INCOME DISTRIBUTION DATA REVIEW – UNITED STATES

1. Available data sources used for reporting on income inequality and poverty

1.1. OECD reporting:

The OECD income distribution and poverty indicators for the United States are provided by *US Census Bureau of Statistics* and calculated on the basis of internal files from the *Annual Socio-Economic Supplement* (March Supplement) of the *Current Population Survey* (CPS ASEC)[49].

The CPS ASEC collects information based on a *standard income definition* (i.e. gross annual income in the previous calendar year), with results disseminated in September. The Census Bureau integrates these data with model-based estimates of income and payroll taxes paid by workers and of quasi-cash benefits received from public programmes (e.g. food stamps). These estimates are combined to survey data to obtain estimates on an *extended income definition*, released in November each year. These are the files used by the OECD.

Data currently available at the OECD refer to income earned in 1974, 1984, 1989, 1995, 2000, 2005, 2008 and 2010. The only break in the time-series occurred in 1993, when a move to a computer-assisted data collection and changes in top coding lead to a higher response rate from high-income respondents.[50] While it is not possible to correct for the latter factor, Burkhauser *et al.* (2008) suggest that the application of a consistent imputation method would have (slightly) increased estimates of the Gini coefficients for years before 1993 relative to those base on the 'unadjusted' internal data.[51]

1.2. National reporting

The main source for national reporting on income distribution and poverty is the US Census Bureau CPS ASEC. This collects information based on gross annual income in the previous calendar year and provides data grouped by a range of characteristics, such as family status, race and Hispanic origin, age, nativity, region, and residence. This is the source also used by the Luxembourg Income Study (LIS), which relies on the Public use micro-data from the US Census. This PUF relies on top-coding that changes over time; this implies some inconsistencies in the LIS time series that are not present in the OECD database. The CPS ASEC is the most timely and accurate national source on household income and it is the basis for computing the official poverty estimates. The Census Bureau recommends it as the preferred source for national analysis.

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[49]   *The Annual Socio-Economic Supplement* (March Supplement) provides data concerning family characteristics, household composition, marital status, education attainment, health insurance coverage, foreign-born population, previous year's income from all sources, work experience, receipt of noncash benefit, poverty, program participation, and geographic mobility.

[50]   Analysis of the 1993 inequality statistics suggested that the increase in the maximum amounts that could be reported by respondents accounts for about 1.8 percentage points (about one-third) of the 5.2 percent increase in the mean income of people in top quartile of the distribution from 1992 to 1993. When also considering the contribution of the switch to CAPI, the total impact of changes in survey methods raises to over one-half of the increase. See P. Ryscavage, *"A Surge in Growing Income Inequality?,"* Monthly Labor Review, August 1995, pp. 51-61.

[51]   Burkhauser R.V., S. Feng, S. Jenkins and J. Larrimore (2008), "Estimating trends in US income inequality using the current population survey: the importance of controlling for censoring", NBER Working Paper 14247.

The CPS ASEC is also used by the Luxembourg Income Study (LIS), which relies on the public use micro-data CPS-ASEC files. Since October 2011, the LIS data (as reported in *Inequality and Poverty Key Figures.*) moved from a concept of cash disposable household income to an enlarged concept which includes non-monetary income from labour and from both public and private transfers. The public use CPS-ASEC files are affected by several changes in the top coding applied to the income of the richest households, which leads to some inconsistencies in the reported time-series (which are not present in the OECD series).

The main measure used in national reporting is the "official poverty rate", based on the Office of Management and Budget's (OMB) Statistical Policy Directive 14. The first official U.S. poverty estimates were released in 1964, and have undergone minimal changes since then (limited to the upgrading of the poverty threshold for annual CPI inflation (CPI-U).[52] Since November 2011, the Census Bureau also reports a "supplemental poverty measure", based on the specifications drawn by an interagency technical working group and on the recommendations of a 1995 National Academy of Science report. The new measure incorporates additional items such as tax payments and work expenses in the estimates of family resources, and on thresholds derived from the Consumer Expenditure Survey referring to expenditures on basic necessities (food, shelter, clothing, and utilities) adjusted for geographic differences in the cost of housing.[53]

Beyond the CPS-ASEC, the Census Bureau reports poverty data from several other household surveys and programs. In addition, income inequality and poverty estimates are reported by a number of other agencies based on additional national sources, which are described below.

Additional national sources

The *Survey of Income and Program Participation* (SIPP) is a panel survey providing detailed information on participation in transfer programs. The survey, which is conducted by the Census Bureau, also provides data on different income sources (wages and salaries, cash benefits from social insurance and welfare programs, returns from property, assets, and holdings), as well as labour force participation and health insurance coverage. Data are reported for individuals, families, and households during the time span covered by each of its panels. The survey started in 1984 (the first interview was conducted in October 1983) and was redesigned in 1996. The duration of each panel ranges from 2 ½ years to 4 years. The U.S. Census Bureau is currently redesigning the survey to reduce respondent burden and attrition, and to deliver data on a more timely basis, while keeping its focus on the same topic areas of the earlier SIPP panels.

