2026 DINA UPDATE FOR THE MIDDLE EAST

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Technical Note – 2026 DINA regional update for the Middle East

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This note presents the latest changes made in the construction of Distributional National Accounts (DINA) for Middle East countries, detailing each step of the method, in the direct continuity of Bajard and Moshrif (2021), Moshrif (2020), El Hariri and Moshrif (2022) and El Hariri (2024 and 2025). Combining household surveys, national accounts, and income tax data, we have updated the constructed income distribution for the period 1980-2025 using recently published survey data and tabulations. The first attempt at creating distributional accounts for the Middle East was done by Alvaredo et al. (2019).

We still face limitations in measuring income inequality as data in the region is scarce: fiscal data is almost impossible to get and survey data is not of high quality. However, there has been an increase in the availability in micro survey data. For countries with no data available, we impute income regionally as explained in this note.

Step 1: Preparing tabulated and micro survey data

Most of our income series are computed using income and expenditure surveys. We are able to access the micro data of these surveys for some countries (Egypt, Iran, Iraq, Jordan, Syria, Tunisia, Turkey and Yemen), and for other countries we could only access the tabulations of the survey data results (see Table 1 for details). We have not been able to get access to any fiscal data this year, in the past, we were able to get hold of Lebanese tax data for the years 2005 to 2014. For some countries, we have used micro-data when it was available, and for the years it was not, we have used tabulated data in order to cover as many years as possible for the 1980-2025 period.

In the 2026 update, we have rebuilt the Iranian series from the Household Expenditure and Income Survey micro-data for 1990–2024. This extends the micro-data series back to 1990, adds the year 2024, and corrects 2008, 2009, 2011, 2015 and 2016, for which some income components were missing previously. The Iranian income concept now includes the imputed rent of owner-occupied housing and excludes social assistance. We have also added the Egyptian Household Income, Expenditure and Consumption Survey micro-data for 2021. Finally, we updated the tabulated data on income for Turkey for the year 2025 and Israel for the years 2018–2021.

Survey distributions from the World Bank are now taken directly from its Poverty and Inequality Platform (PIP, September 2026 release), which replaces PovcalNet. PIP surveys are used only for years for which no other survey data are available or replacing survey-imputed data points that are of low quality. This adds new data points for Algeria (1988, 1995), Morocco (1984, 1990, 1998, 2000, 2006), Tunisia (1985, 1990, 1995, 2000, 2015, 2021), Syria (2006, 2009), Iraq (2023), Lebanon (2022) and Israel (2002–2004, 2006, 2008–2009, 2011, 2013, 2015, 2017 and 2022). We have also reviewed the Arab Barometer income data introduced in previous years' updates: a wave is kept when it is consistent with the other surveys available for the same country, and replaced by PIP otherwise. On this basis, Iraq 2022 and 2024, Lebanon 2024 and Yemen 2013 have been dropped, and Morocco 2013 is now based on PIP.

a. Household and individual micro survey data

Using Household and individual micro survey data, we first estimated the full income distribution. Household income includes pensions and the imputed rent of owner-occupied housing (not available for Egypt in 1999). For Iran, social assistance, transfers from other households and the cash subsidy are excluded, following the DINA Guidelines. For Egypt, Iraq and Jordan, the harmonized data report current transfers received as a single aggregate, so social assistance and private transfers cannot be separated from pensions and are included. However, to avoid having negative income values at the bottom of the distribution or missing income at the top of the distribution (the smaller percentiles within the top 1%), we trimmed the top 0.01% and the bottom of the distribution. Then, we used generalized Pareto interpolation[1] to estimate the distribution shapes and output them in the form of 127 generalized percentiles distributions. This correction yields the same income share for the top 1% and does not alter the income shares for the rest of the distribution. Also, for years when both micro and tabulated survey data were available, we used micro survey data to estimate income distribution.

b. From consumption to income tabulated surveys

Some surveys only have information on consumption and none on income, such as the Kuwaiti tabulations, the Palestinian tabulations of 1996–2009 and the Syrian, Tunisian and Yemeni micro-data. After having harmonized the income concepts for all countries and years, we compute income-consumption ratios by percentile from the surveys in which both income and expenditure are observed (Bahrain, Qatar, the United Arab Emirates and

[1] For generalized Pareto interpolation the online tool gpinter can be used (https://wid.world/gpinter/) or the eponymous R package. For details on the procedure see Blanchet et al. (2021).

Palestine). We then apply these ratios to the consumption distributions to recover the income distribution. The ratio is applied to countries from the same region and with similar characteristics: the Gulf ratio is used for Kuwait, the Palestinian ratio for Palestine, and the Middle East average ratio for the other countries.

c. Integrating PovcalNet-PIP data

Survey distributions from the World Bank's Poverty and Inequality Platform are used for the country-years for which we have no other survey. For each survey-year, PIP publishes data for 100 population groups, which we interpolate into 127 generalized percentiles with generalized Pareto interpolation. Most PIP surveys measure consumption. We convert them into income with the ratio between our own income series and PIP, estimated by percentile on the years in which both are available. When a country has no such year, we use the Middle East average income-consumption ratio. Israel's PIP data already measure income and are used as they are, as is the Iranian survey of 1986. Our own micro-data and tabulations always take precedence over PIP in years where both exist.

Step 2: Top fiscal correction using Lebanese tax data

We take advantage of the availability of fiscal data from Lebanon (Assouad, 2017) to account for the underestimation of top incomes that is inherent to survey data, because of its self-reporting nature. Correction factors are computed for every g-percentile, ranging from 1 below the 80th percentile to around 2.5 at the very top. We then multiply bracket averages and thresholds by these coefficients.

Step 3: Missing capital income

The distribution of missing capital income follows the latest recommendations of the DINA Guidelines. Retained earnings of corporations are distributed following the quantile ratio method, using a finer quantile function (hyperbolic) relative to previous years, which avoids extreme values near the bottom of the distribution. This method links the labor income distribution to the capital income distribution, which we estimate externally using wealth data from France because this type of data is not available for most countries in our sample.

Step 4: Imputation of missing years

As the data suffers from huge gaps between conducted surveys, we linearly interpolate the bracket averages and thresholds for the years we have no data for. Second, we extrapolate both backward and forwards to cover the whole period from 1980 to 2025 for each country assuming constant inequality levels. This implies we have the same inequality levels for

countries that have only one year of survey data (like Oman and Saudi Arabia). Moreover, we average the distributions of all other countries to impute the Libyan distribution, and the Middle East series is constructed by aggregating all our series, including Libya, and reranking them in 127 g-percentiles.

