Appendices to
"Means-Tested Transfers, Asset Limits, and Universal Basic Income"
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Appendix 1: SIPP 2018 Data and Sample Selection

The Survey of Income and Program Participation (SIPP) is a household-based nationally representative longitudinal survey conducted by the United States Census Bureau with the stated goal of providing comprehensive information on the dynamics of income, employment, household composition, and government-program participation. We chose the SIPP for its over-sampling of lower-income households and its extensive coverage of different aspects of a household's finances, in particular, assets, investments, and program transfer values.[1]

While the SIPP has data spanning from 1984 to 2020, we draw data only from the 2018 panel because of a combination of data reliability and relevance concerns. As a result of surveying difficulties associated with the COVID-19 pandemic, the 2020 panel (relating to reference year January–December 2019) was not included in this analysis. While the issue was not caused by the pandemic, the 2019 panel (covering reference year January–December 2018) faced data-collection challenges that similarly prompted us to exclude it from our sample. The 2018 panel (covering January–December 2017) is thus the most recent SIPP dataset not affected by any data-collection challenges and so is included in this analysis.

Variables related to financial assets are taken directly from the SIPP because these data are already annualized and at the household level, matching our sample level. Measurements of household income, earnings, and government-program benefits had to be annualized. This was done by summing the value for each variable and for each month, and thus the total household transfers received is the sum of monthly transfers from January through December. Since we use a single wave of the panel, households are uniquely identified by the sample unit identifier, SSUID. We have considered households with and without relatives using either category 1 or 2 of the ERELRPE variable. Additionally, we use the CPI to adjust all relevant dollar-denominated monthly data to January 2018 dollars. Since the SIPP records all dollar-denominated annual data as of December 31st, we make no adjustments to these values.

More specifically, our measurement of annual household total income is derived from the SIPP-provided THTOTINC variable. Our measurement of wealth is the THNETWORTH variable. Our measure of household labor earnings is the aggregated level of personal earnings into the household level from TPEARN. Resources are measured by calculating the sum of the asset variables commonly tested by government transfer programs: THVAL_BANK, THVAL_BOND, THVAL_OTH, THVAL_RE, THVAL_RENT, THVAL_RET, and THVAL_STMF. The remaining asset categories come from variables THVAL_BUS, THVAL_ESAV, and THVAL_VEH. Additionally, our calculation of the asset poverty line follows the methodology established in Shapiro et al. (2020). We determine the average number of adults per household by taking the mean of (RHNUMPER – RHNUMU18); this value is 1.84. We then calculated the average number of persons under the age of 18 per household by taking

[1] For an in-depth discussion of underreporting of transfers in household surveys, see Meyer et al. (2015).

the mean of RHNUMU18; this value is 0.55. Rounding both values to the nearest whole number, we arrived at our choice of using a family unit comprising two adults and one child for selecting the most relevant 2017 federal poverty line from the available US Census Bureau table. We chose to use the US Census Bureau table over the average RFPOVT variable to simplify our analysis. Program transfer values were taken from variables TSNAP_AMT, TSSI_AMT, and TTANF_AMT, and our imputed EITC amount which is explained in detail in Appendix 3.

Appendix 2: Summary Statistics

Table A1: Summary Statistics for the Full Sample by Benefit Receipt

Variable	Min	Max	Mean	0.25	0.5	0.75
Nonrecipients - N = 20,047						
Earnings	-	1,098,022	74,940	7,175	52,838	104,444
Income	(13,850)	1,124,216	90,616	35,871	67,040	114,616
Net worth	(4,395,500)	2,194,876	302,168	13,764	125,140	414,780
Resources	-	4,843,000	203,664	5,000	46,200	235,126
Bank	-	1,518,200	33,296	1,100	6,000	26,000
Bonds	-	860,000	2,597	-	-	-
Real estate	-	3,810,000	13,860	-	-	-
Rentals	-	4,030,000	18,668	-	-	-
Retirement	-	1,832,000	99,032	-	9,117	95,300
Investments	-	1,980,000	22,729	-	-	-
Vehicles	-	291,930	15,929	3,130	10,950	22,800
Recipients - N = 4,278						
Earnings	-	1,037,123	25,527	-	13,673	34,021
Income	(6,585)	1,050,472	35,542	11,397	24,018	42,362
Net worth	(962,160)	2,129,600	42,684	(800)	1,687	30,300
Resources	-	1,953,402	24,097	-	300	4,350
SNAP	-	13,179	1,990	185	1,550	2,768
TANF	-	9,637	148	-	-	-
EITC	-	6,269	728	-	-	269
SSI	-	27,799	1,801	-	-	606
Bank	-	1,013,200	4,455	-	150	1,050
Bonds	-	547,000	307	-	-	-
Real estate	-	750,000	2,096	-	-	-
Rentals	-	1,750,000	3,828	-	-	-
Retirement	-	1,403,000	8,628	-	-	-
Investments	-	566,800	1,720	-	-	-
Vehicles	-	101,180	5,847	-	2,040	7,590