The *Panel Study of Income Dynamics* (PSID), directed by the University of Michigan and funded by the National Science Foundation, is the longest nationally representative household panel survey in the world. PSID data have been collected annually from 1968 to 1996 and biennially since 1997. It gathers

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[52]   The CPI-U is used to update the thresholds of the official poverty measure for changes in the cost of living (as indicated by the Office of Management and Budget's (OMB) Statistical Policy Directive 14). An alternative price index is the Consumer Price Index Research Series (CPI-U-RS), which presents an estimate of the CPI for all Urban Consumers (CPI-U) that incorporates a range of methodological improvements made over that period. The Census Bureau uses the CPI-U-RS, computed by the U.S. Bureau of Labor Statistics from 1977 through 2011 to adjust for changes in the cost of living in income and earnings over time.

[53]   The official poverty measure is used by all federal agencies in their statistical work. However, government aid programs do not have to rely on it as eligibility criteria. Many government aid programs use a different poverty measure following the Department of Health and Human Services (HHS) poverty guidelines or variants thereof, and each aid program may define eligibility differently.

data on family and individuals income, employment, wealth, expenditures, health, marriage, childbearing, child development, philanthropy, education, and numerous other topics.

The *Survey of Consumer Finances* conducted by the National Opinion Research Center (NORC) of the University of Chicago and sponsored by the Federal Reserve Board, is a triennial cross-sectional survey of US families. While the main focus is the distribution of wealth, SCF also provides information on income distribution, based on information on the family's cash income, before taxes, for the full calendar year preceding the survey. Data are available for 1962-1963 and every three years from 1983 to 2010. [54] The survey provides information on families' balance sheets, pensions, income, and demographic characteristics, and includes information from related surveys of pension providers. The income component considered in SCF includes wages; self-employment and business income; taxable and tax-exempt interest; dividends; realized capital gains; food stamps and other support programs provided by government; pensions and withdrawals from retirement accounts; Social Security; alimony and other support payments; and miscellaneous sources of income for all members of the primary economic unit in the household.

The *Congressional Budget Office* (CBO) occasionally presents analysis on income distribution based on a combination of income-tax files (from the "Statistics on Income", a nationally representative sample of individual income tax returns from the Internal Revenue Service, IRS) and CPS ASEC data. Data are available from 1979 to 2009. CBO reports separately on market and disposable income. Market income includes labour income (i.e. cash wages and salaries, including those allocated by employees to 401(k) plans), employers' health insurance premiums and their share of Social Security, Medicare, and federal unemployment insurance payroll taxes); business income (i.e. net income from businesses and farms operated solely by their owners, partnership income, and income from corporations); capital gains (i.e. profits realized from the sale of assets); capital income (i.e. taxable and tax-exempt interest, dividends paid by corporations, positive rental income, and corporate income taxes). Disposable income is the sum of market and transfer income (i.e. Social Security, unemployment insurance, Supplemental Security Income, Aid to Families with Dependent Children, Temporary Assistance for Needy Families, veterans' benefits, workers' compensation, and state and local government assistance programs and the value of in-kind benefits such as food stamps, school lunches and breakfasts, housing assistance, energy assistance, Medicare, Medicaid, and Children's Health Insurance Program) less taxes paid (i.e. payroll taxes, corporate income taxes, federal excise taxes). The CBO adjusts the household income with the square root of the size of the household as equivalence scale.

Sub-national sources

The U.S. Census Bureau conducts the *American Community Survey* (ACS), which provides annual estimates of median household income and poverty by state and other smaller geographic units. Single-year estimates are available for geographic units with populations of 65,000 or more; estimates based on the polling of 3 years of data are available for counties and places with populations of 20,000 or more; and estimates based on the polling of 5 years of data are available for all geographic units, including census tracts and block groups. Sub-national survey data are available from year 2005 to 2010.

The Census Bureau's *Small Area Income and Poverty Estimates* (SAIPE) programme also produces single-year estimates of median household income and poverty for states and counties, as well as population and poverty estimates for school districts. These data are model-based single-year estimates resulting from the combination of data from administrative records, intercensal population estimates, and the decennial census with direct estimates from the American Community Survey (from 2005)[55]. The

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[54]   Over the periods 1983–1989 and 2007–2009, the survey also collected panel data)

[55]   Previous years used the CPS ASEC.

resulting estimates have lower variances than ACS estimates but are released later. Data are available for years 1989, 1993 and from 1995 to 2010.