Step 5: Rescaling to match national income

In the distribution of retained earnings, we use aggregate variables to rescale the average income to match national income and wealth. National wealth is derived from a globally computed wealth-income ratio.

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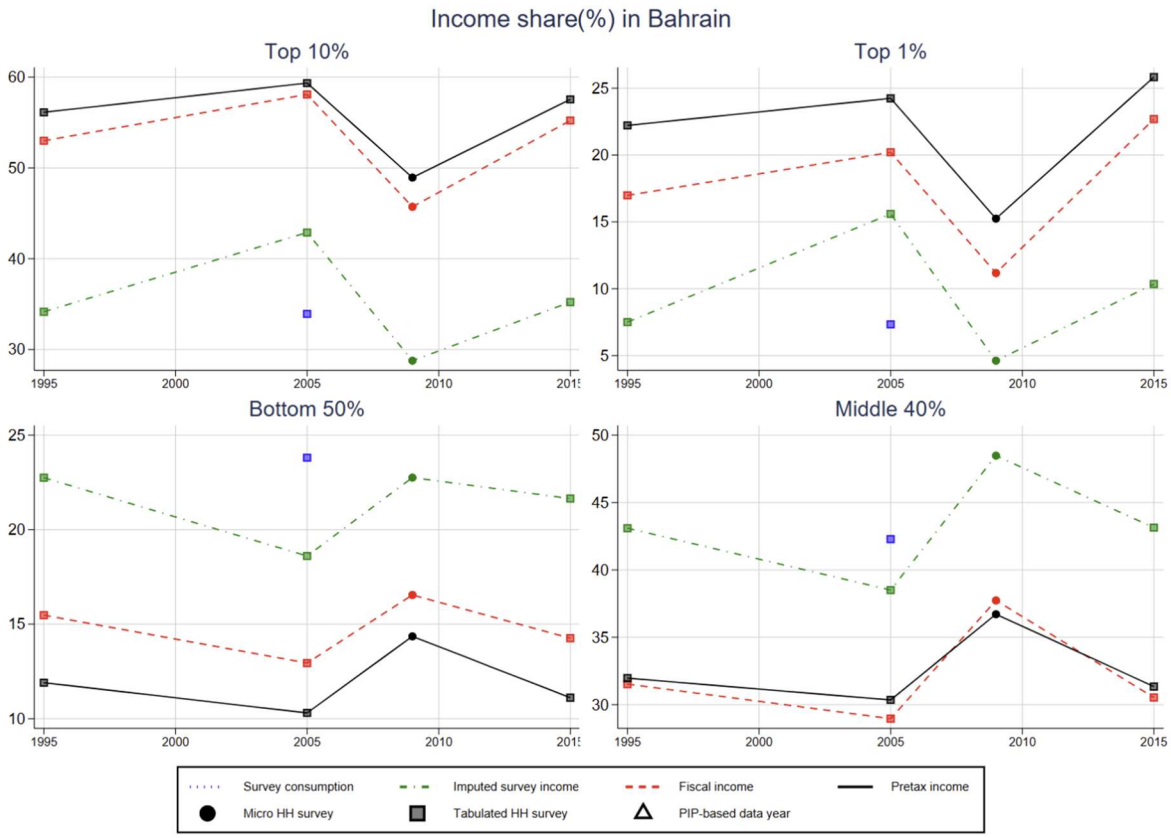
Table 1: List of survey availability in the Middle East

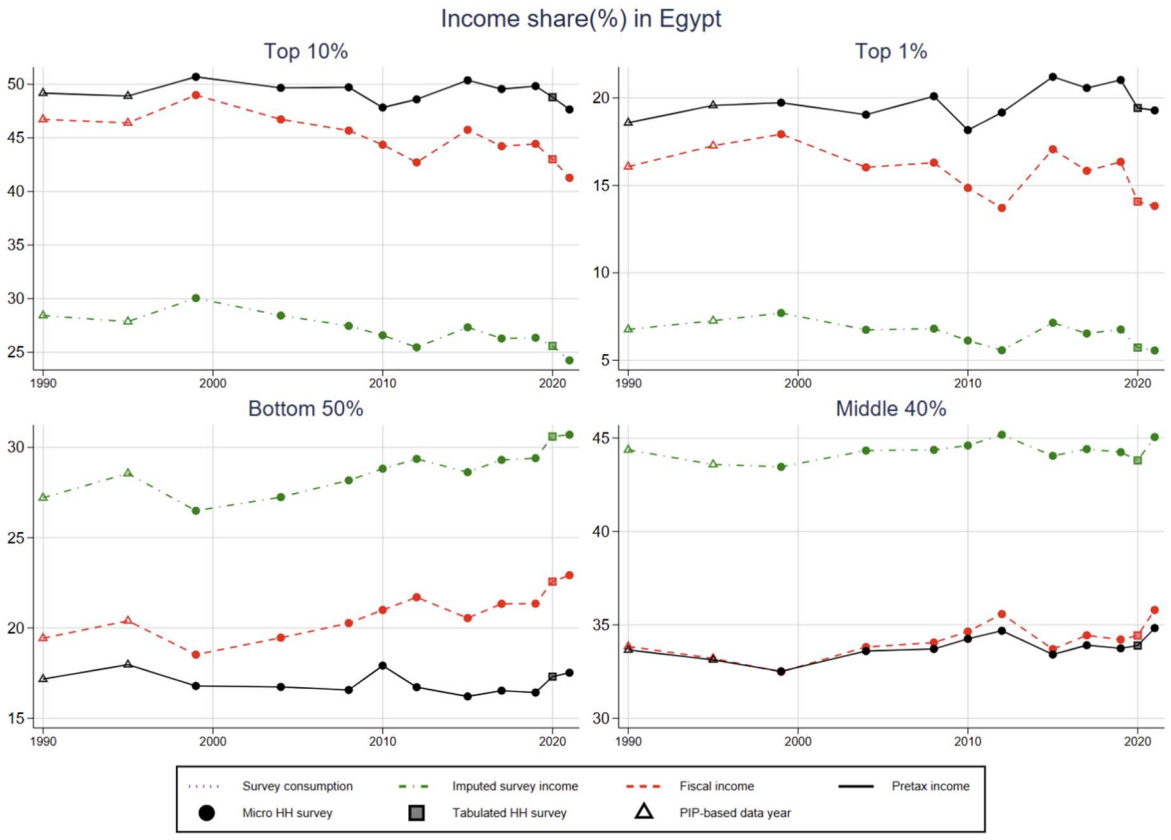
Country	Survey years	Format	New data (2026's update)
Algeria	1988, 1995, 2006, 2011, 2013	PIP, Arabarometer	PIP: 1988, 1995
Bahrain	1995, 2005, 2009, 2015	Tabulation, Arabarometer	
Egypt	1990, 1995, 1999, 2004, 2008, 2010, 2012, 2015, 2017, 2019, 2020, 2021	Micro-data, tabulation, PIP	Survey micro-data: 2021
Iran	1986, 1990-2024	Micro-data, PIP	Survey micro-data: 1991-1993, 1995-1996 and 2024
Iraq	2007, 2011, 2012, 2013, 2023	Micro-data, Arabarometer, PIP	PIP: 2023
Israel	1979, 1986, 1992, 1997, 2001-2022	Tabulation, PIP	Tabulation: 2018-2021; PIP: 2002-2004, 2006, 2008-2009, 2011, 2013, 2015, 2017, 2022
Jordan	1986, 1992, 1997, 2002, 2006, 2008, 2010, 2011, 2013	Micro-data, tabulation, Arabarometer, PIP	
Kuwait	2007, 2013, 2014	Tabulation, Arabarometer	
Lebanon	2005-2014, 2022	Tabulation, PIP	PIP: 2022 (Arabarometer 2024 removed)
Morocco	1984, 1990, 1998, 2000, 2006, 2013	PIP	PIP: 1984, 1990, 1998,

