## <u>Net Annual Fiscal Contributions of US Adults</u> <u>Aged 18-64 by Education Attainment, 2009-2012</u>

<u>The Fiscal Advantages of High School and College Graduates</u> <u>in the Nation and the 15 Largest States</u>

<u>Prepared for:</u> Council for Advancement of Adult Literacy (CAAL) New York City

> <u>Prepared by:</u> Center for Labor Market Studies Northeastern University Boston, Massachusetts

> > January 2014



#### Introduction

Higher levels of educational attainment for individual persons in the United States have been shown to have important advantages for their labor market behaviors, employment success, and their earnings potential over their working lives.<sup>1</sup> As a consequence of their higher earnings from labor market activity, their greater propensity to marry, and their higher annual family incomes from their employment and their property investments, better educated adults are more likely to pay higher amounts of taxes, to be less dependent on cash public income transfers and in-kind assistance to support themselves, and to avoid incarceration in jails and prisons.

These frequently large differences across educational groups in their annual tax payments, their receipt of cash and in-kind public assistance, and their incarceration costs have important consequences for the fiscal well-being of the federal, state, and local governments in the areas in which they reside. This paper provides a methodology for estimating the annual tax contributions of U.S. adults 18-64 years old, the amount of cash and in-kind benefits that they received, and their estimated incarceration costs by educational attainment for six educational groups including high school dropouts and high school graduates with no college. The findings of our estimates of the annual average size of these various contributions (both positive and negative) will be compared to one another, and the values of the mean net fiscal contributions will be estimated for each educational subgroup and compared to one another. The <u>net fiscal contribution</u> is the difference between all taxes paid and all transfers received and incarceration costs imposed. The findings on the large gaps between the fiscal contributions of high school graduates/GED holders and those of high school dropouts will be emphasized.

<sup>&</sup>lt;sup>1</sup> See the upcoming companion paper for CAAL, tentatively titled *The Impact of Education Level on Jobs, Income, Civic Engagement, and Incarceration in America*, on the links between employment, other labor market outcomes, annual earnings, and income inadequacy and the educational attainment of U.S. adults. For a recent review of the benefits of higher education, see: Sandy Baum, et. al., Education Pays 2013: The Benefits of Higher Education, the College Board, 2013.

# Data Sources and Calculations Underlying the Estimates of the Net Fiscal Contributions of Adults (18-64) in the U.S.

The estimates of the net fiscal contributions of U.S. adults in the six selected educational attainment subgroups in this report are based on a number of different data sources and a massive series of data calculations by the staff at the Center for Labor Market Studies of Northeastern University. The primary source of data for most of the annual tax and cash/in-kind transfer data is the Annual Social and Economic Supplement (ASEC) to the March Current Population Survey.<sup>2</sup> During March of each calendar year, approximately 57,000 households across the U.S. are interviewed as part of the March CPS survey. The U.S. Census Bureau uses the ASEC March CPS survey to collect information from sample respondents 15 and older on their work experience, annual earnings, annual incomes, and income sources during the previous calendar year. These data are used by the U.S. Census Bureau to provide annual estimates of the money incomes of U.S. households and families and the poverty status of persons and families across the nation. Information on the receipt of a wide array of cash and in-kind benefits from the state and federal government, including TANF benefits, SSI and social security disability payments, unemployment benefits, general relief, federal Earned Income Tax Credits (EITC), and in-kind government transfers, such as food stamps, energy assistance, Medicaid/Medicare benefits, and rental subsidies, also are collected from either sample respondents or households.<sup>3</sup>

Given the self-reported information on annual earnings and incomes, sources of those incomes, the marital status of respondents, and the type of household in which the respondent lives (married couple family, single parent family, single individual), the U.S. Census Bureau calculates estimates of their Social Security payroll taxes, federal government retirement contributions, and their state and federal income tax liability.<sup>4</sup> For each sample of individual ages 18-64 not enrolled<sup>5</sup> in school at the time of the March survey, we have estimated annual average per capita tax payments in these six tax categories (Table 1). These combined annual tax

<sup>&</sup>lt;sup>2</sup> For more details on the design of the March CPS supplement and the definitions for each of the variables for which data are collected. <u>See: www.census.gov/CPS</u>.

<sup>&</sup>lt;sup>3</sup> Data on food stamps, rental subsidies, and energy assistance are collected at the household level while data on unemployment insurance benefits, disability payments, TANF benefits, SSI disability, and Medicaid expenditures are collected at the individual level.

<sup>&</sup>lt;sup>4</sup> For married couples, an assumption is made by the U.S. Census Bureau that the couple files a joint tax return in determining its federal income tax liability.