The below table presents the main characteristics of the sources above mentioned:

www.oecd.org/social/inequality.htm

	National sources					Subnational sources		International sources
	Annual Socio-Economic Supplement of the Current Population Survey (CPS ASEC)	**Survey of Income and Program Participation(SIPP)**	**Panel Study of Income Dynamics (PSID)**	**Survey of Consumer Finances (SCF)**	**Congressional Budget Office reports**	**American Community Survey(ACS)**	**Small Area Income and Poverty Estimates (SAIPE) program**	**LIS database**
Name	Annual Social and Economic Supplement to the Current Population Survey (CPS ASEC)	Survey of Income and Program Participation(SIPP)	Panel Study of Income Dynamics (PSID)	Survey of Consumer Finances (SCF)	Two primary sources: the Statistics of Income (SOI), collected by the Internal Revenue Service, and the Current Population Survey (CPS), collected by the Census Bureau.	American Community Survey (ACS)	Small Area Income and Poverty Estimates (SAIPE) program combines data from administrative records, intercensal population estimates, and the decennial census with direct estimates from the American Community Survey.	Annual Social and Economic Supplement to the Current Population Survey (CPS ASEC) of the U.S. Census Bureau
Name of the responsible agency	U.S. Census Bureau (the CPS is sponsored jointly with the U.S. Bureau of Labor Statistics (BLS))	U.S Census Bureau	University of Michigan	Sponsored by the Board of Governors of the Federal Reserve System with the cooperation of the U.S. Department of the Treasury. Since 1992 data collected by the National Opinion Research Center (NORC) of the University of Chicago.	Congressional Budget Office	U.S. Census Bureau	U.S. Census Bureau	LIS cross-national data center in Luxembourg (having U.S. Census Bureau as data provider)
Year (survey and income/wage)	Annual income data referring to years from (1959) 1967 to 2010	From 1983 to 1992 a new panel of households was introduced each year in February, then 1996 (4-year panel), 2001 (3-year panel) , 2004 (2 ½ year) and 2008 (on-going) panels	1968-1997 annual data. After 1997 biennial data (starting then from 1999).	Triennial cross-sectional survey from 1962, but over the 1983–1989 and 2007–2009 periods the survey collected panel data.	Annual income data referring to years from 1979 to 2009	Fully implemented from 2006 (Data referring to year 2005)	1989, 1993 and from 1995 to 2010 data years	1974, 1979, 1986, 1991, 1994, 1997, 2000, 2004, 2007, 2010
Period over which income is assessed	Calendar year prior to the year in which the data are collected	Four-month period preceding the interview month	Calendar year prior to the year in which the data are collected	Calendar year preceding the survey	Calendar year prior to the year in which the data are collected	Previous 12 months	Previous 12 months from 2005 onwards, calendar year prior to the year in which the data are collected before 2005	See CPS ASEC
Covered population	Civilian non-institutional population and it includes military personnel who live in a household with at least one other civilian adult, regardless of whether they live off post or on post. All other Armed Forces are excluded.CPS coverage varies with age, sex, and race. Generally, coverage is larger for females than for males and larger for non-Blacks than for Blacks Private Households.	Civilian non-institutionalized population living in the United States	Families (Members of the families who moved away from their original households are also followed: new families, members going to an institution... as well as new family members, but only until when they are part of the family)	Households (private and collective)	Individuals who did file an income tax return complemented with individual covered by the population covered by the CPS ASEC	Households and from 2006 also Group Quarters people (GQ)	See ACS	Individuals and households