Source: Authors' calculations based on the Survey of Income and Program Participation (SIPP), 2018.
Notes: The numbers 0.25, 0.5, and 0.75 denote the first-, second-, and third-quartile cutoffs, respectively, and each is weighted. All data are calibrated in the same way as previously in the text, with the top 0.1 percent of household income respondents trimmed from the sample in addition to the top 5 percent of net worth respondents.

Table A2: Summary Statistics for the Benefit Recipients by Income Quintiles

Variable	Min	Max	Mean	0.25	0.5	0.75
First income quintile - N = 2,157						
Earnings	-	63,232	4,567	-	-	8,037
Income	(6,585)	23,667	11,441	7,229	11,342	16,630
Net worth	(509,285)	1,500,520	13,528	(267)	220	5,970
Resources	-	625,050	5,213	-	20	450
Transfers	2	26,575	4,933	1,477	3,293	7,858
Second income quintile - N = 1,208						
Earnings	-	92,702	24,771	16,134	26,907	34,355
Income	23,700	46,454	33,725	28,069	33,299	38,901
Net worth	(962,160)	1,998,400	33,932	(3,159)	3,330	33,002
Resources	-	1,878,400	15,268	50	705	5,380
Transfers	1	24,801	4,578	1,468	3,126	6,177
Third income quintile - N = 527						
Earnings	-	96,890	42,667	31,302	47,376	56,767
Income	46,504	76,007	58,469	51,446	56,378	65,263
Net worth	(523,708)	2,129,600	71,861	(3,370)	10,470	82,980
Resources	-	1,774,580	43,879	450	4,000	20,360
Transfers	19	39,938	4,281	1,112	2,471	5,436
Fourth income quintile - N = 256						
Earnings	-	125,565	73,527	57,106	77,741	95,271
Income	76,452	127,898	96,480	83,228	94,651	108,362
Net worth	(473,280)	1,707,590	142,322	3,200	45,835	169,817
Resources	-	1,687,500	104,598	2,200	17,002	94,550
Transfers	15	25,896	4,156	1,211	2,471	4,942
Fifth Income Quintile - N = 130						
Earnings	11,890	1,037,123	203,644	133,980	165,358	240,690
Income	128,318	1,050,472	225,501	146,166	175,937	262,917
Net worth	(503,135)	1,964,785	277,527	26,000	159,250	352,780
Resources	-	1,953,402	171,198	8,550	55,980	192,750
Transfers	46	27,440	3,787	1,680	2,632	4,838

Source: Authors' calculations based on the Survey of Income and Program Participation (SIPP), 2018.
Notes: The numbers 0.25, 0.5, and 0.75 denote the first-, second-, and third-quartile cutoffs, respectively, and each is weighted. All data are calibrated in the same way as previously in the text, with the top 0.1 percent of household income respondents trimmed from the sample in addition to the top 5 percent of net worth respondents.

Appendix 3: Constructing the EITC Values from the SIPP

The SIPP provides data on whether a household applied for the credit given by variable EEITC and we are able combine this info with the available data to estimate reasonable EITC values for each household. Due to the fact that survey respondents received the credit in calendar year 2017 based upon 2016 characteristics, we use 2016 parameters when imputing EITC benefit value.[2]

Following the formula specified by the IRS for the 2016 tax year, our EITC value is calculated based upon the following characteristics: (i) the filing status of the applicant (married filing jointly or another status), given by the variable EFSTATUS; (ii) the number of dependent children within the home, given by the variable RHNUMU18, which measures the number of persons in the household under 18 years of age; (iii) the annual sum of earnings and profits and losses from all jobs, given by our constructed measure stemming from TPEARN; and (iv) household income from investments (in 2016, this could not exceed $3,450), given by the variable THINC_AST.