<sup>&</sup>lt;sup>5</sup> The school enrollment question in the monthly CPS survey is asked only to those under 25 years of age.

payments were estimated for adults in the aggregate and in each of the following six educational subgroups:

- Lacks high school diploma or GED certificate
- High school diploma or GED, no college years completed
- 13-15 years, no college degree
- Associate's degree
- Bachelor's degree
- Master's or higher degree

### Table 1:

#### A Listing of the Income, Payroll, Property Tax, and Sales Tax Payments to the Federal Government and State and Local Governments

Federal Government	State and Local Governments
Federal income tax payments	State income tax liability
Federal retirement payroll deductions	Property tax liability
Social Security retirement payroll taxes	State sales tax payments

The ASEC March CPS survey also collects data from respondents on their receipt of a wide array of cash income transfers from local, state, and federal governments, including unemployment insurance payments, Temporary Assistance to Needy Families (TANF) benefits, Supplemental Security Income (SSI) payments for the aged and the disabled, Social Security Disability payments, general relief, and veteran's payments. The combined annual incomes from each of these cash income transfer programs was calculated for each respondent (18-64). (Table 2). The ASEC March CPS questionnaire also collected information on respondents' receipt of a wide array of in-kind transfers from state and federal governments, including food stamps, federal Earned Income Tax Credits (EITC), Medicaid/Medicare health insurance benefits, energy assistance and rental subsidies.<sup>6</sup> The U.S. Census Bureau has imputed cash values for each of these in-kind benefits. They are primarily assigned to the household unit rather than to individual

<sup>&</sup>lt;sup>6</sup> The federal Earned Income Tax Credit (EITC) is primarily a cash tax credit refunded to low earner households by the Internal Revenue Service. The federal EITC is treated as a cash transfer rather than a negative tax by the U.S. Census Bureau in its calculations of the taxes paid and transfers received by individuals. For a review of the design and operations of the federal EITC program, see: Saul Hoffman and Laurence S. Seidman, <u>Helping Working Families: The Earned Income Tax Credit</u>, W.E. Upjohn Institute for Employment Research, Kalamazoo, 2003.

household members. We have assigned most of these in-kind transfers to the householder.<sup>7</sup> We then summed the cash values of each of these in-kind benefits and added them to the estimated value of cash income transfers for each household member. (Table 2).

<u>Table 2:</u>	
A Listing of the Cash and Non-Cash Transfers Received I	by Individuals or Households

Cash Transfers	Non-Cash Transfers (In-Kind Benefits)
Unemployment benefits	Market value of food stamps
Worker's compensation	Market value of Medicare insurance
Social Security payments	Market value of Medicaid benefits
Supplemental Security Income for the disabled and aged	Family market value of housing subsidies
Public assistance income (TANF, general relief)	Family market value of school lunch subsidies
Veteran's payments	Energy assistance payments
Survivor's income benefits	
Other disability income	
Federal Earned Income Tax Credits	

The U.S. Census Bureau does not provide any estimates of annual state sales tax payments for persons interviewed during the March CPS survey. In our fiscal contributions analyses, we have estimated sales tax payments for individuals by using a combination of personal income data from the 2012 ACS survey and sales tax tables for states that are published annually by the U.S. Department of Treasury's Internal Revenue Service (IRS).<sup>8</sup> Some federal taxpayers are allowed to claim state and local sales taxes paid when filing their federal income

<sup>&</sup>lt;sup>7</sup> Medicaid/Medicare expenditures are assigned to an individual household member.

<sup>&</sup>lt;sup>8</sup> U.S. Department of Treasury, Internal Revenue Service, "State and Local General Sales Taxes", Publication 600, 2012, <u>www.irs.gov</u>.

tax returns. Tax filers use published data from IRS tables to estimate their sales tax deductions based on their taxable income and the number of exemptions. We have used IRS data with ACS data to estimate state sales tax payments for adults with positive incomes in 2012 (see Appendix C for methodology). Sales tax rates vary by state.<sup>9</sup> The allowable deductions for state sales taxes are based on the number of exemptions. In our analysis of sales taxes, we applied a single person exemption to each individual respondent 18-64 years old with a positive income. For each adult in individual states in our analysis, we have assigned a state sales tax payment equal to the IRS sales tax deduction for a person with their income in 2012.

The U.S. Census Bureau also does not provide estimates of the annual property taxes paid by households that own their homes. Although property taxes are imputed in the March CPS supplement on earnings and incomes, due to a small sample size and high degree of sample variability, we did not use the March CPS supplement data on property tax payments. We have analyzed data from the 2011-2012 American Community Surveys (ACS) on home ownership rates of U.S. households and their annual property tax payments to compute their expected annual property tax payments.<sup>10</sup> The property tax payments are assigned to the householder in each household that owned the housing unit they occupied at the time of the 2011-2012 ACS surveys.

The institutionalization cost data for individual states are published by the U.S. Justice Department's Bureau of Justice Statistics (BOJ). The BOJ published prison costs data are used with ACS data to generate mean per capita prison costs by state (a detailed methodology in Appendix D).

As noted earlier, our tax payment estimates for U.S. adults from 2009 to 2012 include federal and state income taxes, social security payroll taxes including the Medicare tax, federal government retirement contributions, as well as state sales taxes and local property taxes. The U.S. Census Bureau imputes estimates of the federal and state income tax payments for each non-married individual and assigns these payments to their personal record. For married couple families, however, the U.S. Census Bureau assumes that they file a joint tax return. The Census

<sup>&</sup>lt;sup>9</sup> Alaska, Delaware, New Hampshire, Montana, and Oregon did not have a state sales tax in 2012.

<sup>&</sup>lt;sup>10</sup> The expected values of these property tax payments are the product of the home ownership rate for a given group and the mean value of their property tax payments. Not all homeowners paid a property tax. Overall, 3.8 percent of the households across the U.S. did not pay any positive amount of property taxes.