Table 1. Characteristics of datasets, United States

www.oecd.org/social/inequality.htm

	Col1	Col2	Col3	Col4	Col5	Col6	Col7	Col8
Sample size	75,188 interviewed households containing 204,983 persons (2011 survey).	The effective sample size can range from approximately 14,000 to 36,700 interviewed households, depending on the panel (43,609 eligible Household units in wave 6 of the 2008 Panel)	8690 families and 24385 individuals (2009)	4422 households (2007) and 3,862 households (2009)	295,133 individual tax returns in 2009 statistically matched and complemented with CPS ASEC records.	2,128,104 household unit and 150,052 for group quarters people (2011)	na	See CPS ASEC
Sample procedure	Multistage probability sample for CPS, plus an additional sample for ASEC to provide more reliable data on Hispanic households identified the previous November	The survey design is a continuous series of national panels with multistage-stratified sample. The duration of each panel ranges from 2 ½ years to 4 years.	Panel survey (dynamic longitudinal follow up of families and their descendants originally identified in a combination of three probability samples: a nationally rapresentative sample of families designed by the Survey Research Center at the University of Michigan (the "SRC sample"), an over-sample of low income families from the Survey of Economic Opportunity (the "SEO sample") and the the 1997 Immigrant refresher sample (to include individuals who arrived in the United States after 1968).	Dual-frame design (area-probability sample and list sample). The area-probability sample provides broad national coverage and a sample of households selected with equal probability. The 2007 list sample was selected using a model applied to a set of statistical records derived from individual income tax returns by the Statistics of Income (SOI) Division of the Internal Revenue Service. The model was used to rank taxpayers in seven strata ordered by estimated wealth and sample observations with higher levels of predicted wealth at a higher rate. The two samples are then combined with weights.	For SOI: Stratified probability samples of tax or information returns; For CPS ASEC see the specific column	Two-phase, two-stages stratified sampling. The first-phase sample consists of a definition of two separate samples, Main and Supplemental, each chosen at different points in time (during the summer preceding the sample year and in January/February of the sample year respectively). The Main sample covers approximately 99 percent of the sample, the Supplementary around 1 percent. Both the Main and the Supplemental samples are chosen in two stages. The first stage defines the universe for the second stage and then the second-stage sampling uses 16 sampling strata. Then subsequently to second-stage sampling, sample addresses are randomly assigned to one of the twelve months of the sample year. The second-phase sample selection aims to subsample the unmailable and non-responding addresses for the CAPI (Computer Assisted Personal Interview) .	na	See CPS ASEC
Response rate	83.8%	76.7% (wave 6 of 2008 Panel)	97.4% (core part) and 89.8% (immigrant part) in 2009	70% (2007), 89% (2009 conditional to 2007)	na	97.6% household units and 96.9% group quarters people (2011)	na	See CPS ASEC
Imputation of missing values	Yes (hot-deck imputation)	Adjustment factors applied for missing rotating groups	Yes	Yes	na	Yes	na	Not additionally to what done by the U.S. Census Bureau
Unit for data collection	Individuals and households	Individuals and households	Individuals and families	The majority of the questionnaire focus on the "primary economic unit" (PEU), which includes all people in the household who are economically interdependent with the respondent and/or his or her spouse or partner.	Individuals and households (Statistical match of each SOI record to a corresponding CPS record on the basis of demographic characteristics and income. For the households who have not to file tax returns, the remaining CPS records were recorded as households who did not file an income tax return, and their income values were taken directly from the CPS.).	Individuals and households	na	Individuals and households
Break in series	In 1993 associated to the move from a paper questionnaire to a computer-assisted data collection. The CB doesn't correct for it.				na			See CPS ASEC
Web source:	http://www.census.gov/cps/	http://www.census.gov/sipp/overview.html	http://psidonline.isr.umich.edu/default.aspx	http://www.federalreserve.gov/econresdata/scf/scfindex.htm	http://www.cbo.gov/publication/43373	http://www.census.gov/acs/www/	http://www.census.gov/did/www/saipe/	http://www.lisdatacenter.org/

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2. Comparison of main results from OECD and alternative sources

2.1   Income

2.1.1 Time series of Gini coefficients and other inequality indicators

According to the OECD income distribution database, income inequality among total population in the United States has steady increased from 1974 to 2010. The rise was at a regular pace until 1993, when the series recorded an upward shift. The 1993 upward shift was followed by a decrease of the Gini index until 1999 and a subsequent rise until 2010, where the Gini index was 0.38. A similar trend emerges from other sources, all based on the Census Bureau's CPS ASEC.

The national headline Gini index published in the Census Bureau's CPS ASEC shows a smoother increase in inequality and levels that are between 0.08 and 0.11 points higher than the OECD reference series. The difference can be explained by the use of a different income definition (the Census Bureau does not include taxes nor the value of noncash benefits) and by the fact that the series is computed at the household level, while the OECD reference series refers to distribution among individuals (based on a square root scale applied to household disposable income). The Census Bureau also published (CPS ASEC based) Gini coefficients at the person level, based on a three-parameter equivalence scale and or the experimental post-tax incomes.[56] Values of the Gini coefficient based on this definition are lower than the national headlines series (by between 0.05 and 0.09 points), but are still higher than the OECD reference series (by between 0.05 and 0.07).[57]

The Gini index published by the Congressional Budget Office (CBO) is close to (and identical in some years) to the Census Bureau's series, but has a more jagged pattern with peaks in 1986 (with a Gini index of 0.433), 1988 (0.41), 2000 (0.452) and 2007 (0.465). On the other hand, the CBO series shows a much clearer decline in the mid-90s and in 2001-2002. The CBO series, being based on income tax records, should better capture developments at the high end of the distribution[58].

The LIS time series for the Gini presents the same pattern as the OECD series (both rely in the same equivalence scale) but do not match perfectly due to slightly different disposable income definition and

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[56]   The Census Bureau defines post-tax household income as total household cash income (including realised capital gains) less taxes. They compute post-tax household income both with and without the addition of the earned income tax credit (EITC**)**.

[57]   When comparing the OECD Gini values before taxes and transfers with the Census Bureau's equivalised one, the values almost completely coincide, with only small differences due to the different equivalence scale used.

