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The Relative Cost of a Universal Basic Income and a Negative Income Tax

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Abstract – The cost of a negative income tax (NIT) designed to mimic the redistributive effects of a universal basic income (UBI) and set at a level sufficient to eliminate official poverty in the US is estimated using income distribution data for 2002. It is estimated that an NIT satisfying these conditions would have required an $826 billion increase in government spending in 2002, compared to a $1.69 trillion increase for an equivalent UBI. Despite this cost difference, the income and substitution effects of a UBI and an equivalent NIT are shown to be the same; and these effects are analyzed. Finally, the cost of providing a basic income guarantee (BIG) by either of these means is compared to the cost of securing the right to work and income security recognized in the Universal Declaration of Human Rights using a program of direct job creation and conventional income transfers.

Keywords – basic income, negative income tax, Universal Declaration of Human Rights

1. Introduction

In two recent papers (Harvey, 2003; 2006b) I compared the cost of eliminating official poverty in the US with a universal basic income (UBI) or, alternatively, a program of direct job creation and targeted income transfers designed to secure the right to work and income support recognized in the Universal Declaration of

Human Rights (the "job guarantee" strategy) (United Nations, 1948). In this paper I extend this comparison to include a negative income tax (NIT).

An NIT is a system of refundable tax credits that guarantees eligible tax filers a certain minimum income. Tax filers with no income from other sources receive the full NIT benefit in cash, thereby providing them a basic income guarantee (BIG). Persons with taxable income receive a cash benefit only to the extent their NIT credit exceeds their tax liabilities. Thus, as a person's income rises, the size of the cash NIT benefit they receive declines. At the breakeven-income level a person's tax liabilities exactly equal their NIT credit, so they neither pay taxes nor receive cash NIT benefits. Persons with incomes above the breakeven level pay taxes, because their NIT credit is less than the taxes they owe. It is widely recognized that a BIG can be provided by means of either a UBI or an NIT, and that each of these two mechanisms are capable of achieving exactly the same net transfer of income (Van Parijs, 2004, p. 14). In this paper I refer to the net transfer of income achieved by either a UBI or an NIT, after all benefits are paid and all taxes devoted to the program's support are collected, as the program's redistributive effect.

In my earlier papers I concluded that a UBI capable of ending official poverty in the US in 1999 or 2002 would have cost in excess of $1.5 trillion more than a program of direct job creation and conventional income transfers designed to achieve the same goal. I further argued that most of the other benefits attributable to a UBI could be more fully secured at lower cost using the job guarantee strategy.

In this paper I discuss the relationship between a UBI and an NIT and estimate the cost of an NIT designed to achieve the same redistributive effect as the UBI described in my earlier papers. I draw the following conclusions from this analysis. First, the redistributive effect of a UBI or what some people refer to as its "net cost" (Samson et al., 2002, p. 2; BIG Financing Reference Group, 2004, pp. 37–53) can be determined by estimating the cost of an equivalent NIT, that is, one designed to achieve the same redistributive effect. Second, after taking into account the reductions in conventional transfer payments a BIG would permit, the increase in government expenditures required to fund the NIT modeled in this paper would have been approximately $826 billion in 2002, compared to the $1.69 trillion increase required to fund an equivalent UBI. The redistributive effect of both programs would have been the same – $826 billion after taking into account reductions in other transfer payments. Third, despite its lower budgeted cost, an NIT designed to mimic the redistributive effect of a UBI would impose the same marginal tax rates on earned income as the UBI it mimicked. Fourth,

although an NIT configured in this way would be far less costly than a UBI, it still would require a much larger increase in government spending than the job guarantee strategy – about $775 billion more in 2002. Given this cost difference, the challenge UBI advocates face, in my view, is not simply one of showing that the benefits of a BIG would exceed its cost, but of identifying the additional benefits – over and above those achievable by means of the job guarantee strategy – that would justify its much greater cost.

2. Defining Cost

Under most UBI funding proposals, people would pay taxes to fund the program at the same time they were receiving benefit checks from it. That being the case, some UBI advocates have suggested that, for purposes of comparing different antipoverty strategies, the relevant measure of the cost of a UBI is its net redistributive effect rather than the budget allocations required to fund the program. According to this view, individual UBI payments should be viewed as the equivalent of tax refunds – or as refundable tax credits in the case of persons whose benefit payments would exceed the taxes they would pay to fund the program.

Consistent with this view, Van Parijs has suggested that a UBI and an equivalent NIT would cost the same except for differences in administrative expenses (Van Parijs, 2004, p. 15). Similarly, UBI advocates in South Africa have argued that the net cost of a UBI would equal the amount of income it would redistribute to the poor and near poor *after* the benefit payments received by the nonpoor have been recovered by the government (i.e., "clawed back") through the tax system (Samson et al., 2002, p. 2; BIG Financing Reference Group, 2004, pp. 37–53).

I am skeptical of suggestions that the net redistributive effect of a UBI (i.e., the net transfer of income it would achieve) is the appropriate measure of the cost of such a program for purposes of policy assessment. We shall see that the level of taxation required to fund a UBI in the US is approximately double the level required to fund an equivalent NIT. It strikes me as tendentious to assume that this difference should not concern policy makers simply because the increased taxes required to fund a UBI (compared to an NIT) would be returned to taxpayers in the form of UBI-benefit payments.

All government benefits can be regarded as providing cash or in-kind tax refunds. Some taxpayers receive benefits that are worth more than the taxes they pay. Others receive benefits that are worth less than the taxes they pay. A UBI

would be no different. Even the fact that a UBI would be paid in cash does not distinguish it from other benefit programs. Many recipients of both means tested and contributory cash transfers pay taxes that help support the programs from which they receive benefits, yet I know of no one who maintains that the relative cost of those programs should be measured by their redistributive effect rather than the budget allocations required to fund them. The only way in which a UBI would differ from these programs is in the scale of the offsetting benefit and tax payment streams associated with it.

I readily grant the importance of noting that a UBI and an NIT can achieve the same redistributive effect. Indeed, the purpose of this paper is to emphasize that point. But it simply doesn't follow from this observation that a UBI and an equivalent NIT would impose the same costs, in any meaningful sense, on governments. UBI advocates who advance this claim need to explain why people would view the UBI payments they would receive from government and the taxes they would pay to fund the program any differently than they do the benefits they receive and the taxes they pay to support other transfer programs or, for that matter, other noncash benefits. In other words, they need to substantiate their assumption that people would view UBI payments as the equivalent of tax refunds and, accordingly, that policy makers should ignore both the higher budgetary cost of a UBI compared to an equivalent NIT and the correspondingly higher level of taxation required to fund the UBI alternative.