Bureau's estimate of the federal and state income tax liability of these married couples is assigned entirely to the head of these married couple families.<sup>11</sup> A "zero value" is assigned to the federal and state income tax payments of the spouse. We have developed a straightforward methodology for computing the husband and wife's share of their joint federal and state income tax liability, and calculated their respective annual levels of federal and state income tax payments. A detailed description of this methodology is presented in Appendix B.

Social Security payroll taxes and federal government retirement contributions were estimated by the U.S. Census Bureau for each individual based on their annual earnings and the source of their annual earnings. Only the employee's contribution to the Social Security payroll tax is included in the official Census Bureau estimate. Covered employers also pay an equivalent amount of Social Security payroll taxes to the federal government. Findings of national labor market research on the incidence of the payroll tax on employers suggest that it is primarily ultimately shifted back to the employee in the form of lower wages.<sup>12</sup> Thus, we have multiplied the Social Security payroll tax of the individual by two to adjust for the shifting of the employer's Social Security tax contribution back onto the employee. Even if the employer paid part of this tax, it still represents a tax payment on behalf of the individual worker who was employed and adds to the fiscal contribution of that worker.

<sup>&</sup>lt;sup>11</sup> In a married couple family, the householder can be either the husband or the wife.

<sup>&</sup>lt;sup>12</sup> For evidence, <u>see</u>: Daniel S. Hamermesh, <u>Labor Demand</u>, Princeton University Press, Princeton, 1993.

# Mean Combined Annual Tax Payments of U.S. Adults (18-64) by Their Educational Attainment

Better educated adults are not only more likely to pay each of the six types of federal, state, and local taxes, but they also pay a substantially higher mean amount of such taxes (Table 3). For each type of tax, mean annual payments including those with zero payments rose steadily and strongly with their level of education. The differences were particularly large for federal and state income taxes where adults with a Bachelor's or higher degree paid <u>four to seven times</u> as much in income taxes annually as their counterparts who lacked a high school diploma/GED certificate. Mean annual state and federal income taxes combined were equal to \$2,597 for high school dropouts versus \$4,334 for high school graduates with no college and a high of \$72,894 for those with a Master's or higher degree.

<u>Table 3:</u> <u>The Mean Annual Taxes Paid by 18-to-64 Year Old Adults<sup>(1)</sup> in the U.S., Total and by</u> <u>Educational Attainment, 2009-2012 Averages</u> (in Dollars)

	<12 or 12,	HS					
	No HS	Diploma or	Some	Associate's	Bachelor's	Master's	
Educational Attainment	Diploma	GED	College	Degree	Degree	or Higher	Total
Federal Income Tax							
Payments	2,017	3,369	4,672	5,165	8,807	14,450	5,874
State Income Tax							
Payments	580	965	1,265	1,430	2,223	3,444	1,532
Federal Gvt.							
Retirement							
Contribution	5	36	76	76	98	199	73
Social Security Payroll	1,887	3,278	3,916	4,601	6,441	8,852	4,583
Property Tax Payment	906	1,361	1,543	1,909	2,655	3,323	1,813
Sales Taxes	285	356	408	446	530	650	430
Total Tax Payments	5,682	9,364	11,879	13,626	20,754	30,918	14,306

<u>Sources:</u> (i) March 2010 through March 2013 Annual Social and Economic (ASEC) Supplements, Current Population Survey (CPS) conducted by the U.S. Census Bureau for the U.S. Department of Labor, public use files, tabulations by authors; (ii) 2011 and 2012 American Community Surveys (ACS), U.S. Census Bureau, public use files, tabulations by authors; (iii) U.S. Bureau of Justice Statistics, Special Report, U.S. Department of Justice; (iv) Sales tax exemption tables for 2012 produced by the Internal Revenue Service (IRS), tabulations by the authors.

**Note:** <sup>(1)</sup> Those 18-24 year old adults who were enrolled in school at the time of the March 2010 through 2013 and ACS surveys were excluded from the analysis.

During the 2009-2012 period, the mean annual taxes paid by 18-64 year old U.S. adults in the six tax categories combined was \$14,306 (Table 3). The mean annual amount of these tax payments combined varied quite widely across the six educational subgroups of adults, ranging from a low of \$5,682 among those adults lacking a high school diploma/GED, to \$9,364 among high school graduates/GED holders with no completed years of post-secondary schooling, to \$20,918 for bachelor degree recipients, and to a high of just under \$31,000 for those adults with a Master's or higher degree (Table 3). U.S. adults with a regular high school diploma or GED paid nearly \$3,700 or 67% more than high school dropouts in annual taxes while bachelor degree holders paid 122% more than high school graduates, and those with Master's and higher degrees paid nearly 50% more annually in taxes than bachelor degree holders. The mean combined annual tax payments of non-elderly U.S. adults with a high school diploma were 1.7 times higher than those of their peers who lacked a high school diploma/GED certificate.<sup>13</sup>