[58]   Piketty and Saez also found that income concentration began to rise in the late 1970s and continued to grow thereafter. Their analysis is based on published tax return statistics, and it uses a market-income definition. The key advantage of those data, as well as the data used by the CBO, is that they are comprehensive at the top of the income distribution, where much of the change in the income distribution has occurred. One drawback of tax return data alone, however, is that they only cover the portion of the population filing tax returns, so they cannot yield distributional statistics for the full population. In addition, they cannot capture income that is not reported on tax returns. See Piketty and Saez, *Income Inequality in the United States*.

data availability.[59] A rise of income concentration from the late 1970s has also been documented by Piketty and Saez and by Burkhauser and others.[60]

Figure 1.1 Trends in Gini coefficient
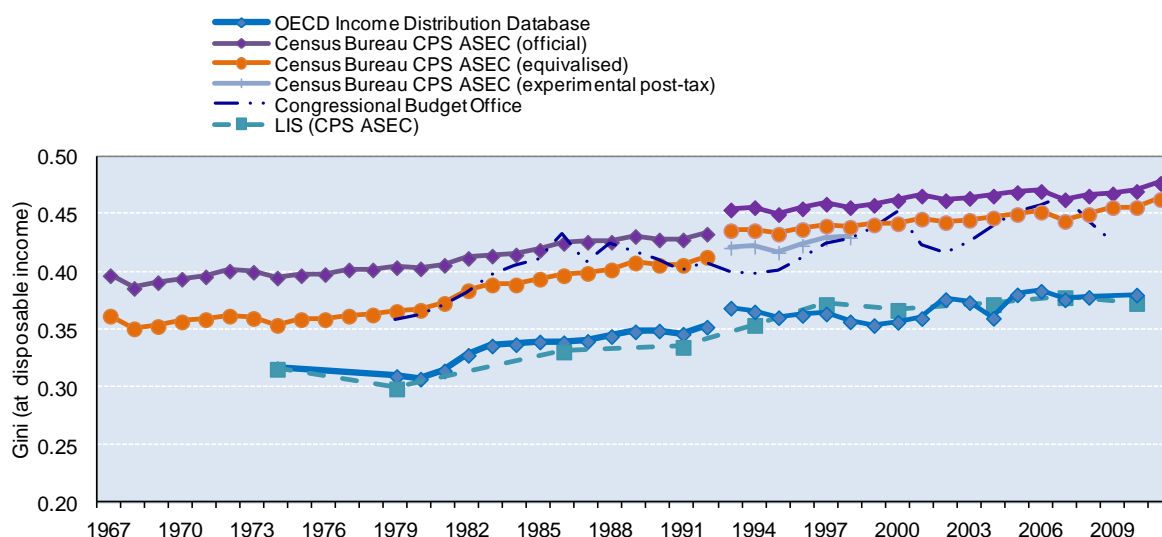
The increase of income inequality over time is also corroborated by the income quintile share ratio (S80/S20). The OECD income quintile share ratio increased from 6.9 in 1995 to 7.9 in 2010. An increasing trend, at a higher pace, is also highlighted by the CPS ASEC data on a standard income definition, which do not include taxes and quasi-cash benefits received from public programmes. Data sourced from the Congressional Budget Office, show a rise that is similar to that in the OECD reference series, with differences linked to different data assessments and data availability[61]. The income quintile share ratio confirms the same pattern of the Gini (and presents the same upward shift in 1993). As for the Gini index, the CPS ASEC series presents higher levels of income inequalities than the OECD reference series, for the same reasons stated above; they are also more variable over time, due to their higher frequency. The CBO series shows a decline in the inequality in mid-90s and in 2001-2002, not shown by other sources, while the decline in 2009, not confirmed by other sources, could reflect revisions after the publication of the CBO report and not incorporated in the report.

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[59]   The LIS series cover 1974, 1979, 1986, 1991, 1994, 1997, 2000, 2004, 2007 and 2010.

[60]   Richard Burkhauser and his coauthors, using internal Census Bureau data, found that the rate of increase in inequality has slowed substantially since the mid-1990s. They computed Gini indexes using a before-tax, after-transfer measure of household cash income, excluding capital gains, was adjusted for differences in household size using the square root of household size. They found that the Gini index grew at an annual rate of 0.14 percent after 1993, in contrast to a growth rate of 0.74 percent in the 1975–1992 period. Even though they found little increase in income inequality after 1993, their analysis did not reject the possibility that inequality could have increased among the highest income households, so they concluded that their results were not inconsistent with those of Piketty and Saez. An increase among the highest-income households may explain the slower growth in measured income inequality after 1993. (Richard Burkhauser and others, *Estimating Trends in US Income Inequality Using the Current Population Survey: The Importance of Controlling for Censoring,* Working Paper 14247 (Cambridge, Mass.: National Bureau of Economic Research, August 2008).

[61]   As the OECD reference series covers nine data points (1974, 1984, 1989, 1995, 2000, 2005, 2008, 2010), while the CBO series is an annual data series from 1979 to 2009.

Data from the Survey of Income and Program Participation (SIPP), which allows examining changes in the annual income of the same households, are available for the years 1997, 1999, 2001, 2003, 2004 and 2006. These data confirm the trend of increasing inequality, with a peak in 2003[62].