Country	Survey years	Format	New data (2026's update)
			2000, 2006, 2013 (replaces Arabarometer 2013)
Oman	2010	Tabulation	
Palestine	1996-1998, 2004-2007, 2009-2012, 2016, 2023	Tabulation, Arabarometer, PIP	
Qatar	2007, 2012	Tabulation	
Saudi Arabia	2011	Arabarometer	
Syrian Arab Republic	1996, 2003, 2004, 2006, 2009	Micro-data, PIP	PIP: 2006, 2009
Tunisia	1985, 1990, 1995, 2000, 2005, 2010, 2011, 2013, 2015, 2021	Micro-data, Arabarometer, PIP	PIP: 1985, 1990, 1995, 2000, 2015, 2021
Turkey	1987, 1994, 2002-2025	Micro-data, tabulation	Tabulation 2025
United Arab Emirates	1998, 2009, 2013, 2018	Tabulation, PIP	2014 removed (duplicate of the 2013 survey)
Yemen	1998, 2006, 2011, 2013, 2014	Micro-data, Arabarometer, PIP	Arabarometer 2013 removed

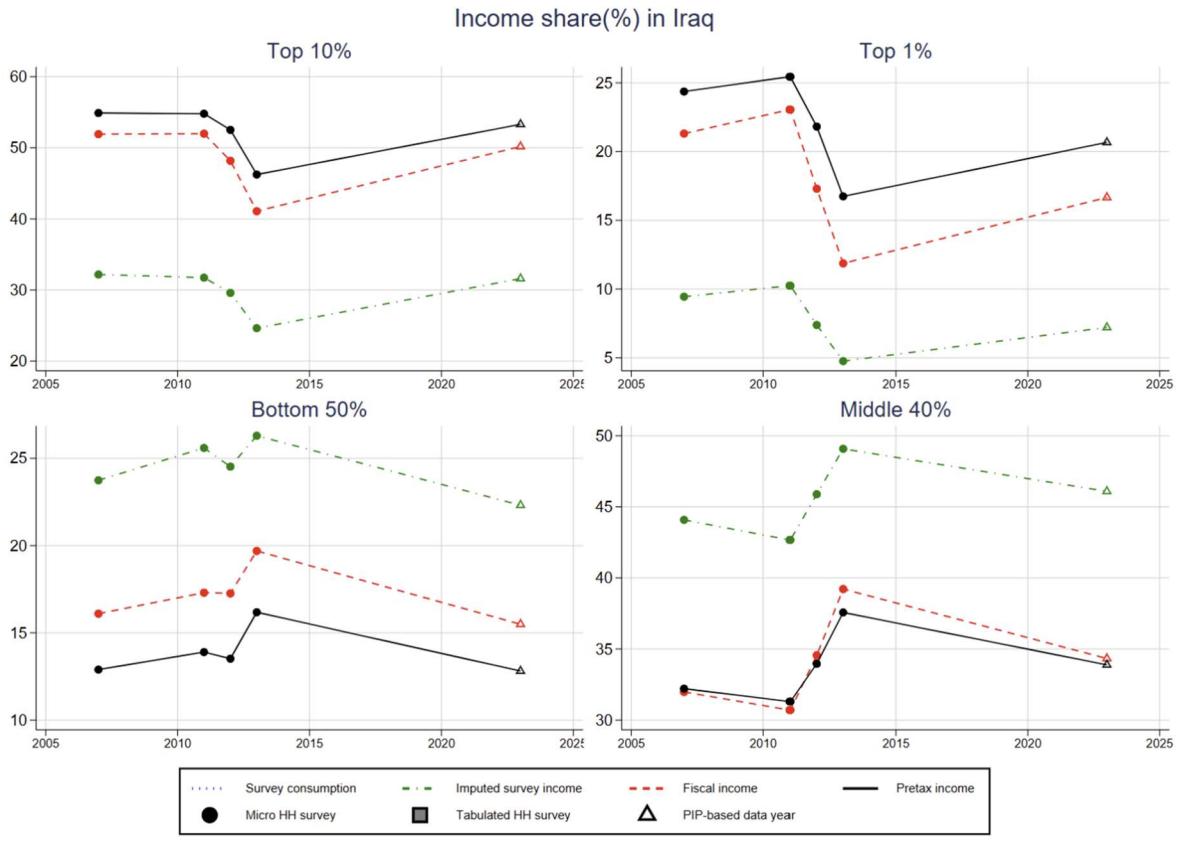

Income share(%) in Algeria
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

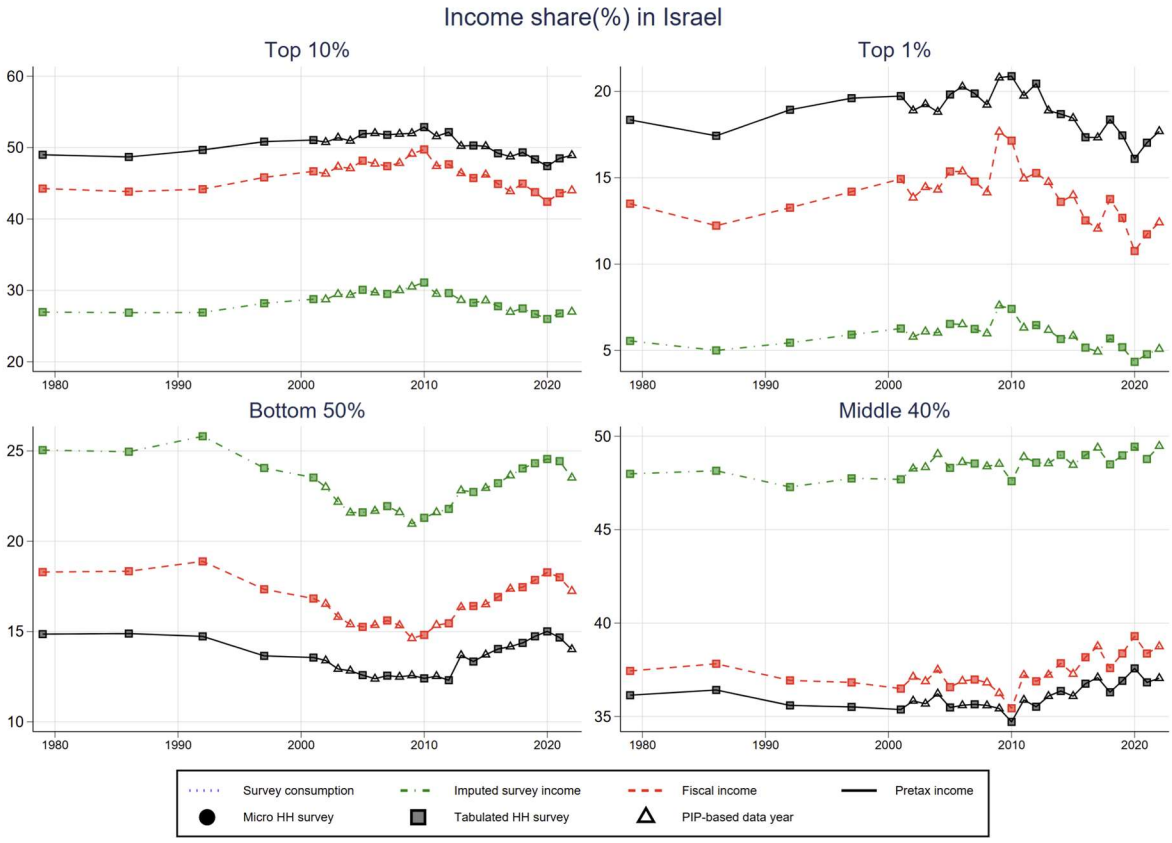
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Income share(%) in Bahrain
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