# The Receipt of Various Cash and In-Kind Government Transfers of U.S. Adults by Educational Attainment

The employment and earnings prospects of adults without a high school diploma compared to their peers with a high school diploma or more has deteriorated in recent decades. As a consequence of this, a high and rising share of adults without a high school diploma depend upon various cash and in-kind transfers program funded by local, state, and federal governments to support themselves. Table 4 presents findings on the estimated percent of the nation's 18-64 year olds who received various types of cash and in-kind benefits on average in 2009 through 2012. These in-kind transfer payments include Medicare/Medicaid health insurance benefits, food stamps, rental subsidies in both public and private housing, and energy assistance.<sup>14</sup> The estimated mean annual amount of the cash and in-kind transfers received by 18-64 year old adults in each of the six educational groups over the 2009-2012 period are displayed in Table 4. For the entire 18-64 year old population (excluding these 16-24 year olds who were enrolled in

<sup>&</sup>lt;sup>13</sup> Unfortunately, the March CPS files of the U.S. Census Bureau do <u>not</u> distinguish between those adults with a regular high school diploma and those with a GED certificate.

<sup>&</sup>lt;sup>14</sup> With the exception of Medicaid/Medicare health care benefits, the U.S. Census Bureau imputes values of in-kind transfers to the household rather than to individual household members. We have assigned the imputed monetary values of these in-kind transfers to the householder. Estimates of the incidence of receipt of these in-kind transfers refers only to householders.

school at the time of the March CPS surveys), the mean combined annual amount of the cash and in-kind benefits was \$3,382 of which \$1,550 was in the form of cash transfers. The mean values of these annual transfers varied considerably across the six educational subgroups, ranging from a high of \$6,332 for those adults lacking a high school diploma/GED certificate, to slightly under \$4,300 for high school graduates, to lows of slightly under \$1,400 for those adults with a Master's or higher degree. Adults without high school diplomas/GED certificates received a mean level of transfers that was <u>1.5</u> times as high as that of high school graduates and <u>4</u> times as high as those peers with a four year or higher degree during calendar years 2009 through 2012.

Given their poor employment prospects and their lower wages when employed, adults without a high school diploma, especially men, were highly more likely than their better educated peers to be incarcerated. During 2010-2012, nearly 4 percent of the nation's 18-to-64 year old adults were residing in jail or prison compared to only 1.8% of adults with a high school diploma or a GED and only 0.1% to .2% of adults with a Bachelor's or a higher degree. The data on institutionalization rates for educational subgroups of adults available from the 2010-2012 American Community Surveys were combined with data on the annual per inmate cost in state prisons to estimate the annual institutionalization costs associated with adults in each educational group (See Appendix D for detail methodology). According to estimates from the U.S. Bureau of Justice Statistics, the annual per state prison inmate costs for the entire nation in 2001 was \$22,645. Adjusting this per inmate cost for inflation between 2001 and 2012 yielded a per inmate cost of \$29,370 by 2012. By multiplying the institutionalization rate for each educational group of adults from the 2010-2012 American Community Survey by the per inmate cost, we can estimate the average annual costs of institutionalization per adult in each educational attainment group. On average, adults without a high school diploma or GED cost the nation approximately \$1,151 in per capita expenditures related to institutionalization per year (Table 4). The mean annual costs of institutionalization for adults without a high school diploma were more than 2.1 times as high as that of high school graduates without any post-secondary schooling and 23 times higher than that of adults with four-year college degrees.

These institutionalization costs per person only represent the estimated annual fiscal costs associated with their confinement. For persons in correctional and mental institutions, these annual costs are very conservative estimates of their true long run fiscal and societal costs. First, the annual per inmate costs of housing persons in prisons included only current capital expenditures and excluded annualized capital costs of past construction, which are likely to far exceed current capital outlays. Second, these costs ignore all future parole and probation costs associated with monitoring the future behavior of the jailed. Third, being jailed today sharply reduces the future earnings potential of both men and women, with the size of these earnings losses ranging from 20 to 25 percent among men to more than 40 percent among women.<sup>15</sup>

Table 4:
The Mean Annual Cash/In-Kind Transfers Received and Jail Prison Costs of 18-to-64 Year Old
Adults in the U.S. and Their Net Annual Fiscal Contributions, Total and by Educational
Attainment, 2009-2012 Averages
(in Dollars)

	<12 or 12, No HS	HS Diploma or	Some	Associate's	Bachelor's	Master's	
	Diploma	GED	College	Degree	Degree	or Higher	Total
Non-Cash Transfers	4,221	2,400	1,801	1,384	606	429	1,832
Cash Transfers	2,111	1,822	1,760	1,516	975	944	1,550
Total of Cash and Non-							
Cash Transfers	6,332	4,222	3,561	2,900	1,581	1,363	3,382
Jail/Prison Cost	1,151	543	291	156	50	29	394
Total Transfers/Jail or Prison							
Cost	7,484	4,765	3,852	3,055	1,632	1,402	3,776
Taxes Paid Less transfer/Jail							
or Prison Cost	-1,802	4,599	8,028	10,571	19,122	29,516	10,530
Ratio of Taxes Paid to							
transfer/Jail or Prison Cost	0.76	1.97	3.08	4.46	12.72	22.05	3.79

<sup>&</sup>lt;sup>15</sup> <u>See:</u> Scott Davies and Julian Tanner, "The Long Arm of the Law: Effects of Labeling on Employment," <u>The Sociological Quarterly</u>, Volume 44, Number 3, pages, 385-404.