Figure 1.2 Trends in income share quintile ratio S80/S20
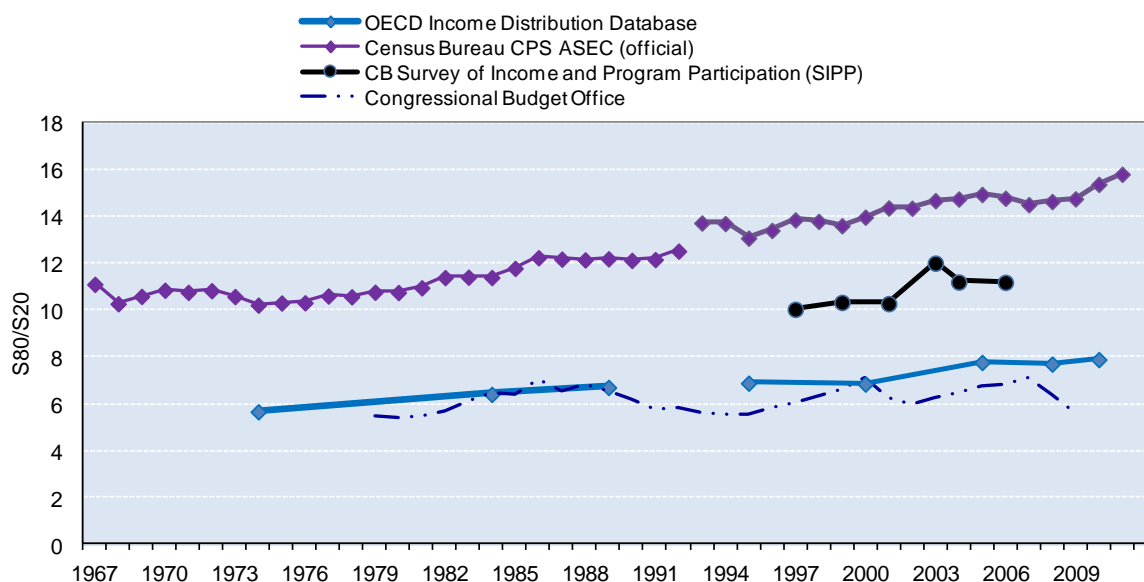
2.1.2 Time series of poverty rates

According to the OECD database, the share of the population living with less than 50% of the median equivalised income (29 056 dollars per year in 2010) has increased continuously since 1974, reaching 17.4% in the 2010, 2 points higher than in 1974. The poverty rate increased from 1979 to 1983, flattening until 1993 (with a peak of 18.4% in 1987) and then slightly declining until the beginning of the 2000s. Since then, the series resumed its upward trend.

A similar pattern, but more pronounced and variable, emerges when looking at the official poverty figures published in the CPS ASEC. Compared to 1974, poverty increased more than 3 point reaching 15% in 2010. Unlike the OECD reference series, the official poverty rate declined from 1983 to 1990 and from 1993 to 2000; it also declined before 1974. The official poverty estimates are between 2 and 5 percentage points lower than the OECD reference series. In the Figure below, both the Census Bureau's official poverty measure (using the Consumer Price Index for All Urban Consumers, CPI-U) and the measure based on the Consumer Price Index Research Series Using Current Methods (CPI-U-RS) are presented. The two measures differ only for the years before mid-90s, with the CPI-U-RS series showing higher poverty. The Census Bureau's Supplemental poverty measure is also shown for the years for which it is available (2009 and 2010). It shows a pattern similar to the official poverty, but slightly higher as it incorporates additional items as tax payments.

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[62]   This is explained by the fact that only the top quintile in the panel experienced a significant increase in the share of total household income between 2001 and 2003, while for the other quintiles it remained statistically unchanged. (*Dynamics of Economic Well-Being: Fluctuations in the U.S. Income Distribution, 2004–2007* http://www.census.gov/prod/2011pubs/p70-124.pdf)

An average monthly poverty measure and a poverty measure calculated using the annual income and threshold[63] are published by the Census Bureau based on the Survey of Income and Program Participation (SIPP) for the years 1987, 1990-98, 2001-07 and 2009 (2001-2006 only for the annual income measure). The two series display patterns and levels similar to the CPS ASEC series, except in mid-90s, where the SIPP monthly average series peaks, while the CPS ASEC series decreases. The annual SIPP series is lower than below the CPS ASEC series SIPP typically reports more income (and therefore lower annual poverty) than the CPS ASEC.

The LIS series has pattern and magnitude similar to the OECD series, with minor differences due to the LIS more limited time coverage. The small differences for the same year can be explained by different definitions of disposable income in the two sources.

