility has been mostly inconclusive (Moffitt 1998), there is some evidence that the 1990s expansions of the EITC may have affected first births among unmarried women. Baughman and Dickert-Conlin (2003) find that an increase in the EITC is negatively correlated with first births for white women (only statistically significant at the 10-percent level), and positively correlated for nonwhite women (although the economic significance is very small, with an estimated elasticity of 0.02). Since the FSA increases the EITC for childless individuals (relative to the benchmark), it can be argued that the FSA would discourage childbearing among single females. To address this concern, we carried out an exercise where the first-birth rate among single, unpartnered females decreases by 50 percent upon the implementation of the FSA. This is a very large decrease, which should be interpreted merely as a way of testing the robustness of our results above to a decline in first births. We find that our qualitative results remain unchanged; namely, the FSA would still increase child deep poverty, although the magnitude of the increase is somewhat attenuated by the reduction in first births (deep poverty would double). The increase in deep poverty among single-mother families remains unaltered with respect to the one found above under the assumption that first births are unresponsive to policy.

TANF work requirements. TANF requires aid recipients to engage in work activities. However, states have ample discretion to set their own policies in terms of who must comply, what is considered a work activity, and which sanction to apply to those failing to meet this requirement. Activities that count towards the work requirement range, subject to some limits, from education and job search to employment. In the benchmark policy used in our simulations above we abstracted from TANF work requirements. However, since these requirements create incentives to work under the benchmark policy,

and since TANF would be removed under the FSA, our results above can be interpreted as conservative lower-bound estimates of the effects of implementing Senator Romney’s proposal. To see this more clearly, we have simulated the model introducing work requirements in the benchmark policy (assuming that TANF applicants must work to qualify for aid). We find that the drop in the single mothers’ employment rate is twice that found under no work requirements. Furthermore, even married couples would reduce, on average, labor market participation under the FSA. Specifically, employment rates would decline by 7 percent among married females, and by 1.35 percent among married males. This would imply an increase in the child poverty rate (recall that we found a reduction in child poverty when abstracting from work requirements). The increase in child deep poverty would be larger than the one found when abstracting from TANF work requirements.

It is worth mentioning that our framework abstracts from home production. In our model, time away from the labor market is spent on leisure and taking care of the children (i.e., producing child care services), but there is no production of home goods. To the extent that the time productivity of males and females in the home-production sector may differ significantly, a proper modeling of this sector is likely to have implications for the time allocation of two-adult households with children. Also, under heterogeneity in home-production productivity, the household formation and the marital status decisions would be more complex, as they would not only depend on market productivities and asset holdings. This is an interesting extension which is not addressed here. It must be noted however that the effects of the FSA on market employment would not be altered under this extension—albeit the distribution of changes in labor supply among two-adult couples would depend on the distribution of home productivities. Importantly, since we are computing poverty rates using the official guidelines, which abstract from goods produced at home, our main conclusions concerning poverty should also remain unaltered.

A final extension of our work would be to calibrate the model separately for white, black, and other minorities. This would allow for an assessment of the effects of the FSA based on race. Since there are important differences across racial groups (for instance in the frequency of marriage and cohabitation) it should be expected that the FSA would have different effects across groups.

6 Concluding Remarks

In this study we have assessed Senator Romney’s Family Security Act, a proposal to reform the tax/transfer system to promote marriage and reduce child poverty. Compared to the tax/transfer system of 2019 (the benchmark), we find that this proposal would indeed increase marriage and reduce cohabitation (the population of non-college educated workers with children living as cohabitants would fall by 45 percent). However, despite a reduction in the child poverty rate, Senator Romney’s plan would increase poverty

among single-mother families and child deep poverty.

References

- Baughman, Reagan and Stacy Dickert-Conlin (2003). Did Expanding the EITC Promote Motherhood? *American Economic Review Papers and Proceedings*, vol. 93, no. 2, pp. 247–251.
- Bitler, Marianne P., Jonah B. Gelbach, Hilary W. Hoynes and Madeline Zavodny (2004). The Impact of Welfare Reform on Marriage and Divorce. *Demography*, vol. 41, no. 2, pp. 213–236.
- Eissa, Nada and Hilary W. Hoynes (2004). Taxes and the Labor Market Participation of Married Couples: The Earned Income Tax Credit. *Journal of Public Economics*, vol. 88, no. 9–10, pp. 1931–1958.
- Eissa, Nada and Jeffrey B. Liebman (1996). Labor Supply Responses to the Earned Income Tax Credit. *Quarterly Journal of Economics*, vol. 111, no. 2, pp. 605–637.
- Fitzgerald, John M. and David C. Ribar (2004). Welfare Reform and Female Headship. *Demography*, vol. 41, no. 2, pp. 189–212.
- Low, Hamish, Costas Meghir, Luigi Pistaferri and Alessandra Voena (2018). Marriage, Labor Supply and the Dynamics of the Social Safety Net. NBR Working Paper 24356.
- Meyer, Bruce D. and Dan T. Rosenbaum (2001). Welfare, the Earned Income Tax Credit, and the Labor Supply of Single Mothers. *Quarterly Journal of Economics*, vol. 116, no. 3, pp. 1063–1114.
- Moffitt, Robert A. (1998). The Effect of Welfare on Marriage and Fertility: What do we Know and What we Need to Know? In Robert Moffitt, ed., *The Family and Reproductive Behavior: Research Perspectives*. Washington, DC: National Academy Press, pp. 50–96.
- Moffitt, Robert A. (2015). The Deserving Poor, the Family, and the U.S. Welfare System. *Demography*, vol. 52, no. 3, pp. 729–749.
- Moffitt, Robert A., Brian J. Phelan and Anne E. Winkler (2020). Welfare Rules, Incentives, and Family Structure. *Journal of Human Resources*, vol. 55, no. 1, pp. 1–42.
- Ortigueira, Salvador and Nawid Siassi (2021). The U.S Tax-transfer System and Low-income Households: Savings, Labor Supply and Household Formation. *Review of Economic Dynamics*, in press, <https://doi.org/10.1016/j.red.2021.02.010>.
- von Wachter, Till (2020). Lost Generations: Long-Term Effects of the COVID-19 Crisis on Job Losers and Labour Market Entrants, and Options for Policy. *Fiscal Studies*, vol. 41, no. 3, pp. 549–590.