#### Findings on Net Fiscal Contributions of 18-64 Year Old High School Graduates and High School Dropouts Across 15 States

The substantial mean differences in the annual fiscal contributions of U.S. adults by educational attainment over the 2009-2012 time period also prevailed in 15 individual states analyzed separately by the authors of this report (Table 5). The absolute size of these differences in these mean annual fiscal contributions between high school graduates and high school dropouts ranged from lows of \$3,951 in Texas and \$5,019 in California to highs of \$9,500 to \$10,000 in the states of Minnesota, Ohio, and New York. In the latter three states, these mean annual differences in fiscal contributions over the working lives of these two groups of workers would amount to about \$440,000 to \$460,000. These represent substantial fiscal dividends for residents of these states that would help finance the costs of providing goods, services, and capital infrastructure investments for them and their families. Formal education thus can help states and local governments finance their desired set of services for their residents.

Differences Retw	een the Net Annual	Taxes Paid and f	he Cash/ In-k
Incarceration (	Costs Imposed By H	Ligh School Drop	outs and High
Holders 1	18-64 Years Old in	15 States Across	the Nation. 20
			· · · · · · · · · · · ·
			(C)
	(A)	(B)	Difference
State	HS Dropout	HS Graduate	(B-A)
California	13	5,032	5,019
Colorado	-900	5,103	5,913
Florida	-2,252	3,460	5,714
Illinois	-1,602	6,440	8,042
Kentucky	-3,874	3,428	7,302
Maryland	-939	7,088	8,027
Michigan	-5,442	2,683	8,125
Minnesota	-3,091	6,411	9,502
New Jersey	260	8,890	8,630
New York	-4,814	5,198	10,012
Ohio	-4,859	4,739	9,598
Oklahoma	-638	4,647	5,285
Pennsylvania	-3,309	4,647	7,533
Texas	114	4,065	3,951
Virginia	1.174	6,085	4,911

Table 5:

### <u>Appendix A:</u> <u>The Annual Tax Payments, Cash and In-Kind Transfers, Incarceration Costs,</u> <u>and the Net Fiscal Contributions of 18-to-64 Year Old U.S. Adults by</u> <u>Educational Attainment in 15 States</u>

Table A-1:							
The Annual Tax Payments, C	The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal						
Contributions of 18-to-64 Ye	ar Old U.S.	Adults by Educa	ational Attainme	ent in California, 2	2009-		
	<u>2</u>	012 Averages					
		<u>(in Dollars)</u>					
		Total	Taxes Paid -	Ratio of Taxes			
		Transfers/Jail	Transfer/Jail	Paid to			
	Total Tax	or Prison	or Prison	Transfer/Jail			
Educational Attainment	Payments	Cost	Cost	or Prison Cost			
<12 or 12, No HS Diploma	5,368	5,355	13	1.002			
HS Graduate or GED	9,119	4,087	5,032	2.231			
Some College	12,820	3,616	9,204	3.545			
Associate's Degree	15,243	3,190	12,053	4.778			
Bachelor's Degree	23,987	1,459	22,528	16.440			
Master's or Higher	36,612	1,590	35,021	23.022			
Total	15,629	3,336	12,293	4.685			

Table A-2:

The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Colorado, 2009-2012 Averages (in Dollars)

		Total Transfers/Jail	Taxes Paid - Transfer/Jail	Ratio of Taxes Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	6,194	7,094	-900	0.873
HS Graduate or GED	9,556	4,453	5,103	2.146
Some College	11,894	3,520	8,373	3.379
Associate's Degree	12,874	2,992	9,882	4.302
Bachelor's Degree	21,218	1,201	20,017	17.670
Master's or Higher	29,501	1,340	28,161	22.019
Total	15,718	3,115	12,603	5.046

<u>2012 Averages</u>							
	(in Dollars)						
		Total	Taxes Paid -	Ratio of Taxes			
		Transfers/Jail	Transfer/Jail	Paid to			
	Total Tax	or Prison	or Prison	Transfer/Jail			
Educational Attainment	Payments	Cost	Cost	or Prison Cost			
<12 or 12, No HS Diploma	4,651	6,905	-2,253	0.674			
HS Graduate or GED	7,702	4,240	3,461	1.816			
Some College	10,129	3,639	6,489	2.783			
Associate's Degree	10,731	2,673	8,058	4.014			
Bachelor's Degree	15,828	1,709	14,119	9.261			
Master's or Higher	24,306	1,537	22,770	15.817			
Total	11,385	3,470	7,915	3.281			

<u>Table A-3:</u> <u>The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal</u> <u>Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Florida, 2009-</u> 2012 Averages

|--|

The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Illinois, 2009-2012 Averages

(in Dollars)

		Total	Taxes Paid -	Ratio of Taxes
		Transfers/Jail	Transfer/Jail	Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	5,833	7,435	-1,602	0.784
HS Graduate or GED	11,016	4,576	6,440	2.407
Some College	12,985	3,891	9,094	3.337
Associate's Degree	14,551	3,020	11,532	4.819
Bachelor's Degree	23,142	1,564	21,578	14.801
Master's or Higher	33,045	1,169	31,876	28.268
Total	16,499	3,520	12,978	4.687