3. Modeling an NIT

Ignoring the possible effects that providing an unconditional income guarantee might have on the level of national income or the rate of economic growth in a society, the cost of an NIT depends on the following three variables that may be defined the same for all population groups or differently for different population groups: 1. the population unit whose income is measured for purposes of determining the size of the benefit (e.g., individuals, individual adults and their dependent children, households); 2. the maximum NIT benefit this population unit can receive (i.e., the size of the BIG provided by the NIT mechanism); and 3. the take-back rate at which the NIT benefit received by this population unit is reduced as other income is received.

As indicated above, population groups can be made subject to differing eligibility criteria, the maximum NIT benefit provided to eligible population units can vary in size, and the take-back rate can vary for population units, based on their ages or income levels, for example. Adapting Neuberg's notation

(Neuberg, 2003, Appendix One), an NIT can be modeled using the following terms:

U = The total number of population units subject to the NIT

G = The maximum NIT benefit

Y = The taxable income received by a population unit within U

t = The NIT or take-back rate

P = The NIT payment, if any, received by a population unit within U

Using these terms, the following relationships can be defined:

G/t = The breakeven-level of Y (the level at which P reaches zero) (1)

$P = G - tY$ for $Y < (G/t)$ (2)

$P = 0$ for $Y > (G/t)$ (3)

The cost (C) of an NIT (also its redistributive effect) can be expressed as the sum of the NIT payments (P) received by all population units comprising U, as follows.

$$C = \sum P_i \text{ for } i = 1 \text{ to } U \quad (4)$$

where

C = The aggregate cost of the NIT program

P_i = The NIT payment (P) received by the ith population unit within U.

Alternatively, the program's cost can be expressed as the sum of the tax payments made by individuals with incomes greater than the breakeven level, as follows:

$$C = tY_X - GX \quad (5)$$

where

X = The number of population units in U for which $Y > G/t$

Y_X = The aggregate taxable income received by the population units comprising X

In other words, if X equals the number of population units with incomes above the breakeven level, and Y_X equals the aggregate taxable income received by those population units, the aggregate cost of an NIT (C) can be estimated by multiplying Y_X by the NIT rate (t) and subtracting from that figure the aggregate

value of the NIT credit (GX) that those population units would be permitted to deduct from that tax liability.

Thus, the cost of an NIT can be estimated in either of two ways: by estimating the total payments the system is likely to make to population units with taxable incomes below the breakeven level (equation 4); or by estimating the total tax payments the system is likely to receive from population units with taxable incomes above the breakeven level (equation 5).

For an NIT to have the same redistributive effect as a UBI, all that is required is that the maximum NIT benefit (G) equals the UBI benefit, and that the tax rate and tax base used to fund the NIT and the UBI be the same. For a UBI funded with a flat tax, this tax rate will equal the aggregate cost of the UBI (the sum of all UBI benefit payments) divided by aggregate taxable income (Y).

For example, if a society with $160 billion in taxable income wanted to fund a UBI that would provide UBI benefit payments totaling $40 billion, the flat-tax rate required to fund the system would equal 25 percent ($40/160), but the same redistributive effect could be achieved with an NIT that provided the same maximum benefit in the form of a refundable tax credit made subject to a 25 percent take-back rate.

4. Clark's Proposed UBI

Clark has suggested two designs for a UBI in the US. The first would provide two levels of benefit. All persons 18 years of age and older would receive a UBI equal to the official poverty threshold for a single person living alone. All persons under the age of 18 would receive a uniform UBI set below the individual poverty threshold but high enough to guarantee that their family income – when combined with the UBI benefits received by their adult caretakers – will at least equal the poverty threshold for a family of requisite size (Clark, 2003, p. 150).[1] Clark estimates that such a program would have cost $1.98 trillion in 1999 and would have approximately doubled federal government spending – from $1.70 trillion to $3.44 trillion (Clark, 2003, p. 150).[2]

Clark's other proposed design for a UBI would be identical to the first except that "seniors" (persons 65 years of age and older) would receive a means-tested "top-up" benefit instead of a UBI. (Clark, 2005, p. 16). Clark does not explain

[1] The poverty thresholds used by Clark are those published annually for households of different size by the US Census Bureau.

[2] The reason government spending would not have increased by an amount equal to the full cost of the program is that Clark assumed the UBI would have been accompanied by a reduction in spending on other income security programs totaling about $238 billion.

how his proposed top-up benefit would be calculated, but he seems to envision a program that would pay seniors a cash benefit equal to the difference between their income from all other sources, including Social Security benefits, and the official poverty threshold.

If this is what Clark had in mind, his overall proposal can be described as a mixed system. It would combine a UBI for persons under the age of 65 with an NIT for seniors. Persons under the age of 65 would receive a UBI while seniors would receive an NIT that would provide approximately the same maximum benefit but which would be subject to a 100 percent take-back rate.

Note that the UBI and NIT components of this proposed system are not equivalent in the sense in which I have been using the term in this paper, since they would tax other sources of income at very different rates. Whereas the take-back rate applied to the NIT benefit offered to seniors would be set at 100 percent, the tax rate used to fund the overall system, including its UBI component, would be only about 26 percent in Clark's example.

Clark estimates that such a program would have cost $1.97 trillion in 2002 and would have increased federal government spending from $2.01 trillion to $3.72 trillion (Clark, 2005, p. 16). If seniors were offered the same UBI benefit proposed in Clark's earlier paper (Clark, 2003, p. 150), it would have resulted in an estimated program cost of $2.23 trillion in 2002 instead of $1.97 trillion, and total federal government spending would have increased to $3.98 trillion instead of $3.72 trillion (Harvey, 2006b, p. 24n72).

If I have accurately surmised Clark's intent, the top-up benefit he has proposed for seniors is the least expensive type of antipoverty guarantee a government can provide. The proposal limits transfer payments to the absolute minimum necessary to raise the income of the target population to the poverty threshold. This program design is susceptible to criticism, however, if one does not want to discourage wage employment on the part of program participants – because a program that taxes earned income at such a high rate (100 percent in the case of Clark's proposed top-up payment) creates strong work disincentives.

Clark believes this is acceptable for seniors because "most of the elderly are not in the labor force (and those who are in the labor force are there for economic reasons and would like to leave, or are there because they enjoy what they are doing)" (Clark, 2005, p. 16n7). The problem with this argument is that it applies with equal or greater force to many other groups – indeed arguably to all workers. An average of 4.5 million seniors were active labor-market participants in the US at any one time during 2002, meaning that a larger number were employed or sought employment at some point during the year. Presumably,

these seniors sought wage employment for the same combination of reasons other people do, and while some would have ceased working if they had been guaranteed a poverty level income, many others would have wanted to continue working in order to maintain a standard of living above the poverty threshold. Why should we be any less concerned about discouraging them from engaging in wage employment than we would be if they were under age 65?