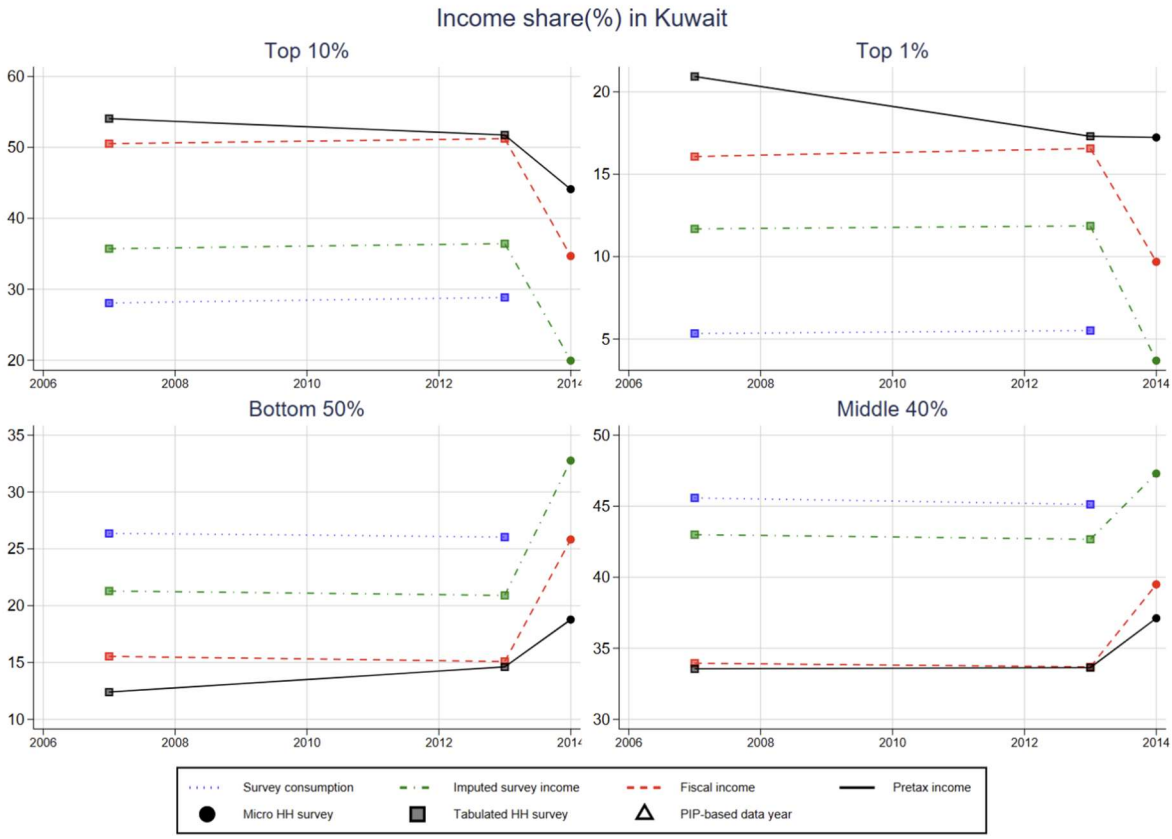

Income share(%) in Egypt
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

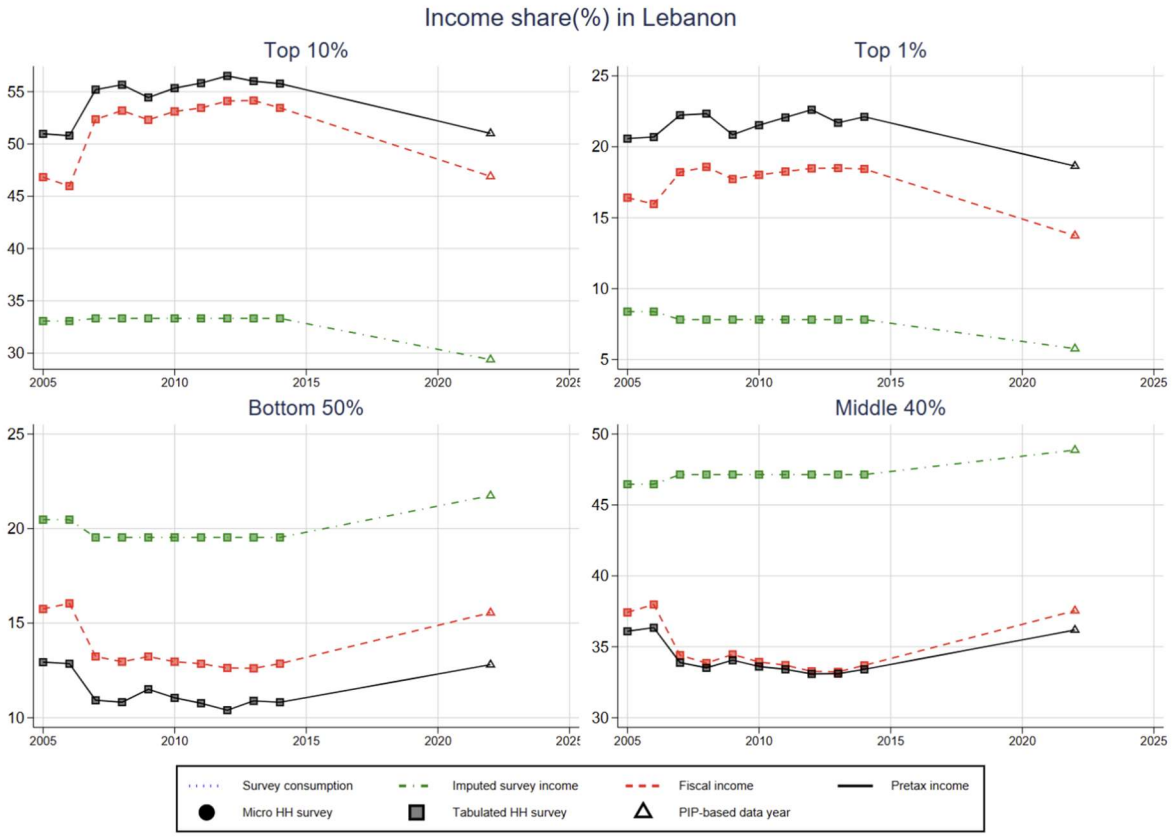

Income share(%) in Iran