Figure 2.1 Trends in poverty rates
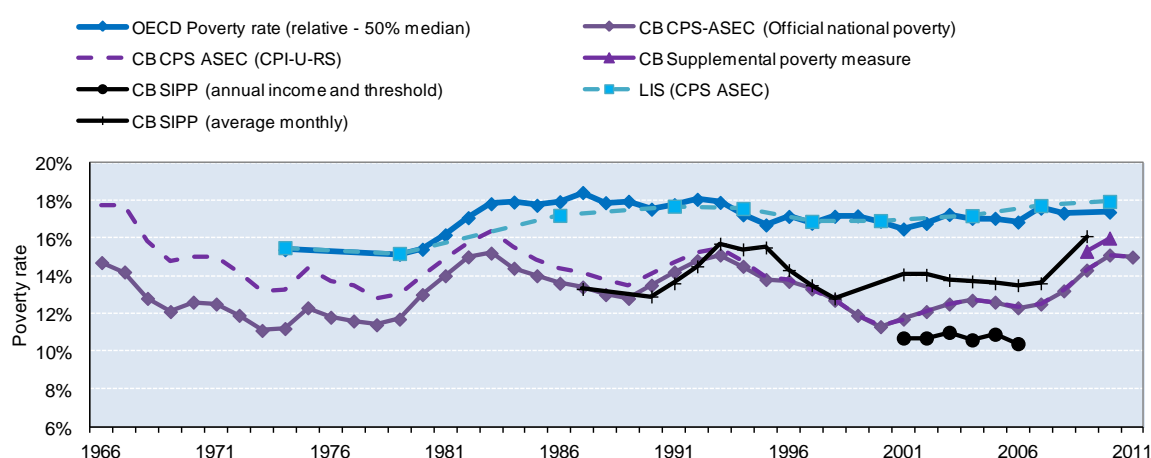
2.2   *Wages*

See Part II of the present Quality Review.

3. Consistency of income components across different surveys

3.1. *Comparison of main aggregates: earnings; SE income; capital income; transfers; taxes*

When comparing the composition of the average equivalised disposable income of the OECD reference survey (based on CPS ASEC) with the CBO series (based on the tax files and CPS ASEC), shares of disposable income generally match. Wages represent a slightly higher share in the OECD reference series, as the CBO disposable income series includes other components (e.g. capital gains, other income, additional transfers) not included in the CPS ASEC. Furthermore, the CBO series shows income levels that are always higher than in the CPS ASEC, as the income taxes records tend to capture better high-income households. Additionally the tax files collects detailed information on income components (as

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[63]   Panel and yearly estimates contain different samples. 3-year panel estimates include only respondents in the panel for 10 waves whereas calendar year estimates include people in sample for 12 months. The total number of respondents in each sample is as follows: 27,840 in the 3-year panel, 86,128 in 2004, 76,953 in 2005, and 34,372 in 2006.   In wave 9 of the SIPP 2004 Panel, there was a 53% sample reduction. However, the calendar year weight for 2006 and the 3-year panel weight correct for that sample reduction.

capital gains and other income from capital) excluded from the OECD reference series, as well as on taxes, which are estimated by the Census Bureau in the OECD series.

Table 2. Main income aggregates, USA

		Survey	Year	Unit	Wages	Capital		Self Employment		Transfers	Taxes	Disposable income
												(HDI)
OECD reference suvery	CPS ASEC	2008	natcur	35,109	3,766		2,318		3,779	-9,256	35,717
				% av HDI	98.3%	10.5%		6.5%		10.6%	-25.9%	
					Income		Capital gains	Business income	Other income			
Other INCOME survey	SOI & CPS ASEC	2008	natcur	55,894	6,512	3,739	5,105	5,785	10,258	-15,761	71,532
				% av HDI	78.1%	9.1%	5.2%	7.1%	8.1%	14.3%	-22.0%	

Figure 4 compares trends in shares of public cash transfers in equivalised disposable income from the OECD reference series with the share of total cash social spending in net national income, reported from the OECD Social Expenditure database (OECD SOCX). OECD SOCX series include pensions, incapacity, family, unemployment, social assistance. Both series show similar trends throughout the period. The two series display a similar profile, with trends over time moving in the same direction..

Figure 4 Trends in shares of public social transfers
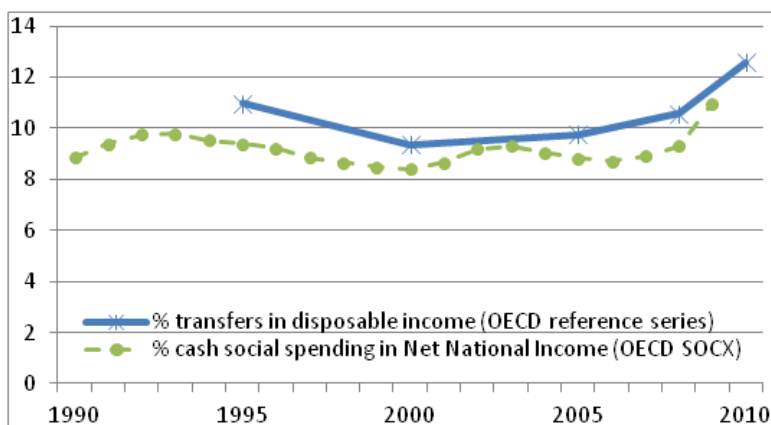
4. Metadata of data sources which could explain differences and inconsistencies

There are several methodological differences between the OECD Terms of References and the methodology used by the Census Bureau for its own national publications based on the CPS ASEC. The main differences are as follows:

- *Unit of report and equivalence scale:* Inequality is generally reported by the Census Bureau across households rather than across individuals, and no 'equivalisation' is applied to official income data.[64]

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[64] Nevertheless the Census Bureau publishes also selected measures of equivalence-adjusted income dispersion. The equivalence adjustment used is based on a three-parameter scale that reflects that: i) on average, children consume less than adults; ii) as family size increases, expenses do not increase at the same rate; and iii) the increase in expenses is larger for a first child of a single-parent family than for the first child of a two-adult family. Specifically, the scale fixes the ratio of the scale for two adults and one adult to a constant value 1.41. For single parents the scale adds the number of adults to 0.8 for the first child plus 0.5 times all other children raised to a power of 0.7, that is $(A + 0.8 + 0.5 * C)^{0.7}$. All other families use the formula $(A + 0.5 *C)^{0.7}$.