Clark's proposal would produce other anomalous (and likely unintended) results. By using age to determine whether Social Security recipients would receive a UBI in addition to their Social Security benefits, Clark's proposal would treat seniors less favorably than millions of other Social Security recipients (who would receive a UBI benefit in addition to their Social Security benefit), and it would cause a precipitous drop in the income received by many such persons when they reached age 65.

Approximately 5.5 million disabled workers under age 65 received Social Security disability benefits in 2002, as did 745 thousand disabled children and 3.4 million children of deceased or disabled workers. Another 2.5 million persons, ages 62–64, received Social Security benefits that year because they elected to begin collecting an actuarially reduced benefit before reaching age 65. Under Clark's proposal, all of these persons would receive a UBI in addition to their Social Security benefits,[3] despite the fact that most of them are far less likely to seek wage employment than are seniors. Why should they, but not seniors, receive a UBI in addition to their Social Security benefits? And why should Social Security recipients who reach the age of 65 lose their UBI benefit, possibly cutting their income by as much as 50 percent?[4]

Clark's proposal also would result in seniors subsidizing the UBI benefits received by younger persons. Under Clark's proposal seniors would have

[3] Ironically, while leaving Social Security benefits intact for persons under the age of 65, Clark proposes the elimination of equivalent benefits for veterans. His funding proposal assumes that all pension, disability, life insurance and readjustment benefits currently paid to veterans and their families would be eliminated. The bulk of these benefits consist of disability pensions for veterans with service-connected disabilities, and pension benefits for the survivors of military personnel who die of service-connected causes. It is difficult to envision any rationale for eliminating these benefits when comparable Social Security benefits would be left intact. Clark's treatment of other social insurance benefits – such as unemployment insurance – evidences similar inconsistencies, but the question of which social welfare benefits should be deemed replaceable by a UBI (or an equivalent NIT) is beyond the scope of this paper. For a more extended discussion of this issue, see (Harvey, 2006b, pp. 36-41).

[4] Anyone whose income from sources other than their UBI equaled the poverty threshold would suffer a 50 percent reduction in their income under Clark's proposal. Persons whose income from other sources was less than the poverty threshold would have at least part of their UBI replaced with a top-up payment, while persons whose income from other sources exceeded their UBI would suffer a loss of income equal to their lost grant, but that loss would constitute less than 50 percent of their total income.

contributed about $104 billion in flat-tax payments to support his proposed UBI in 2002, but they would have received only about $34 billion in top-up payments from the program. Any senior who received either wages or taxable pension income would almost certainly suffer a reduction in their disposable income under Clark's proposal unless they were poor enough to receive a top-up payment compensating them for the additional taxes they would pay.

I do not believe Clark intended any of these anomalous results, but because of them I have elected to base my estimate of the cost of an NIT on Clark's earlier assumption that seniors would receive the same UBI benefit as everyone else.

The specifications for an NIT designed to mimic the effects of Clark's original proposal for the design of a UBI – one that treated seniors the same as everyone else – are set forth in Table 1 using 2002 data. An NIT with these specifications would have exactly the same redistributive effect as Clark's proposed UBI. It also would impose exactly the same marginal rate of taxation on other income since, as explained above, the model's take-back rate (t) has been set at the same level that all income would be taxed under Clark's proposed UBI.[5]

Two features of this tax rate (25.6 percent) warrant special emphasis. First, it does not include the taxes required to fund any other government functions. Clark estimates that an overall flat-tax rate of 35.2 percent would have been required to fund these functions along with his proposed UBI in 2002. Moreover, this 35.2 percent figure does not include Social Security taxes and state and local taxes, all of which would be left in place under Clark's proposal (Clark, 2005, p. 17). Wage earners accordingly would have been subject to a total tax bite of 45.2 percent on their wage income (beginning with their first dollar earned) up to the maximum level of wage income subject to full Social Security taxation ($84,900 in 2002).

The second feature worth noting about the 25.6 percent flat-tax rate assumed in my model, is that it assumes everyone would fully report their income to the tax authorities. We know this is not the case under existing tax systems, and with the increased rates of taxation required to fund either a UBI or an equivalent NIT, the incentives for tax evasion would grow substantially. The US Internal Revenue Service (IRS) estimates that taxpayers underreport their actual income

[5] To calculate this rate, I first had to recalculate what Clark's proposed UBI would have cost in 2002 using the same population (U), benefit (G) and tax base (Y) figures used in my NIT specifications. The estimated cost of Clark's system based on these figures would have been $1960.3 billion in 2002. Dividing this figure into the system's assumed tax base of $7,562.9 produced the 25.6 percent value of "t" included in my NIT specifications.

Table 1. 2002 Design specifications for an NIT with the same redistributive effect as Clark's proposed UBI

U	=	285,933,410 (Total US population in 2002)[6]
G	=	$ 3,500 (Persons under 18 years of age)
		$ 9,359 (Persons aged 18 to 64)
		$ 8,628 (Persons aged 65 and above)
		$ 9,183 (Weighted avg. NIT benefit for persons ≥ 18)[7]
Y	=	$ 7652.9 billion (Clark's proposed tax base)[8]
t	=	25.6 % (The NIT or take-back rate)[9]
G/t	=	$ 13,672 (Breakeven income for persons under 18 years of age)
		$ 36,559 (Breakeven income for persons aged 18–64)
		$ 33,703 (Breakeven income for persons aged 65 and older)

by over 15 percent (Internal Revenue Service, 2005). If Clark had assumed this level of underreporting in his cost estimate, the flat-tax rate required to fund his proposed UBI system (or an equivalent NIT) would have been 30.1 percent in 2002 instead of 25.6 percent, and the overall tax bite on wage earners would have been 52.3 percent instead of 45.6 percent on earnings up to the $84,900 maximum subject to full Social Security taxation. If the underreporting of income had increased to 20 percent (and it would be reasonable to assume at least some increase in tax evasion under Clark's proposed funding system) the flat-tax rate required to fund either scheme would have been 32.0 percent in 2002, and the overall tax bite on wage earners would have been 55.1 percent on earnings up to $84,900.

[6] This number is about 2 million smaller than the 287,984,799 population figure Clark used in estimating the cost of his proposed universal program in 2002. I use the smaller figure because the income distribution data on which my estimate is based uses it. I recalculate the cost of Clark's proposal using the same population figure before comparing its cost to the NIT whose cost I am estimating.

[7] This weighted figure equals the official poverty threshold for persons 18 and above before that threshold is recalculated for persons between the ages of 18 and 64 and for seniors. I use this weighted average NIT benefit in my estimation exercise to avoid having to calculate differing NIT benefits for working age adults and seniors. The use of this figure for that purpose should have no effect on the results of my estimation exercise.

[8] This figure equals total "personal income" minus "current transfer receipts of individuals from governments," as those terms are defined in the US Department of Commerce's national income accounting methodology (US Department of Commerce Bureau of Economic Analysis, 2006).