EITC benefits are disbursed along a "trapezoidal" path. There is a "phase-in" range, wherein as a household's income increases, so, too, does its benefit. Then there is a plateau wherein an increase or decrease in income does not affect benefit receipt. Lastly, there is a "phase-out" phase, wherein an increase in income gradually reduces the benefit received.

The rate at which EITC disbursement increases in the phase-in period is determined by the number of dependent children within the household. Following the Internal Revenue Service formula, a household with no children will phase-in at a rate of 7.65 percent. For a household with one child, the rate of increase is 34 percent. For a household with two children, the rate of increase is 40 percent. For a household with three or more children, the rate of increase is 45 percent. These phase-in rates are the same for all households regardless of filing status. The phase-in period ends once a household's adjusted gross income (AGI) meets or exceeds a certain value. Like all points along the phase-in period, this threshold depends on the number of children in the household but is consistent across filing statuses. For households with zero, one, or two or more children, initial thresholds are $6,610, $9,920, and $13,930, respectively.

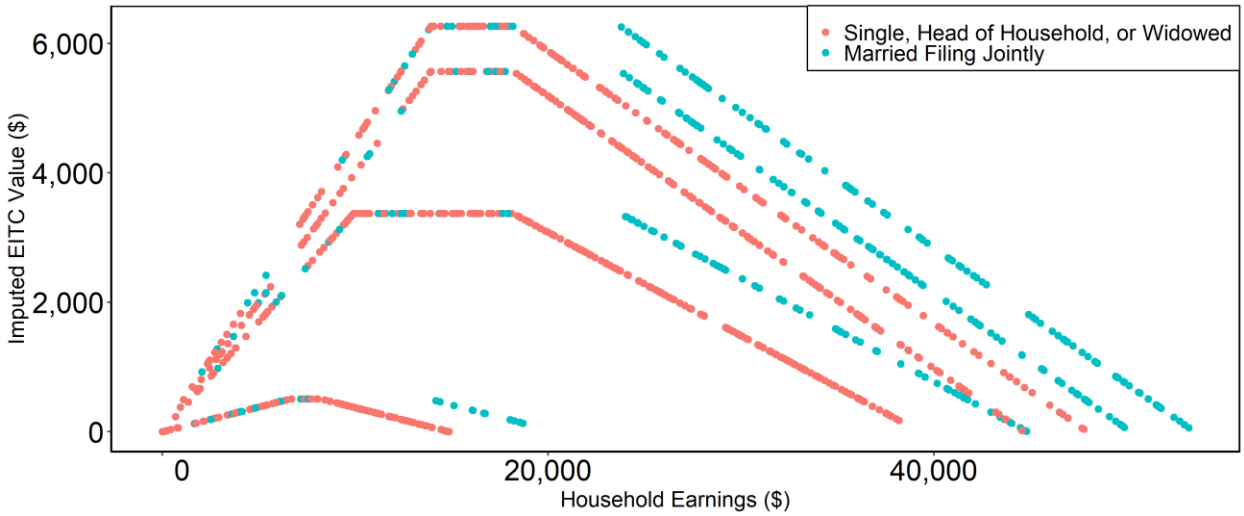
The period of consistent benefit disbursement is dependent on the number of children in the household and the filing status of the household. If a household includes no children, any additional dollar earned beyond $8,270 (or $13,820 if married filing jointly) will result in a decrease in benefit received. If a household includes any children, any additional dollar earned beyond $18,190 (or $23,740 if married filing jointly) will result in a decrease in benefit received. The rate at which benefits decrease as income increases is dependent only upon the number of children. For households with no children, the rate is 7.65 percent. For households with one child, the rate is 15.98 percent. For households with two or more children, the rate of decrease is 21.06 percent.