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

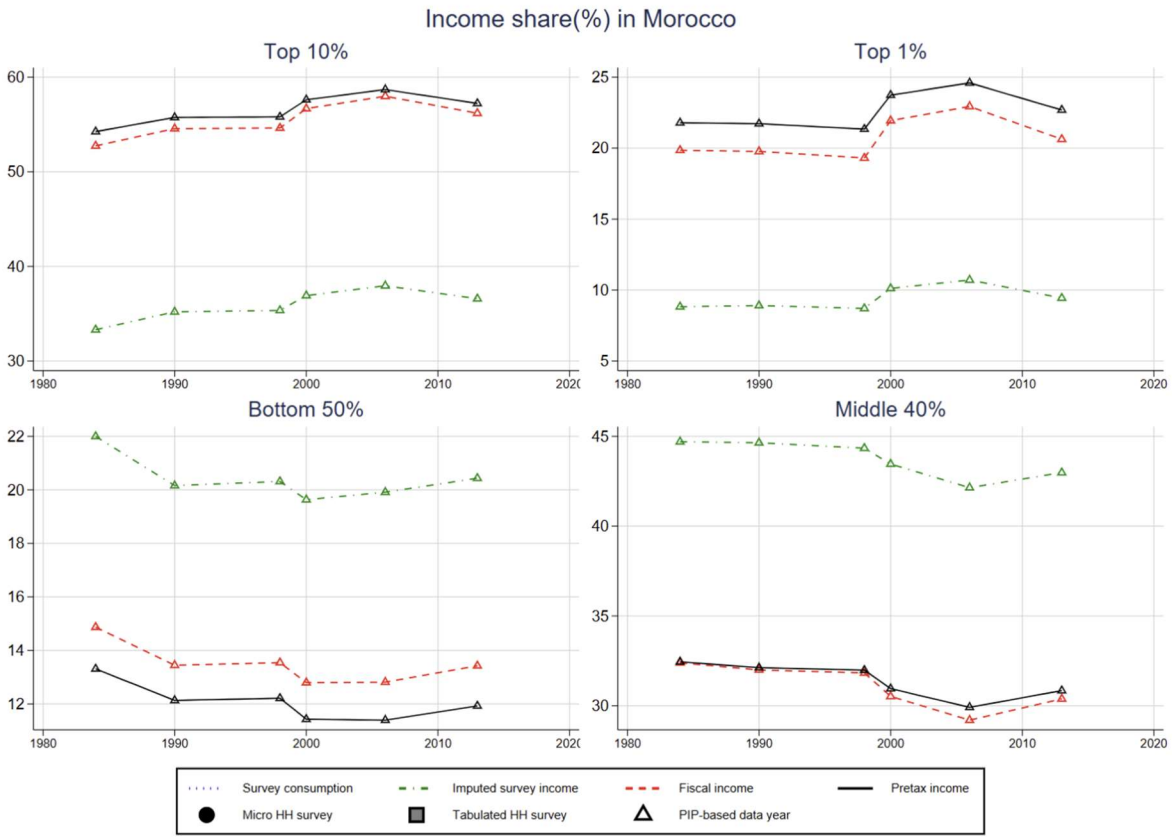

Income share(%) in Iraq
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year