[9] This is the proportion of each dollar of an individual's income that would be taxed away to pay for the NIT. Up to the breakeven-income levels (G/t), this tax would be deducted from the individual's NIT credit, thereby reducing its size, but once an individual's income exceeded the breakeven level their tax liability would exceed their NIT credit and they would have to pay their tax liability in excess of their NIT credit.

Also note that the breakeven income levels specified in this model are based on only that portion of an individual's total tax liability that would be devoted to funding the NIT. This does not mean that anyone with an income below these breakeven levels would receive an NIT benefit. If the additional tax payments required to support other government functions are taken into consideration, a person between the ages of 18 and 64 would have to have earned less than $20,706 instead of $36,559 before they would have received an NIT benefit check from the government. If income underreporting totaled only 15 percent, and the tax rates required to support the specified NIT were adjusted accordingly, a full-time worker between the ages of 18 and 64 would have to have earned less than $17,895 before they received a positive NIT benefit. Even at the higher breakeven level of $20,706, fewer than one in four full-time workers would have received a positive NIT payment under this scheme in 2002.

5. Estimating the Cost of an NIT

To estimate the cost of an NIT with the design specifications listed above I used individual-income distribution data derived from the 2003 March Supplement (the "March Supplement") to the Current Population Survey (CPS) (US Bureau of the Census, 2003). The March Supplement reports data obtained in a supplemental survey conducted each March to collect annual income and other information from the same sample of households that the US Bureau of the Census surveys monthly, in cooperation with the US Bureau of Labor Statistics (BLS), to produce the government's official labor force participation and unemployment statistics. Among other things, the March Supplement includes self-reported annual-income figures for each person aged 15 and older in the sample households.[10]

The principal problem with this data for estimating an NIT equivalent to Clark's proposed UBI is that the total income reported by CPS participants is less than Clark's proposed tax base. A small portion of this discrepancy is attributable to the fact that the income of persons under age 15 is not recorded in the survey,[11] but the principal reason is that survey participants underreport

[10] The income reported by survey participants is for the preceding calendar year. That means the income reported for persons who are 15 years old at the time of the survey (in March) consists mainly of income received when they were 14 years old. The same lag is true for all other age groups as well.

[11] Lacking income data for persons under the age of 15, I have assumed that all such persons received zero income in 2002. While children obviously do receive some income, this assumption does not significantly affect my estimate of the cost of an NIT because the amount of income children receive is very low in the aggregate. For example, the average reported income for 15-year-olds in the survey (excluding government transfers) was

their nonwage income to CPS enumerators just as they do to the IRS. To correct for this tendency, I have adjusted the average income figures reported by CPS participants upwards to produce income figures for the entire US population equal to the $7.7 trillion tax base on which Clark based his estimate of the cost of a UBI in 2002 (the same period covered by the 2003 March Supplement).

I have used the resulting adjusted distribution of income to estimate the cost of an NIT with the design specifications listed in Table 1. This estimation exercise is detailed in three tables in this paper's Appendix. Table A1 in the Appendix shows the individual distribution of US income in 2002. Government transfers are not included in the income figures reported in this table,[12] even though the income cohorts shown in the first column of the table are based on all reported income, including government transfers. In addition to tabulating self-reported income figures from the 2003 March Supplement, Table A1 also includes a set of adjusted income figures designed to estimate the actual average income received by the members of each income cohort. The sum of these adjusted income figures equals our hypothetical tax base.

Table A2 in the Appendix breaks down the Table A1 data by age. Separate tabulations are provided for adults (persons 18 years of age and above) and children (persons under the age of 18). This separation is required because Clark's proposed UBI (and hence an equivalent NIT) would provide different benefits for members of these two age groups.

Table A3 uses the adjusted income figures from Table A2 to estimate the cost and redistributive effects of the NIT being modeled. Average NIT benefit or tax payments are calculated for persons in different income cohorts based on the adjusted average income figures tabulated in Table A2. Total NIT benefits received or taxes paid by members of each income cohort also are calculated, along with aggregate benefits received (which equals aggregate taxes paid) by the entire population.

Based on these figures, I estimate that total cash benefits received by persons aged 18 and above under the NIT I have modeled would have equaled $839.9

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only $383 in 2002. Moreover, all but $122 of that was attributable to earnings from work, a source of income unavailable to most younger children. This compares to $27,899 average nontransfer income reported for all persons aged 18 and older.

[12] The CPS database does not permit the removal of all government transfers from its reported income figures, but the amounts that are not removable are very small in the aggregate. Income from all major transfer programs is separately recorded in the database, and none of this income is included in Appendix 1. The sources of income that are included consist of earnings from both wage and salary work, earnings from both farm and nonfarm self-employment, dividends, interest, rent, private retirement benefits, private disability benefits, private survivor's benefits, and a small "other income" category that includes all other regularly received income not included elsewhere.

billion in 2002. NIT benefit payments to persons under the age of 18 would have totaled another $253.3 billion, so the total cost of the program would have been just over $1.09 trillion.

As explained above, the UBI that Clark modeled for 2002 would have achieved exactly the same redistributive effect – but with a budgeted cost approximately double that of its NIT equivalent. Based on the figures set forth in Table A3, the cost of a UBI system that included seniors on the same basis as other persons would have totaled $1.96 trillion in 2002 compared to the $1.09 trillion budget of its NIT equivalent.

This does not take into account reductions in other transfer benefits made possible by the implementation of a BIG in the form of either an NIT or a UBI. Clark has estimated these savings at $267.3 billion in 2002. As suggested above, I believe Clark's selection of proposed transfer-program cuts is problematic, but his figures still can be used to estimate the approximate savings governments would have enjoyed if his proposed UBI or an equivalent NIT had been in place in 2002.

Subtracting these savings from the budgeted cost of Clark's proposed UBI and the equivalent NIT I have modeled would have resulted in the same reduction in the additional tax burden required to fund either one. The net additional cost of Clark's proposed UBI after this adjustment would have been $1.69 trillion (instead of $1.96 trillion). The additional cost of the NIT would have been $826 billion (instead of $1.09 trillion).

These figures show that a UBI and an equivalent NIT both would be very costly to implement, but the NIT strategy would be far less costly. On the other hand, remember that the marginal rate at which other income received by program participants would be exactly the same under both systems, so a plausible claim can be made that the two systems would be perceived by taxpayers as costing the same. As explained above, I am skeptical of this claim, but it cannot be dismissed out of hand.

6. The Work Incentive Effects of a BIG and Why They Should Concern Us

As noted above, the cost estimates described in this paper assume that the introduction of a BIG (in the form of either a UBI or an NIT) would have no effect on the size of the tax base used to fund the program. One of the first questions that needs to be addressed in relaxing this assumption is whether the introduction of a BIG would affect labor force participation rates.