Contributions of 18-to-64 Ye	ear Old U.S.	Adults by Education	ational Attainm	ent in Kentucky, 20	J
	2	2012 Averages			
		(in Dollars)			
		Total	Taxes Paid -	Ratio of Taxes	
		Transfers/Jail	Transfer/Jail	Paid to	
	Total Tax	or Prison	or Prison	Transfer/Jail	
Educational Attainment	Payments	Cost	Cost	or Prison Cost	
<12 or 12, No HS Diploma	4,943	8,817	-3,874	0.561	
HS Graduate or GED	8,280	4,853	3,428	1.706	
Some College	10,333	4,611	5,722	2.241	
Associate's Degree	13,003	3,026	9,977	4.297	
Bachelor's Degree	16,637	1,642	14,995	10.133	
Master's or Higher	23,134	1,368	21,766	16.909	
Total	11,177	4,357	6,820	2.565	

<u>Table A-5:</u> <u>The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal</u> <u>Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Kentucky, 2009-</u> 2012 Averages

Table A-6:	

The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Maryland, 2009-2012 Averages (in Dollars)

		Total Transfers/Jail	Taxes Paid - Transfer/Jail	Ratio of Taxes Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	7,029	7,968	-939	0.882
HS Graduate or GED	11,442	4,354	7,088	2.628
Some College	14,341	3,243	11,098	4.422
Associate's Degree	15,303	2,825	12,478	5.417
Bachelor's Degree	22,251	1,420	20,831	15.675
Master's or Higher	30,336	853	29,483	35.577
Total	17,283	3,154	14,129	5.479

ear Old U.S.	Adults by Educ	<u>ational Attainm</u>	<u>ent in Michigan, 20</u>	l
2	2012 Averages		-	
_	(in Dollars)			
	<u>()</u>			
	Total	Taxes Paid -	Ratio of Taxes	
	Transfers/Jail	Transfer/Jail	Paid to	
Total Tax	or Prison	or Prison	Transfer/Jail	
Payments	Cost	Cost	or Prison Cost	
5,204	10,646	-5,442	0.489	
8,791	6,108	2,683	1.439	
10,975	4,675	6,300	2.348	
13,229	3,081	10,148	4.294	
19,334	2,062	17,272	9.377	
28,526	1,700	26,825	16.778	
13,376	4,654	8,722	2.874	
	Total Tax <u>Payments</u> 5,204 8,791 10,975 13,229 19,334 28,526 13,376	Ear Old U.S. Adults by Educ           2012 Averages (in Dollars)           Total Transfers/Jail           Total Tax         or Prison           Payments         Cost           5,204         10,646           8,791         6,108           10,975         4,675           13,229         3,081           19,334         2,062           28,526         1,700           13,376         4,654	Ear Old U.S. Adults by Educational Attainm           2012 Averages (in Dollars)           Total Taxes Paid - Transfers/Jail Transfer/Jail           Total Tax         or Prison         or Prison           Payments         Cost         Cost           5,204         10,646         -5,442           8,791         6,108         2,683           10,975         4,675         6,300           13,229         3,081         10,148           19,334         2,062         17,272           28,526         1,700         26,825           13,376         4,654         8,722	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

<u>Table A-7:</u> <u>The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal</u> <u>Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Michigan, 2009-</u> 2012 Averages

 Table A-8:

 The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal

 Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Minnesota, 2009 

 2012 Averages

 (in Dollars)

		Total Transfers/Jail	Taxes Paid -	Ratio of Taxes Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	7,057	10,148	-3,091	0.695
HS Graduate or GED	11,545	5,135	6,411	2.249
Some College	13,861	4,049	9,813	3.424
Associate's Degree	14,917	3,317	11,600	4.497
Bachelor's Degree	21,852	1,332	20,520	16.409
Master's or Higher	30,095	1,155	28,940	26.065
Total	16,598	3,621	12,977	4.584

Contributions of 18-to-64 Yea	ar Old U.S. A	Adults by Educa	tional Attainme	ent in New Jersey, 20
	2	2012 Averages		
		(in Dollars)		
		Total	Taxes Paid -	Ratio of Taxes
		Transfers/Jail	Transfer/Jail	Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	8,150	7,891	260	1.033
HS Graduate or GED	14,003	5,113	8,890	2.739
Some College	17,633	3,767	13,867	4.681
Associate's Degree	19,047	2,929	16,119	6.503
Bachelor's Degree	26,772	2,194	24,578	12.203
Master's or Higher	43,855	1,666	42,188	26.322
Total	21,372	3,827	17,545	5.584

<u>Table A-9:</u> <u>The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal</u> <u>Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in New Jersey, 2009-</u> 2012 Averages

#### Table A-10:

The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in New York, 2009-2012 Averages (in Dollars)

		Total Transforg/Jail	Taxes Paid -	Ratio of Taxes
	Total Tax	or Prison	or Prison	Transfer/Iail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	6,558	11,372	-4,814	0.577
HS Graduate or GED	11,400	6,202	5,198	1.838
Some College	14,015	5,328	8,687	2.630
Associate's Degree	16,573	3,997	12,576	4.147
Bachelor's Degree	23,322	2,436	20,886	9.574
Master's or Higher	36,119	1,672	34,448	21.605
Total	17,677	5,012	12,665	3.527