- *Income definition:* The income concept used by the Census Bureau is that of money income before payments for personal income taxes, social security, union dues, etc. This concept excludes the value of noncash benefits, such as those provided by the Supplemental Nutrition Assistance Program (SNAP), Medicare, Medicaid, public housing, and employer-provided fringe benefits. The OECD income definition also includes items that are imputed by the Census Bureau (e.g. food stamps, income and wealth taxes, EITC);

- *Poverty thresholds:* The Census Bureau reports poverty based on the OMB official definition, based on a set of absolute thresholds (which do not vary geographically) adjusted by family size, gender of the family head, number of children under 18 years, and farm-nonfarm residences to determine who is in poverty. The official poverty definition uses money income before taxes and tax credits, and excludes capital gains and non-cash benefits. In the OECD database, poverty is defined using relative thresholds expressed as a given percentage (50% and also 60%) of the median equivalised disposable income of the entire population. The OECD also reports on relative poverty anchored in time (mid-1990s and 2005)

Differences among the Census Bureau's surveys and with the PSID:

- *Taxes and assets holdings:* While in the CPS ASEC no taxes are included, in the Survey of Income and Program Participation (SIPP) and in the Panel Study of Income Dynamics (PSID) the Census Bureau collect information on some federal, state and local income taxes, payroll taxes and property taxes, as well as on assets holdings (in the CPS ASEC only *home* ownership is included). In SIPP, a detailed inventory of real and financial assets and liabilities is collected once a year for panels from 1996 (and at least once per panel in prior years); in the PSID regular information about home value and mortgage debt is available, but information about wealth is collected occasionally.

- *Definition of the unit of collection:* The PSID does not collect information on income of household members who are not members of the PSID family. Also, the CPS definition of household differs from the PSID concept of a family when one or more PSID families reside in the same household.[65] For these reasons PSID estimate of family income tend to be lower than the CPS estimate of household income[66]. The household composition is defined in the interview month (February, March, or April) in the CPS ASEC, while in the SIPP family composition may vary during the reference period. This affects the selection of the poverty threshold; as a result, the annual poverty rate estimates in the SIPP differ from official estimates based on the CPS ASEC.

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[65]   This happens, for example, when a grown child marries and leaves the parental home to live independently, but then eventually comes back to live with their parents. It is PSID practice to treat the parent's family and the new adult child's family (even if it consists of a single person) as separate "families" and obtain full, independent interviews from both of them.

[66]   Results of a study of Elena Gouskova, Patricia Andreski, and Robert F. Schoeni (Comparing Estimates of Family Income *in the Panel Study of Income Dynamics and the March Current Population Survey, 1968-2007*), where the authors compared estimates of family income between the PSID and the CPS from 1968 through 2007 survey years using visualization techniques to assess qualitatively the disparities in the empirical distributions of income, show that the distributions match fairly closely in the range between the 5th and 95th percentiles: historically the PSID estimates have been somewhat higher than the CPS estimates, but the trends are quite similar. The two data sets show less agreement at the upper and lower five percentiles of the distribution.

Differences between the OECD reference series and the CBO reported data

While the OECD reference series is based on the CPS ASEC, the income-tax records from the "Statistics on Income" represent the core part of the CBO's report. These records are then statistically matched to the corresponding CPS records. When comparing the two sources, CBO's series result in higher income levels and higher inequality estimates than those in the OECD database, due to better and more detailed coverage of high-incomes households, the inclusion of capital gains and a better coverage of other income from capital.

5. Summary evaluation

Differences in methodology and definitions among the sources lead to differences in levels in all the indicators considered. However, all series display similar trend patterns, except for the poverty rates where concepts ('absolute' poverty, in the official definition; relative poverty, in the OECD ones) differ. The limited time-coverage of the OECD series does not allow capturing all the variability of the national series (this is the case for the OECD reference series on the income quintile share ratio in respect to the Census Bureau's series). As taxes and some other income components are estimated in the OECD reference series by the Census Bureau, it could be useful to consider the corresponding values collected in the SOI in the estimation process or compare the estimates to them ex-post. Attention should also be paid when comparing the OECD series before and after 1993, as the move from a paper questionnaire to a computer-assisted data collection in 1993 (for which the Census Bureau does not correct) resulted in a better measure of the income of the wealthier households, and slightly higher measure of income inequality in that year.