Income share(%) in Israel
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

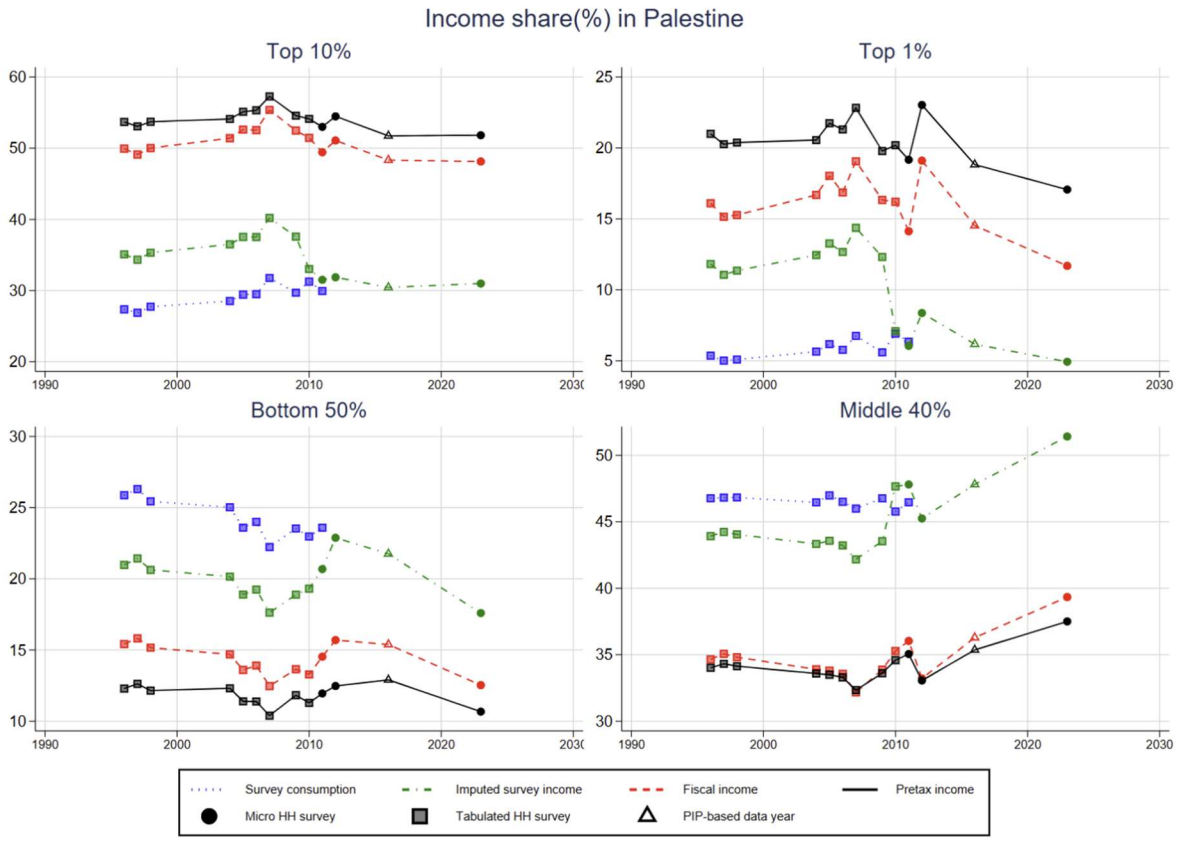

Income share(%) in Jordan
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

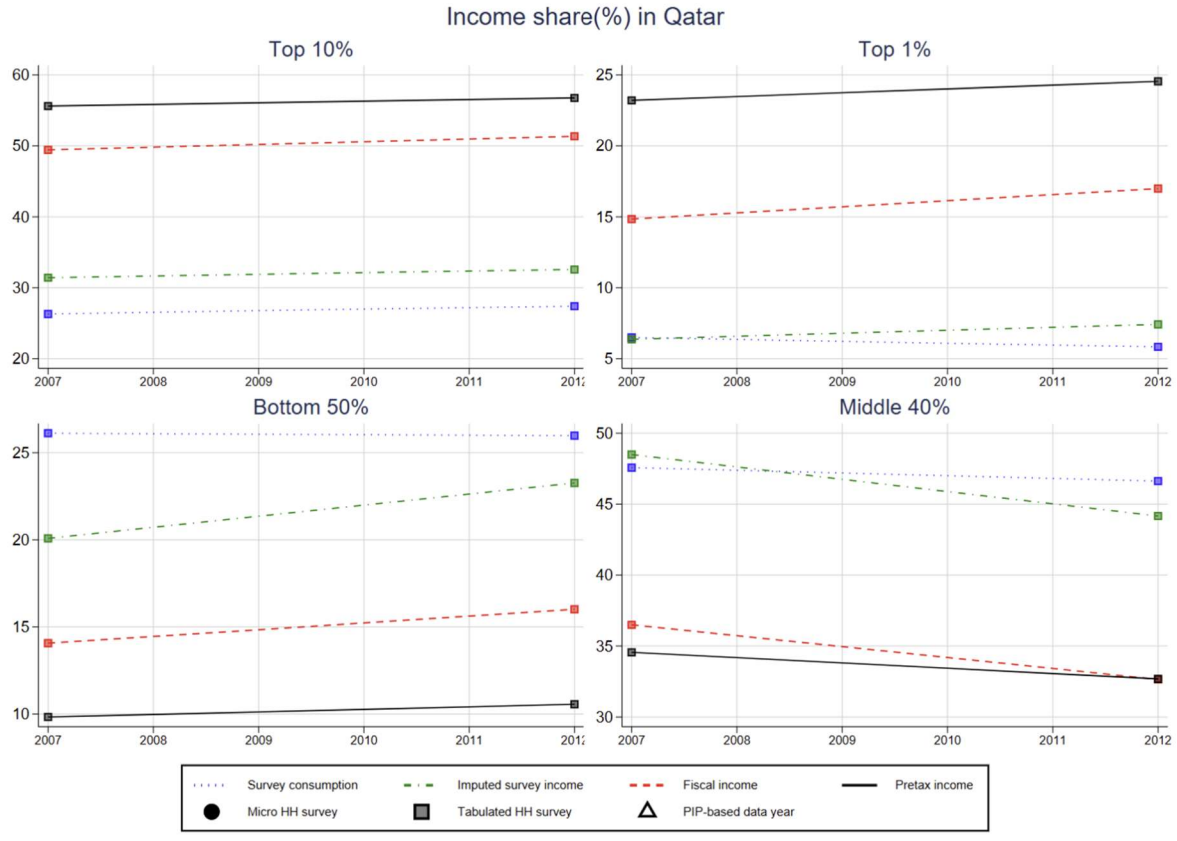

Income share(%) in Kuwait