BIG advocates face a conundrum in addressing this question because their hopes for the program pull in two opposing directions. On the one hand, when discussing funding issues, BIG advocates tend to assume that the establishment of an unconditional income guarantee by means of either a UBI or an equivalent NIT would not cause aggregate income to decline. Both Clark and I, for example, have adopted this assumption in our program cost estimates. On the other hand, this assumption is at odds with another tendency among BIG advocates – an urge to celebrate the support a BIG would provide for nonmarket activities (Standing, 2004).

These tendencies are at odds because any significant reduction in labor market participation would be likely to cause a reduction in the tax base needed to fund a BIG.[13] If people don't reduce their participation in the paid labor market, it is hard to see how a BIG could result in an upsurge in nonmarket activities. But if they did embrace nonmarket work in preference to wage employment, it could undermine the tax base needed to support the BIG and hence its sustainability.

I am not suggesting that BIG advocates are unaware of this problem. Van Parijs, for example, has been careful to specify that the size of a BIG should be limited by its sustainability (Van Parijs, 1995; 2006). But that raises another issue. Does the provision of a BIG constitute the best use of a society's limited redistributive capacity? Suppose the maximum BIG a society can sustain over time is insufficient to eliminate poverty. The inadequacy of a BIG to fully achieve its goals provides no reason in and of itself for rejecting the idea, but it is hard to imagine this "sustainability limit" being reached without the redistributive capacity of society being exhausted in the process. If that were the case, the BIG itself could become a giant poverty trap, preventing a society from using its

[13] This assumes that a reduction in labor force participation would not lead to compensating increases in real wages. This assumption probably is reasonable. We know what happens when excess labor supplies evaporate due to increased aggregate demand. Wages rise, but so does the rate of inflation, and both employers and the government (usually through its central bank) react in ways that tend to slow down the economy, increase unemployment rates, and relieve upward pressure on wage rates – all in the name of fighting inflation. There is no obvious reason to expect employers and governments to react any differently if the decline in excess labor supplies (and consequent increase in average wage levels and the rate of inflation) were caused by a decline in labor force participation rather than an increase in aggregate demand. This means the most likely effect of a decline in labor force participation would not be a lasting increase in wages but a decline in national income, and hence in the tax base available to fund a BIG. In the long run, of course, it is possible that a BIG would produce effects that would enhance labor productivity and hence raise wage levels without inflationary effect, but before counting on such gains, BIG advocates need to reconcile their hopes for a flowering of productivity-enhancing nonmarket activities with the unattractive short-run consequences of a reduction in labor force participation.

sustainable redistributive capacity to fund less costly methods of eliminating poverty – such as that afforded by the job guarantee strategy (Harvey, 2003; 2005; 2006b).

In other words, the possible work-disincentive effects of a BIG are important, not only for determining the maximum BIG a society can sustain over time, but also because they underscore the fact that a society's ability to redistribute income may have economic as well as political limits. Funding a social welfare benefit as costly as a UBI (or an equivalent NIT) could impose significant opportunity costs on society – preventing it from funding other equally or more important social welfare benefits.[14] If one accepts that a BIG would not secure all of the economic and social human rights that governments have an obligation to secure, the opportunity cost of providing a BIG must be considered along with its sustainability in deciding what level of BIG, if any, it would be desirable for a society to provide. This makes the possible work-incentive effects of a BIG doubly important – since they could affect not only the sustainability of the BIG itself, but also a society's ability to meet other social welfare needs.

Most commentary on the work-incentive effects of a BIG addresses another issue – whether a BIG would create the kind of "poverty trap" that existing means-tested transfer programs have been blamed for creating. This type of poverty trap results from the alleged tendency of such programs to diminish work incentives among the poor because the withdrawal of benefits that occurs as a recipient's income rises has the effect of taxing wage income at an exceptionally high marginal rate. It is claimed that this causes people to remain in poverty when an increase in work effort would permit them to raise their standard of living (see, e.g., Murray, 1984). We therefore need to add this concern to our list of reasons to worry about the possible work-incentive effects of a BIG.

What would be the likely work-incentive effects of a UBI or an equivalent NIT? The fact that both systems would have the same redistributive effect and would tax earned income at the same marginal rate means that both the "income" and the "substitution" effects of the systems should be the same. A conventional economic analysis accordingly would predict that both systems would produce the same incentive effects, but what would those incentive effects be?

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[14] Van Parijs has suggested that a society's obligation to provide health and education benefits to its members should have priority over the establishment of a BIG (Van Parijs, 2006, p. 22) but he offers no explanation of the considerations on which that judgment is based and, consequently, no guidance in determining whether there are other social welfare benefits that he views as commanding similar funding priority.

One reassuring conclusion is that neither a UBI nor an equivalent NIT would create the kind of poverty trap that critics of existing public assistance programs deplore, since the marginal rate of taxation on wage income would be the same for wage workers at all income levels. However, our concern is not only that the poor might be encouraged to work less, thereby "trapping" them in poverty, but that labor force participation in general might decline and with it the tax base available to fund a BIG.

Unfortunately, the tendencies of a BIG in this regard are unsettling. First, the increase in taxes required to implement either a UBI or an equivalent NIT would reduce net wage rates for all workers. This means the substitution effect of these programs should tend to cause all labor-force participants (or potential labor-force participants) to want to work less.

Moreover, this tendency would be enhanced for low-income workers by the programs' income effect. A UBI or an equivalent NIT would increase the real income of persons with incomes below the breakeven level while reducing the real income of persons with incomes above the breakeven level. A conventional analysis would predict that net-income gainers would use at least part of their additional income to "purchase" more leisure. In other words, they would work less because of the income effect of the transfer benefit they received. On the other hand, net-income losers should manifest the opposite tendency, reducing their "consumption" of leisure by working more. In other words, the income effect of a BIG should encourage higher-income workers to work more and lower-income workers to work less.

This analysis can be summarized as follows: lower-income workers would be subject to both an income and a substitution effect that would tend to make them want to work less, while higher-income workers would be subject to conflicting income and substitution effects that could cause them to want to work more than they do now, less than they do now, or the same amount that they do now. I am not predicting that these effects actually would occur. Recent behavioral economic research has undermined confidence in the rational actor assumptions on which conventional analysis of the income and substitution effects is based. On the other hand, there is no reason to be sanguine concerning these projected effects. If the changes in labor force participation predicted by neoclassical theory materialized, it could mean that pretransfer income inequality would grow under a BIG at the same time the tax base needed to sustain the program was shrinking.

7. Conclusion

We have seen that a UBI and an NIT designed to achieve the same redistributive effect would impose the same marginal rates of taxation on other sources of income, but that the overall tax burden required to fund an NIT would be much smaller than for an equivalent UBI. Unless one is persuaded that the redistributive effect of the two systems is the proper measure of their cost, the NIT alternative plainly enjoys a substantial cost advantage over a UBI. A UBI might have other advantages that would tend to compensate for its higher cost, but those advantages would have to be very great to cancel out the cost advantage of an NIT.