Contributions of 18-to-64 Ye	ar Old U.S.	Adults by Educa	alional Allainm	ent in Onio, 2009-2	2
		Averages			
		(in Dollars)			
		Total	Taxes Paid -	Ratio of Taxes	
		Transfers/Jail	Transfer/Jail	Paid to	
	Total Tax	or Prison	or Prison	Transfer/Jail	
Educational Attainment	Payments	Cost	Cost	or Prison Cost	
<12 or 12, No HS Diploma	5,334	10,193	-4,859	0.523	
HS Graduate or GED	9,614	4,875	4,739	1.972	
Some College	10,826	4,575	6,252	2.367	
Associate's Degree	12,931	2,999	9,931	4.311	
Bachelor's Degree	19,090	1,537	17,553	12.422	
Master's or Higher	28,542	1,665	26,877	17.140	
Total	12,880	4,302	8,577	2.994	

<u>Table A-11:</u> <u>The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal</u> <u>Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Ohio, 2009-2012</u>

#### Table A-12:

The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Oklahoma, 2009-2012 Averages (in Dollars)

		Total	Taxes Paid -	Ratio of Taxes
		Transfers/Jail	Transfer/Jail	Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	7,102	7,740	-638	0.918
HS Graduate or GED	9,095	4,447	4,647	2.045
Some College	13,242	4,012	9,230	3.301
Associate's Degree	11,783	3,047	8,736	3.867
Bachelor's Degree	21,664	1,687	19,977	12.845
Master's or Higher	26,036	1,577	24,459	16.510
Total	13,463	3,857	9,606	3.491

	<u>200</u>	<u>9-2012 Average</u> (in Dollars)	<u>25</u>	
		~ ~		
		Total	Taxes Paid -	Ratio of Taxes
		Transfers/Jail	Transfer/Jail	Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	6,389	9,698	-3,309	0.659
HS Graduate or GED	9,808	5,585	4,224	1.756
Some College	11,648	4,154	7,494	2.804
Associate's Degree	13,451	3,050	10,401	4.410
Bachelor's Degree	20,320	1,692	18,628	12.013
Master's or Higher	31,245	1,243	30,002	25.130
Total	14,336	4,276	10,060	3.352

Table A-13:
The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal
Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Pennsylvania,
2009-2012 Averages

|--|

The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Texas, 2009-2012 Averages

A	vera	<u>ges</u>
(in	Dol	lars)

		Total Transfers/Jail	Taxes Paid - Transfer/Jail	Ratio of Taxes Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	5,067	4,953	114	1.023
HS Graduate or GED	7,982	3,917	4,065	2.038
Some College	10,596	3,293	7,303	3.218
Associate's Degree	12,061	2,935	9,126	4.109
Bachelor's Degree	19,425	1,333	18,091	14.568
Master's or Higher	27,392	952	26,440	28.772
Total	11,913	3,195	8,718	3.728

Table A-15:
The Annual Tax Payments, Cash and in-Kind Transfers, Incarceration Costs, and the Net Fiscal
Contributions of 18-to-64 Year Old U.S. Adults by Educational Attainment in Virginia, 2009-
2012 Averages
<u>(in Dollars)</u>

		Total Transfers/Jail	Taxes Paid - Transfer/Jail	Ratio of Taxes Paid to
	Total Tax	or Prison	or Prison	Transfer/Jail
Educational Attainment	Payments	Cost	Cost	or Prison Cost
<12 or 12, No HS Diploma	8,035	6,861	1,174	1.171
HS Graduate or GED	10,140	4,056	6,085	2.500
Some College	14,678	3,176	11,502	4.622
Associate's Degree	15,524	2,751	12,773	5.643
Bachelor's Degree	23,052	1,066	21,986	21.628
Master's or Higher	37,620	1,311	36,308	28.685
Total	17,958	2,983	14,975	6.021

### <u>Appendix B:</u> <u>Methods for Estimating the Annual Federal and State Income Taxes Paid by</u> <u>Husbands and Wives in Married Couple Families</u>

In computing the annual federal and state income tax payments of adults in the March CPS Annual Social and Economic Supplement, the U.S. Census Bureau adopts a different practice for husbands and wives in married couple families than it does for all other individuals with incomes during the year. For married couple families, the U.S. Census Bureau adopts the assumption that the couple files a joint federal and state income tax return. Research staff then estimate the federal and state income tax liability for the married couple and assign the entire federal and state income tax liability to the head of the married couple family. The householder of this married couple family can be either the husband or the wife. In approximately 85 percent of the cases, the householder in a non-elderly married couple family is the husband.<sup>16</sup> For all other individuals, whether living in families or in non-family households, the federal and state income tax liability appears on their personal record. Given the above practice in assigning income tax liabilities to the head of a married couple family, we cannot identify from the existing March CPS records the specific federal and state income tax liability of the husband and spouse in a married couple family. To avoid exaggerating the income tax payments of the heads of married couple families and severely underestimating the income tax payments of the spouses in such families, we developed a set of computer programming instructions with the statistical package that allowed us to generate separate estimates of the federal and state income tax liability of husbands and wives.