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

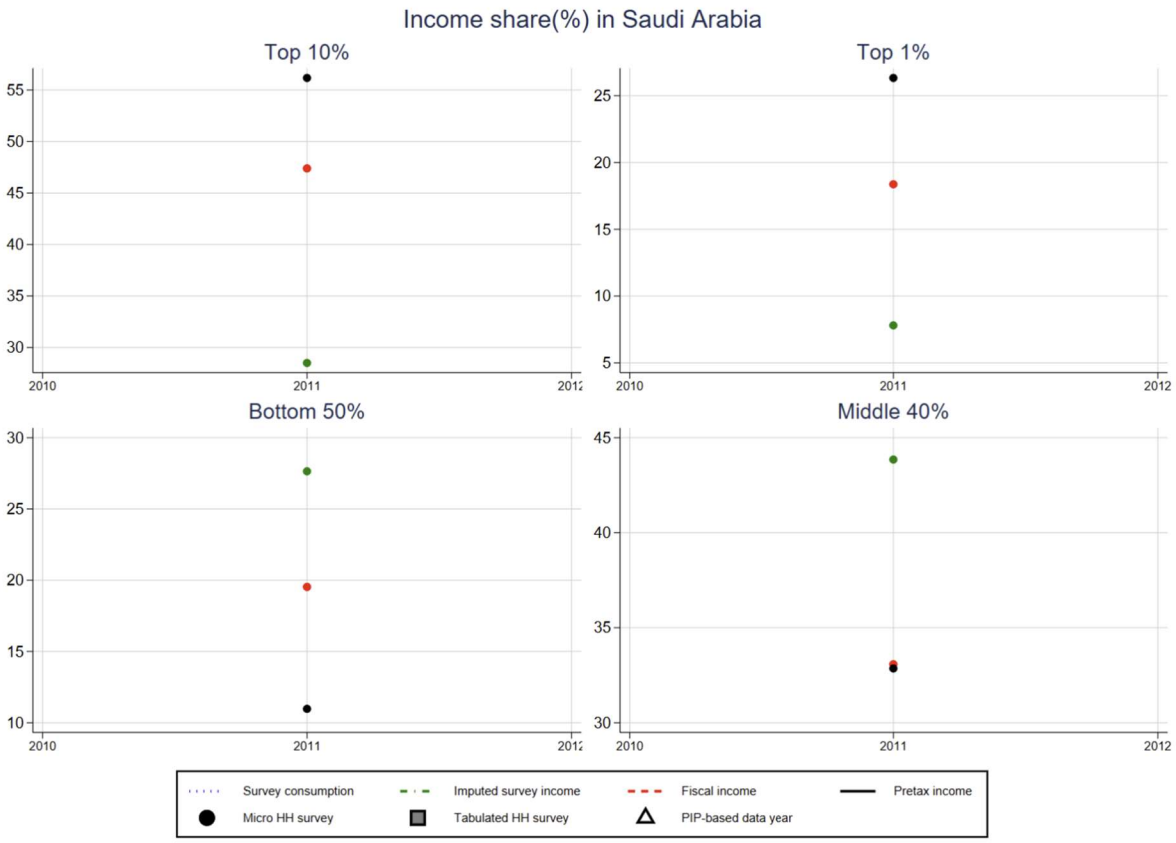

Income share(%) in Lebanon
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

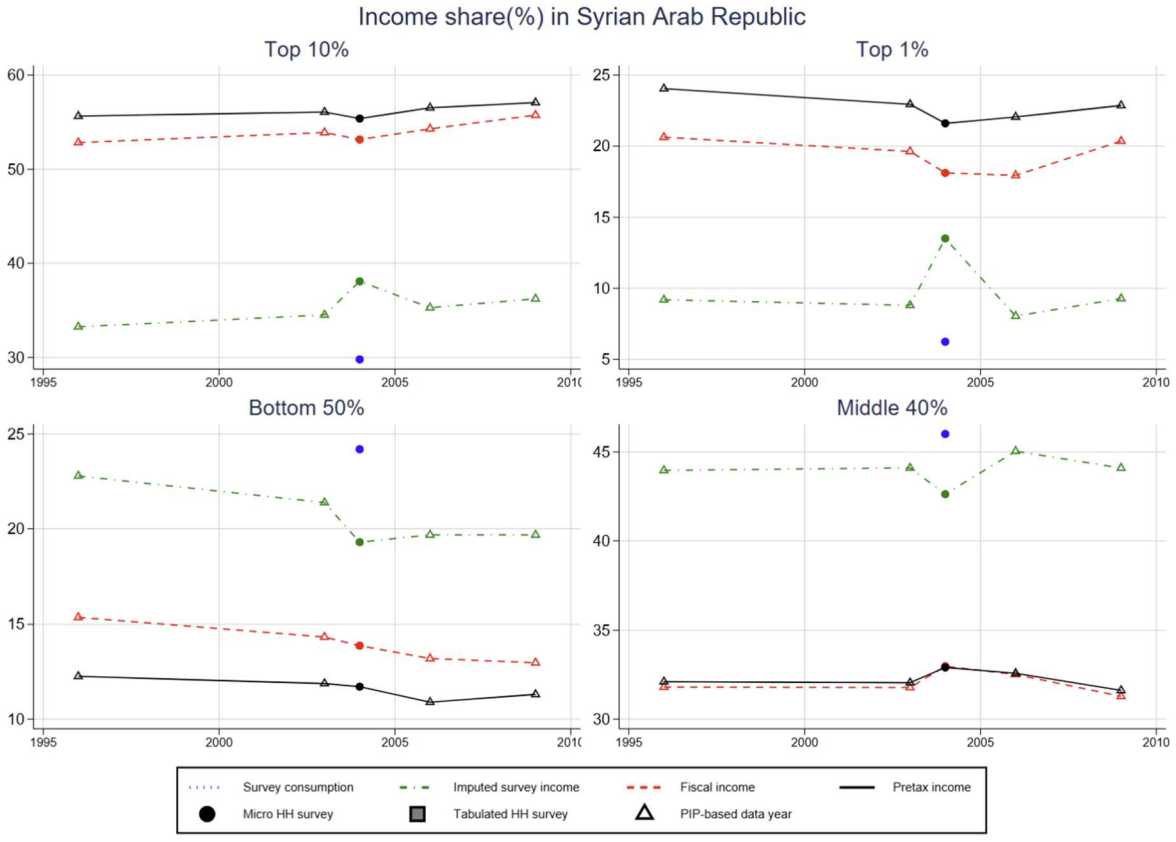

Income share(%) in Morocco
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