We also have seen that despite the lower cost of an NIT compared to a comparable UBI, it still would constitute a very expensive way of eradicating poverty. Indeed, the high cost of the NIT modeled in this paper – combined with the possibility that it would produce work disincentives undermining its own sustainability – call into question the viability of this type of BIG as a means of eliminating poverty.[15] The distinct possibility exists that it could not be sustained at a high enough level to achieve its antipoverty goals.

This would not matter, of course, if a UBI or equivalent NIT constituted the only means of eliminating poverty. In that case it would be reasonable to disregard any misgivings we might have concerning the ultimate effectiveness of the strategy. We could proceed in good conscience to promote the most generous BIG the economy could sustainably maintain. If the strategy fell short of its ultimate goal, at least we would have done what we could.

But providing a UBI or its NIT equivalent is not the only way of eliminating poverty. The reason a UBI or an equivalent NIT would be so expensive is because most of its benefits would be provided to individuals who were not living in poverty. The reason for this is obvious in the case of a UBI. A benefit large enough to raise the income of the poorest members of society to the poverty threshold would have to be paid to every member of society, the vast majority of whom are not poor.

An NIT configured to achieve the same redistributive effect would cost less because back-and-forth payments to individuals would be eliminated, but it would not eliminate back-and-forth payments to family units. Since tax liabilities

[15] I know that BIG advocates have devoted considerable energy to the task of identifying potential funding sources other than the straightforward redistribution of income modeled in this paper. I leave to another day the task of considering whether the analysis in this paper would apply to those funding strategies as well. I also leave to another day an inquiry into less expensive design specifications for an NIT or a nonuniversal basic income grant system.

and benefit eligibility would be determined for each family member individually (consistent with the universality principle underlying the UBI idea), some family members could be liable for substantial net-tax payments while others received NIT benefit checks. Consequently, most of the budget of an NIT configured to achieve the same redistributive effect as a UBI would be used to pay benefits to nonworking members (both children and adults) of nonpoor families.

Other ways of providing a BIG are conceivable, of course, but it is beyond the scope of this paper to explore those possibilities. The only comparison I will make here is between the cost of the NIT I have modeled in this paper and the cost of the job guarantee strategy (Harvey, 2003; 2006b). As noted at the beginning of this paper, that strategy involves the use of direct job creation and conventional transfer benefits to secure the right to work and income support recognized in the Universal Declaration of Human Rights. In contrast to the $826 billion increase in taxes required to fund the NIT modeled in this paper, I have estimated that the job guarantee strategy could be funded with an increase in taxes of less than $100 billion a year.

This latter cost comparison raises the question of whether the benefits produced by a UBI or an equivalent NIT would be great enough to justify the far greater cost of this means of providing a BIG compared to the job guarantee strategy. Answering that question in the negative, I have argued that the job guarantee strategy would not only eliminate poverty more efficiently than a UBI, but that it also could achieve most of the other goals of a BIG at less cost, while simultaneously securing a range of economic and social human rights that a UBI would not address (Harvey, 2003, 2005, 2006b). This same argument would apply to the NIT modeled in this paper, although with less force given the cost advantage of an NIT over a UBI.

Finally, even if the benefits of a UBI or an equivalent NIT would justify its cost in theory, BIG advocates need to consider the possible opportunity cost of pursuing the strategy in practice. In light of its high cost, is it realistic to imagine that a UBI or an equivalent NIT could be sustained at a high enough level to eliminate poverty? BIG advocates who argue that a society should provide its members the largest sustainable BIG it can afford – whether or not that guarantee would be large enough to eliminate poverty – are on shaky moral ground if the opportunity cost of providing such a BIG would be the exhaustion of society's redistributive capacity without eliminating poverty when other foregone social welfare strategies could have been funded at far less cost that would have succeeded in achieving that goal.

Appendix

Table A1. Individual distribution of US pre-tax income, 2002

Income (1) (*dollars*)	Number of Persons (*1000s*)	Avg. Reported Income (2) (*dollars*)	Avg. Actual Income (3) (*dollars*)	Total Income of Cohort (3) (*billions of dollars*)
All Persons	285,933	20,787	26,765	7652.9
Under 2,500 (4)	99,156	55	71	7.1
2,500 - 4,999	8,884	2,181	2,809	25.0
5,000 - 7,499	13,289	2,694	3,469	46.1
7,500 - 9,999	11,417	3,804	4,898	55.9
10,000 - 12,499	13,397	6,658	8,573	114.9
12,500 - 14,999	9,734	8,130	10,467	101.9
15,000 - 17,499	11,304	11,859	15,269	172.6
17,500 - 19,999	8,377	14,352	18,478	154.8
20,000 - 22,499	10,868	18,087	23,288	253.1
22,500 - 24,999	6,923	19,782	25,470	176.3
25,000 - 27,499	9,182	23,655	30,457	279.7
27,500 - 29,999	5,709	25,325	32,607	186.1
30,000 - 32,499	9,472	28,859	37,158	352.0
32,500 - 34,999	4,311	30,261	38,962	168.0
35,000 - 37,499	6,945	34,061	43,855	304.6
37,500 - 39,999	4,036	35,565	45,792	184.8
40,000 - 42,499	6,710	39,429	50,767	340.6
42,500 - 44,999	2,741	40,639	52,324	143.4
45,000 - 47,499	4,167	43,947	56,583	235.8
47,500 - 49,999	2,512	45,726	58,874	147.9
50,000 - 52,499	4,868	49,324	63,507	309.1
52,500 - 54,999	1,917	50,782	65,384	125.4
55,000 - 57,499	2,683	54,010	69,540	186.5
57,500 - 59,999	1,389	55,576	71,557	99.4
60,000 - 62,499	3,025	58,957	75,909	229.6
62,500 - 64,999	1,259	60,601	78,026	98.2
65,000 - 67,499	1,873	63,926	82,307	154.1
67,500 - 69,999	969	65,732	84,633	82.0
70,000 - 72,499	1,934	69,435	89,401	172.9
72,500 - 74,999	849	70,877	91,257	77.5
75,000 - 77,499	1,753	74,473	95,887	168.1
77,500 - 79,999	707	75,654	97,408	68.8
80,000 - 82,499	1,428	78,774	101,425	144.9
82,500 - 84,999	576	81,330	104,715	60.3
85,000 - 87,499	828	84,406	108,676	90.0
87,500 - 89,999	396	84,665	109,010	43.2
90,000 - 92,499	822	89,212	114,864	94.5
92,500 - 94,999	351	90,468	116,482	40.9
95,000 - 97,499	581	94,312	121,431	70.6