The procedures used to estimate husband/wife income tax liability can be summarized as follows. We first calculated the percentage shares of joint husband/wife earnings during the year that were earned by the family head and the spouse. The family head's percentage share of earnings (e.g., 70%) was then multiplied by the estimated joint federal income tax liability of the married couple to estimate his (her) federal income tax payments. Suppose that the married couple's federal income tax liability was \$20,000 and the head obtained 70% of the combined earnings during the year. The head's federal income tax liability was computed to be \$20,000 \* .70 = \$14,000. The remaining \$6,000 in federal income tax liability was then assigned to the

<sup>&</sup>lt;sup>16</sup> Our definition of a non-elderly family is one whose head is an individual under the age of 65.

spouse.<sup>17</sup> The same statistical procedures were used to compute the state income tax payments of the husband and wife.

### <u>Appendix C:</u> <u>Estimating State Sales Tax Payments for Individuals</u>

The U.S. Census Bureau does not provide any estimates of annual state sales tax payments for persons interviewed during the March CPS survey. In our fiscal impact analyses, we have estimated state sales tax payments for individual adults in the U.S. by using a combination of personal income data from the 2012 ACS survey and sales tax tables for individual states published annually by the U.S. Department of Treasury's Internal Revenue Service (IRS). In our analysis of state sales taxes, we applied a single person exemption to each individual respondent ages 18-64 with a positive income. For each person in our analysis, we assigned state sales tax payment equal to the IRS sales tax deduction for a person in that particular state with their annual income in 2012. Below is a sample table of the allowable sales tax deductions for residents of California in 2012.

<sup>&</sup>lt;sup>17</sup> In a married couple family, the spouse can be either the husband or wife depending on which of the two was classified as the family householder.

Income		Exemptions					
	But less						
At least	than	1	2	3	4	5	Over 5
<b>\$</b> 0	\$20,000	\$307	\$329	\$343	\$353	\$361	\$372
\$20,000	\$30,000	\$493	\$528	\$550	\$566	\$579	\$596
\$30,000	\$40,000	\$588	\$630	\$655	\$674	\$689	\$710
\$40,000	\$50,000	\$669	\$716	\$745	\$767	\$784	\$807
\$50,000	\$60,000	\$742	\$794	\$826	\$850	\$869	\$895
\$60,000	\$70,000	\$809	\$865	\$900	\$926	\$946	\$974
\$70,000	\$80,000	\$871	\$932	\$970	\$997	\$1,019	\$1,049
\$80,000	\$90,000	\$929	\$994	\$1,034	\$1,063	\$1,087	\$1,119
\$90,000	\$100,000	\$984	\$1,052	\$1,095	\$1,126	\$1,151	\$1,184
\$100,000	\$120,000	\$1,056	\$1,129	\$1,175	\$1,208	\$1,235	\$1,271
\$120,000	\$140,000	\$1,155	\$1,235	\$1,285	\$1,321	\$1,350	\$1,389
\$140,000	\$160,000	\$1,242	\$1,327	\$1,380	\$1,419	\$1,451	\$1,493
\$160,000	\$180,000	\$1,328	\$1,419	\$1,476	\$1,517	\$1,551	\$1,596
\$180,000	\$200,000	\$1,405	\$1,501	\$1,561	\$1,605	\$1,641	\$1,688
\$200,000 or	r More	\$1,790	\$1,912	\$1,988	\$2,044	\$2,088	\$2,148

<u>Appendix Table C-1:</u> Optional State Sales Tax Tables, California, 2012

**Source:** Internal Revenue Service, "State and Local General Sales Taxes", <u>Publication 600</u>: 2012, <u>www.irs.gov</u>.

#### Appendix D: Estimating Jail/Prison Costs of Adults Ages 18-60

To estimate rates of institutionalization among the non-elderly adult population of the U.S., we analyzed the findings of the 2010-2012 American Community Surveys, which interviewed residents of group quarters, including institutions such as jails and prisons. The ACS survey identified the institutionalization status of each adult respondent. This group includes those persons who were under supervision in correctional facilities (jails/prisons), nursing/skilled nursing facilities, mental (psychiatric) hospitals, in patient hospice facilities, and group homes for juveniles. The public use files for the ACS survey unfortunately do not identify the specific type of institution in which these individuals were living at the time of the survey. Nationally, the U.S Census Bureau's publication of institutionalization data from the 2010-2012 ACS survey revealed that a substantial majority (over 89 percent) of the members of the institutionalized population between the ages of 15 and 64 were inmates of correctional facilities. Since our analysis of the costs of incarceration are restricted to adults between ages 18 and 60, the share of the institutionalized population that was in correctional facilities is expected to be larger than 89 percent since older adults (60-64) who are institutionalized are more likely to be in nursing homes and less likely to be in correctional facilities and very few persons 15-17 are in jail or prison.

The U.S. Bureau of Justice Statistics estimated the annual costs per state prison inmate for the entire nation in 2001. By adjusting this per inmate cost for inflation between 2001 and 2012, the cost per inmate for 2012 was derived. By multiplying the institutionalization rate for each educational group of adults from the 2010-2012 American Community Survey by the per inmate cost, we can estimate the average annual costs of institutionalization per adult in each educational attainment group. The assumption underlying these calculations is that the annual costs of housing inmates in each of the other correctional institutions are the same as those of state prisons.