The final aspect of EITC disbursement calculation is the point at which additional income disqualifies a household from receiving any benefits. This depends on both the number of children and the filing status of the household. For married households filing jointly with zero,

[2] See Tax Policy Center, EITC parameters 1975-2021. https://www.taxpolicycenter.org/statistics/eitc-parameters

one, two, or three or more children, the maximum income is $20,430, $44,846, $50,198, and $53,505, respectively. The threshold is $5,550 lower for households not filing jointly. Thus, they are no longer eligible for benefits once their income exceeds $14,880 (for childless households), $39,296 (one child), $44,648 (two children), or $47,955 (three or more children). Figure A1 below shows the resulting EITC benefit schedule of our imputation.

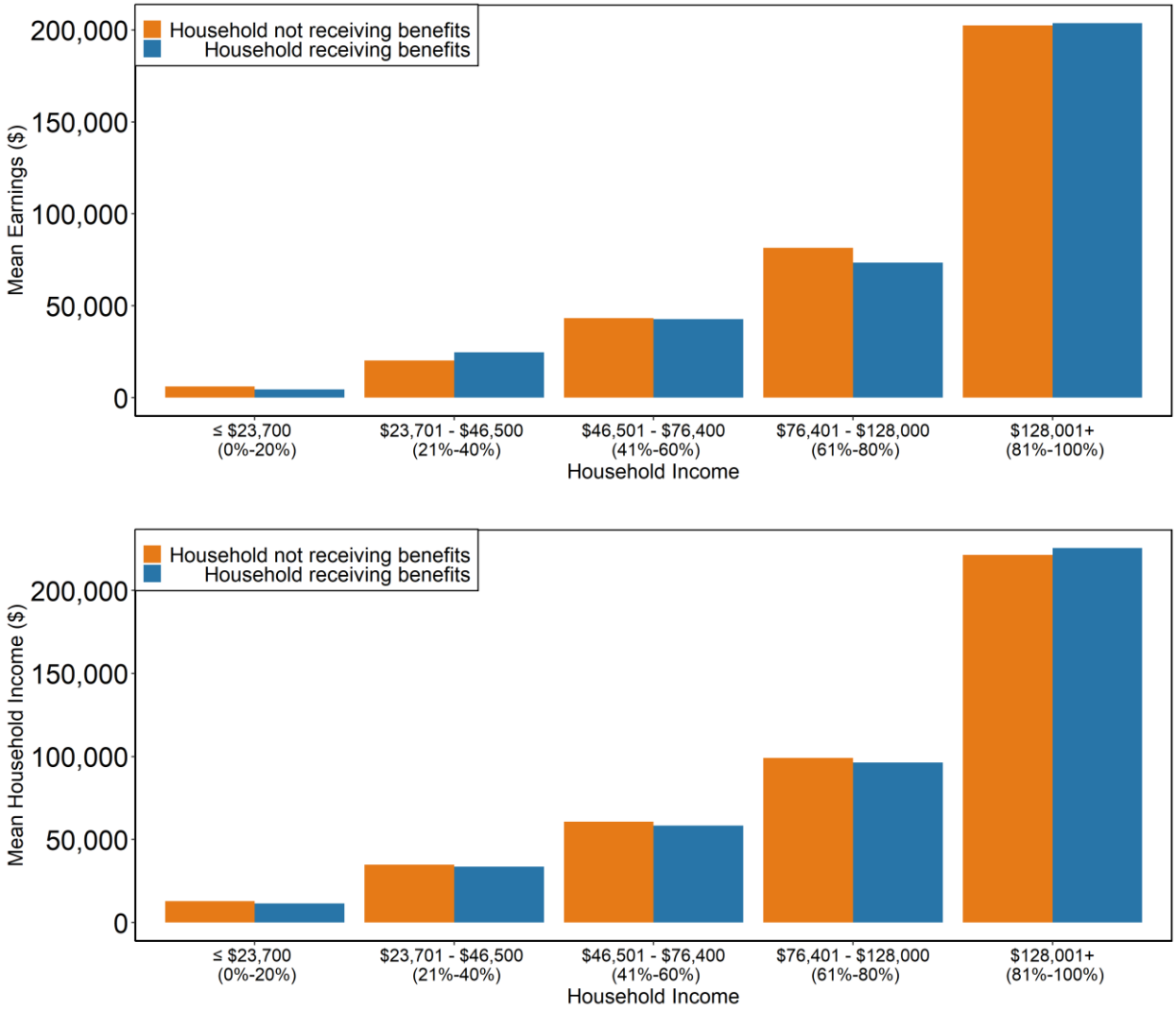
Figure A1: Imputed EITC Benefit Schedule



Source: Authors' calculations based on the Survey of Income and Program Participation (SIPP), 2018.
Notes: The figure shows the imputed EITC values for households in our sample. See text for details.