Table A1. (*continued*)

Income (1) (*dollars*)	Number of Persons (*1000s*)	Avg. Reported Income (2) (*dollars*)	Avg. Actual Income (3) (*dollars*)	Total Income of Cohort (3) (*billions of dollars*)
All Persons	285,933	20,787	26,765	7652.9
97,500 - 99,999	343	93,697	120,639	41.4
100,000 +	8,247	173756.9	223,719	1845.0

Source: Author's calculations using data from US Census Bureau, DataFerrett, CPS, March Supplement, 2003.
(1) Based on reported income including government transfers
(2) Excluding government transfers
(3) Estimated
(4) Assumes zero income for all persons under age 15

Table A2. Individual distribution of US pre-tax income by age, 2002

	Persons Under 18				Persons 18 and Older			
Income (1) (*dollars*)	Number (*1000s*)	Avg. Reported Income (2) (*dollars*)	Avg. Actual Income (3) (*dollars*)	Total Income of Cohort (3) (*billions*)	Number (*1000s*)	Avg. Reported Income (2) (*dollars*)	Avg. Actual Income (3) (*dollars*)	Total Income of Cohort (3) (*billions*)
All Income Levels	73,312	161	207	15.197	212,622	27,899	35,920	7,637.4
Under 2,500 (4)	71,380	31	40	2.849	27,777	117	151	4.2
2,500 - 4,999	952.6	2,694	3,468	3.304	7,932	2,120	2,729	21.6
5,000 - 7,499	511.6	3,497	4,502	2.304	12,777	2,662	3,427	43.8
7,500 - 9,999	196.7	4,923	6,338	1.247	11,220	3,785	4,873	54.7
10,000 - 12,499	102.4	7,224	9,301	0.952	13,295	6,654	8,567	113.9
12,500 - 14,999	51.9	6,991	9,001	0.467	9,682	8,136	10,475	101.4
15,000 - 17,499	38.2	12,607	16,232	0.620	11,266	11,857	15,266	172.0
17,500 - 19,999	6.4	15,885	20,451	0.131	8,371	14,350	18,476	154.7
20,000 - 22,499	5.1	20,449	26,328	0.133	10,863	18,086	23,286	253.0
22,500 - 24,999	4.0	18,453	23,758	0.094	6,919	19,782	25,470	176.2
25,000 - 27,499	11.0	20,486	26,376	0.291	9,171	23,659	30,461	279.4
27,500 - 29,999	1.5	28,000	36,050	0.055	5,707	25,324	32,605	186.1
30,000 - 32,499	6.8	23,350	30,063	0.203	9,465	28,863	37,161	351.7
32,500 - 34,999	10.3	18,986	24,445	0.252	4,301	30,288	38,995	167.7
35,000 - 37,499	3.8	36,000	46,349	0.177	6,941	34,060	43,852	304.4
37,500 - 39,999	2.7	37,180	47,869	0.129	4,033	35,564	45,789	184.7
40,000 - 42,499	2.4	31,811	40,956	0.099	6,708	39,429	50,765	340.5
42,500 - 44,999	0.3	44,000	56,650	0.015	2,741	40,638	52,322	143.4
45,000 - 47,499	5.5	28,342	36,491	0.202	4,162	43,947	56,582	235.5
47,500 - 49,999	(5)	(5)	(5)	(5)	2,512	45,726	58,872	147.9
50,000 - 52,499	7.2	29,158	37,541	0.269	4,860	49,340	63,525	308.8
52,500 - 54,999	1.4	54,503	70,173	0.097	1,916	50,779	65,378	125.3
55,000 - 57,499	3.1	55,143	70,996	0.223	2,679	54,009	69,536	186.3

Table A2. (*continued*)

Income (1) (*dollars*)	Persons Under 18 Number (*1000s*)	Avg. Reported Income (2) (*dollars*)	Avg. Actual Income (3) (*dollars*)	Total Income of Cohort (3) (*billions*)	Persons 18 and Older Number (*1000s*)	Avg. Reported Income (2) (*dollars*)	Avg. Actual Income (3) (*dollars*)	Total Income of Cohort (3) (*billions*)
All Income Levels	73,312	161	207	15.197	212,622	27,899	35,920	7,637.4
57,500 - 59,999	0.2	58,721	75,603	0.012	1,389	55,576	71,554	99.4
60,000 - 62,499	1.7	60,846	78,339	0.133	3,023	58,990	75,949	229.6
62,500 - 64,999	(5)	(5)	(5)	(5)	1,259	60,601	78,024	98.2
65,000 - 67,499	(5)	(5)	(5)	(5)	1,873	63,926	82,304	154.1
67,500 - 69,999	(5)	(5)	(5)	(5)	969	65,732	84,630	82.0
70,000 - 72,499	(5)	(5)	(5)	(5)	1,934	69,435	89,398	172.9
72,500 - 74,999	(5)	(5)	(5)	(5)	849	70,877	91,254	77.5
75,000 - 77,499	1.0	75,000	96,563	0.099	1,752	74,473	95,884	168.0
77,500 - 79,999	0.4	79,194	101,962	0.041	706	75,652	97,402	68.8
80,000 - 82,499	(5)	(5)	(5)	(5)	1,428	78,774	101,422	144.8
82,500 - 84,999	(5)	(5)	(5)	(5)	576	81,330	104,712	60.3
85,000 - 87,499	(5)	(5)	(5)	(5)	828	84,406	108,672	90.0
87,500 - 89,999	(5)	(5)	(5)	(5)	396	84,665	109,006	43.2
90,000 - 92,499	(5)	(5)	(5)	(5)	822	89,212	114,860	94.5
92,500 - 94,999	(5)	(5)	(5)	(5)	351	90,468	116,478	40.9
95,000 - 97,499	(5)	(5)	(5)	(5)	581	94,312	121,427	70.6
97,500 - 99,999	1.9	98,416	126,711	0.236	341	93,671	120,602	41.2
100,000 +	2.2	157,797	203,163	0.447	8,245	173,761	223,717	1,844.5

Source: See Table A1
(1) Based on reported income including government transfers
(2) Excluding government transfers
(3) Estimated
(4) Assumes zero income for all persons under age 15
(5) Numbers too small to report

Table A3. Estimated benefits and taxes under hypothetical NIT, 2002

Income Cohorts (1) (*dollars*)	Persons Under 18 Number (*1000s*)	Avg. Actual Income (2)(3) (*dollars*)	Avg. NIT Ben (+) or Tax (-) (*dollars*)	Total NIT Ben (+) or Tax (-) (*billions*)	Persons 18 and older Number (*1000s*)	Avg. Actual Income (2)(3) (*dollars*)	Avg. NIT Ben (+) or Tax (-) (*dollars*)	Total NIT Ben (+) or Tax (-) (*billions*)	Aggregate NIT Ben (+) or Tax (-) (*dollars*)
All Income Levels	73,312	207		253.30	212,622	35,920		839.9	1,093.2
Under 2,500 (4)	71,380	40	3,490	249.10	27,777	151	9,144	254.0	503.1
2,500 - 4,999	953	3,468	2,612	2.49	7,932	2,729	8,484	67.3	69.8
5,000 - 7,499	512	4,502	2,347	1.20	12,777	3,427	8,306	106.1	107.3

Table A3. (*continued*)

Income Cohorts (1) (*dollars*)	Persons Under 18 Number (*1000s*)	Avg. Actual Income (2)(3) (*dollars*)	Avg. NIT Ben (+) or Tax (-) (*dollars*)	Total NIT Ben (+) or Tax (-) (*billions*)	Persons 18 and older Number (*1000s*)	Avg. Actual Income (2)(3) (*dollars*)	Avg. NIT Ben (+) or Tax (-) (*dollars*)	Total NIT Ben (+) or Tax (-) (*billions*)	Aggregate NIT Ben (+) or Tax (-) (*dollars*)
All Income Levels	73,312	207		253.30	212,622	35,920		839.9	1,093.2
7,500 - 9,999	197	6,338	1,877	0.37	11,220	4,873	7,936	89.0	89.4
10,000 - 12,499	102	9,301	1,119	0.11	13,295	8,567	6,990	92.9	93.0
12,500 - 14,999	51.9	9,001	1,196	0.06	9,682	10,475	6,501	62.9	63.0
15,000 - 17,499	38.2	16,232	-655	-0.03	11,266	15,266	5,275	59.4	59.4
17,500 - 19,999	6.4	20,451	-1,736	-0.01	8,371	18,476	4,453	37.3	37.3
20,000 - 22,499	5.1	26,328	-3,240	-0.02	10,863	23,286	3,222	35.0	35.0
22,500 - 24,999	4.0	23,758	-2,582	-0.01	6,919	25,470	2,663	18.4	18.4
25,000 - 27,499	11.0	26,376	-3,252	-0.04	9,171	30,461	1,385	12.7	12.7
27,500 - 29,999	1.5	36,050	-5,729	-0.01	5,707	32,605	836	4.8	4.8
30,000 - 32,499	6.8	30,063	-4,196	-0.03	9,465	37,161	-330	-3.1	-3.2
32,500 - 34,999	10.3	24,445	-2,758	-0.03	4,301	38,995	-800	-3.4	-3.5
35,000 - 37,499	3.8	46,349	-8,365	-0.03	6,941	43,852	-2,043	-14.2	-14.2
37,500 - 39,999	2.7	47,869	-8,755	-0.02	4,033	45,789	-2,539	-10.2	-10.3
40,000 - 42,499	2.4	40,956	-6,985	-0.02	6,708	50,765	-3,813	-25.6	-25.6
42,500 - 44,999	0.3	56,650	-11,002	-0.003	2,741	52,322	-4,211	-11.5	-11.5
45,000 - 47,499	5.5	36,491	-5,842	-0.03	4,162	56,582	-5,302	-22.1	-22.1
47,500 - 49,999	(5)	(5)	(5)	(5)	2,512	58,872	-5,888	-14.8	-19.8
50,000 - 52,499	7.2	37,541	-6,111	-0.04	4,860	63,525	-7,079	-34.4	-34.5
52,500 - 54,999	1.4	70,173	-14,464	-0.02	1,916	65,378	-7,554	-14.5	-14.5
55,000 - 57,499	3.1	70,996	-14,675	-0.05	2,679	69,536	-8,618	-23.1	-23.1
57,500 - 59,999	0.2	75,603	-15,854	-0.003	1,389	71,554	-9,135	-12.7	-12.7
60,000 - 62,499	1.7	78,339	-16,555	-0.03	3,023	75,949	-10,260	-31.0	-31.0
62,500 - 64,999	(5)	(5)	(5)	(5)	1,259	78,024	-10,791	-13.6	-18.6
65,000 - 67,499	(5)	(5)	(5)	(5)	1,873	82,304	-11,887	-22.3	-27.3
67,500 - 69,999	(5)	(5)	(5)	(5)	969	84,630	-12,482	-12.1	-17.1
70,000 - 72,499	(5)	(5)	(5)	(5)	1,934	89,398	-13,703	-26.5	-31.5
72,500 - 74,999	(5)	(5)	(5)	(5)	849	91,254	-14,178	-12.0	-17.0
75,000 - 77,499	1.0	96,563	-21,220	-0.02	1,752	95,884	-15,363	-26.9	-26.9
77,500 - 79,999	0.4	101,962	-22,602	-0.01	706	97,402	-15,752	-11.1	-11.1
80,000 - 82,499	(5)	(5)	(5)	(5)	1,428	101,422	-16,781	-24.0	-29.0
82,500 - 84,999	(5)	(5)	(5)	(5)	576	104,712	-17,623	-10.1	-15.1
85,000 - 87,499	(5)	(5)	(5)	(5)	828	108,672	-18,637	-15.4	-20.4
87,500 - 89,999	(5)	(5)	(5)	(5)	396	109,006	-18,723	-7.4	-12.4
90,000 - 92,499	(5)	(5)	(5)	(5)	822	114,860	-20,221	-16.6	-21.6
92,500 - 94,999	(5)	(5)	(5)	(5)	351	116,478	-20,635	-7.2	-12.2
95,000 - 97,499	(5)	(5)	(5)	(5)	581	121,427	-21,902	-12.7	-17.7

Table A3. (*continued*)

Income Cohorts (1)	Persons Under 18				Persons 18 and older				Aggregate
	Number	Avg. Actual Income (2)(3)	Avg. NIT Ben (+) or Tax (-)	Total NIT Ben (+) or Tax (-)	Number	Avg. Actual Income (2)(3)	Avg. NIT Ben (+) or Tax (-)	Total NIT Ben (+) or Tax (-)	NIT Ben (+) or Tax (-)
(*dollars*)	(*1000s*)	(*dollars*)	(*dollars*)	(*billions*)	(*1000s*)	(*dollars*)	(*dollars*)	(*billions*)	(*dollars*)
All Income Levels	73,312	207		253.30	212,622	35,920		839.9	1,093.2
97,500 - 99,999	1.9	126,711	-28,938	-0.05	341	120,602	-21,691	-7.4	-7.5
100,000 +	2.2	203,163	-48,510	-0.11	8,245	223,717	-48,089	-396.5	-396.6
Total Nit Benefits Received(+) Or Taxes Paid(-)				+/- 253.3				+/- 839.9	+/- 1,093.3

Source: See Table A1
(1) Based on reported income including government transfers
(2) Excluding government transfers
(3) Estimated
(4) Assumes zero income for all persons under age 15
(5) Numbers too small to report

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