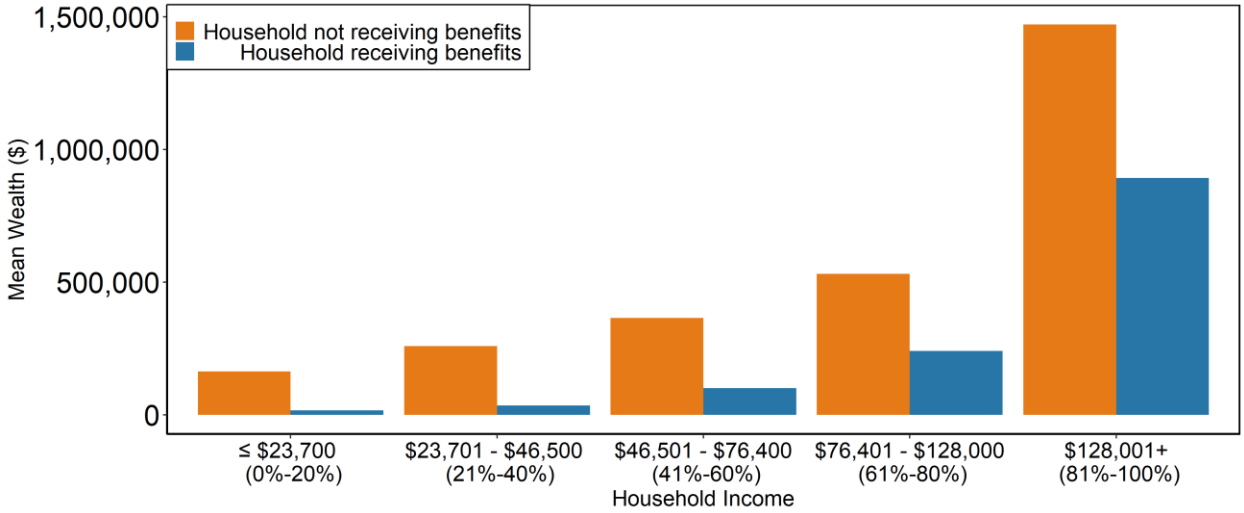
Appendix 4: Additional Figures

Figure A2: Earnings and Income Distributions by Benefit Receipt along the Quintiles of the Income Distribution



Source: Authors' calculations based on the Survey of Income and Program Participation (SIPP), 2018.
Notes: The figure shows the earnings and income distributions by benefit receipt along the quintiles of the income distribution. As an example, the second quintile has households with incomes that span $23,701 to $46,500 and are located between the bottom 20 percent and the bottom 40 percent of the income distribution. The total household income distribution excludes the households at the top 0.1 percent. The wealth distribution is shown with the exclusion of the top 5 percent. Recipients are defined as receiving any transfers from the programs studied. The income quintile ordering is weighted at the household level with the exclusion of the top 0.1 percent. See previous appendices for details. X-axis labels are rounded to nearest hundred dollars.

Figure A3: Wealth Distribution by Benefit Receipt without Exclusion of Top 5 Percent along the Quintiles of the Income Distribution



Source: Authors' calculations based on the Survey of Income and Program Participation (SIPP), 2018.
Notes: The figure shows the wealth distribution by benefit receipt along the quintiles of the income distribution. As an example, the second quintile has households with incomes that span $23,701 to $46,500 and are located between the bottom 20 percent and the bottom 40 percent of the income distribution. The total household income distribution excludes the households at the top 0.1 percent. Recipients are defined as receiving any transfers from the programs studied. The income quintile ordering is weighted at the household level with the exclusion of the top 0.1 percent. See previous appendices for details. X-axis labels are rounded to nearest hundred dollars.

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