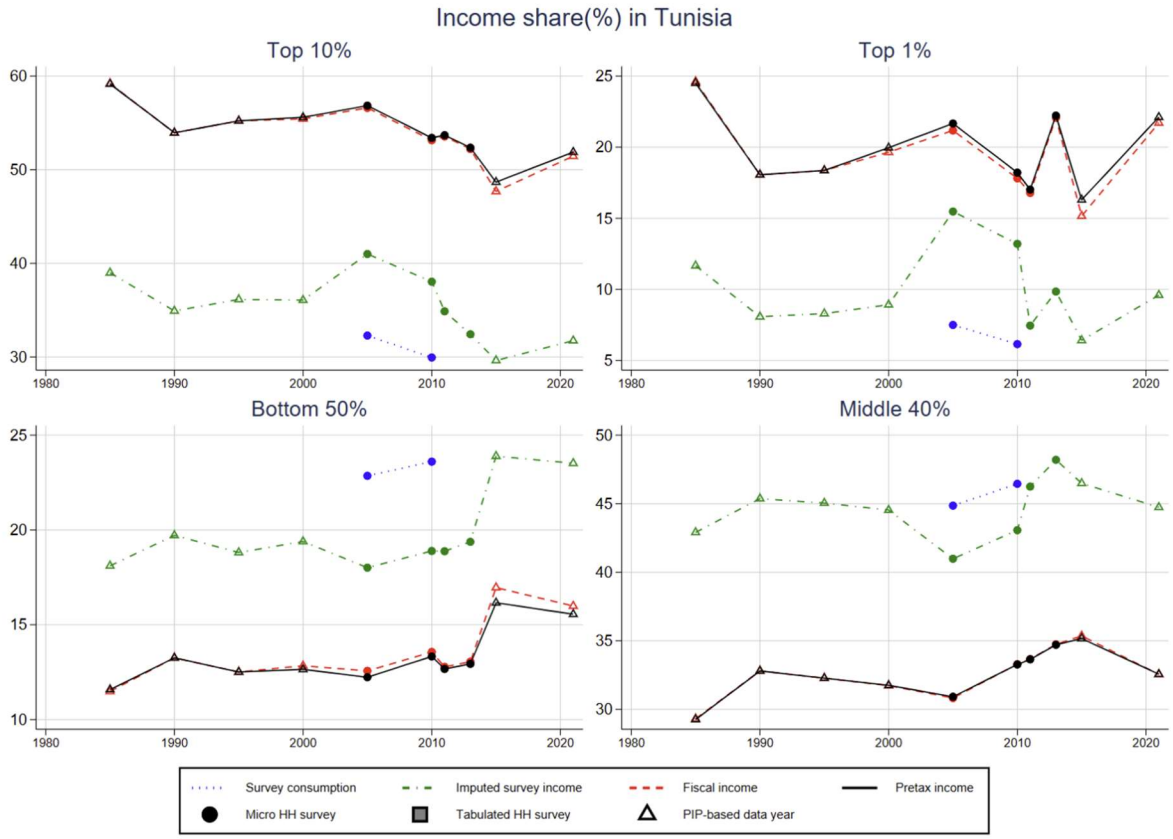

Income share(%) in Oman
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

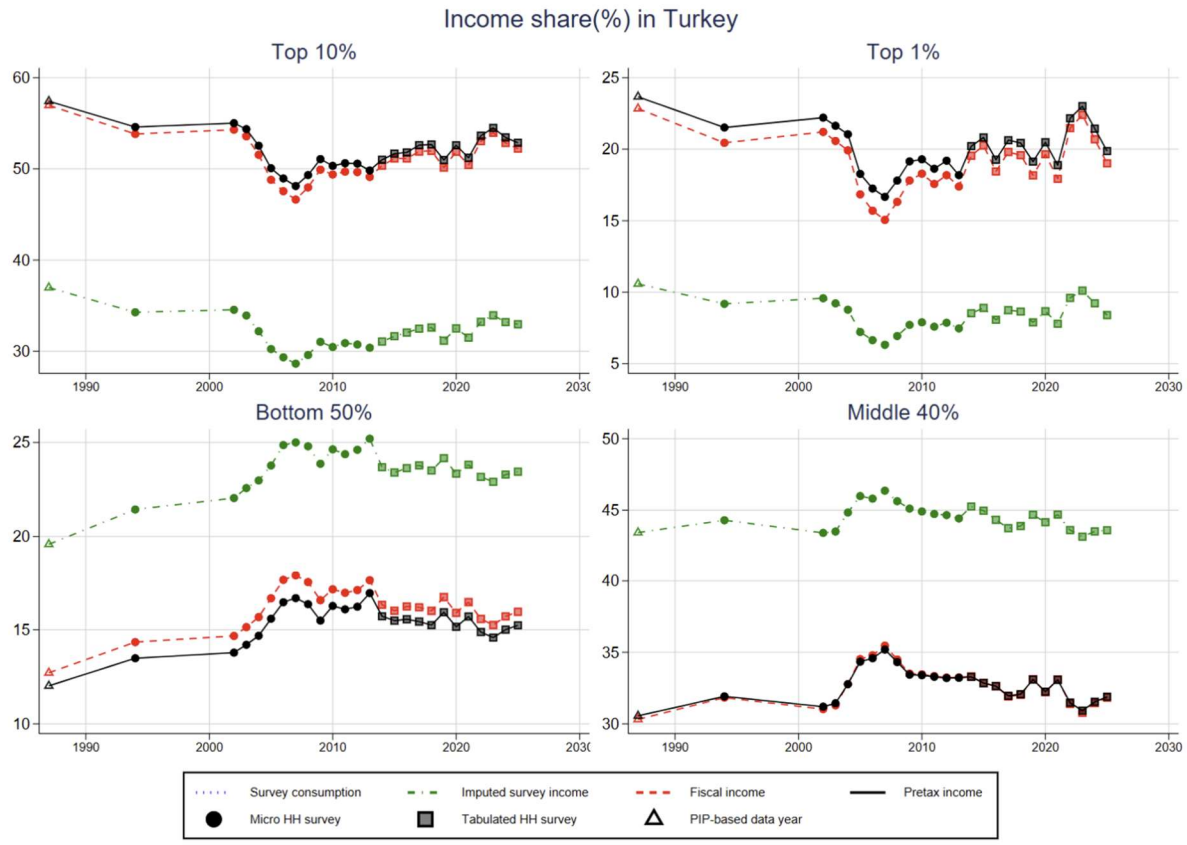

Income share(%) in Palestine
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

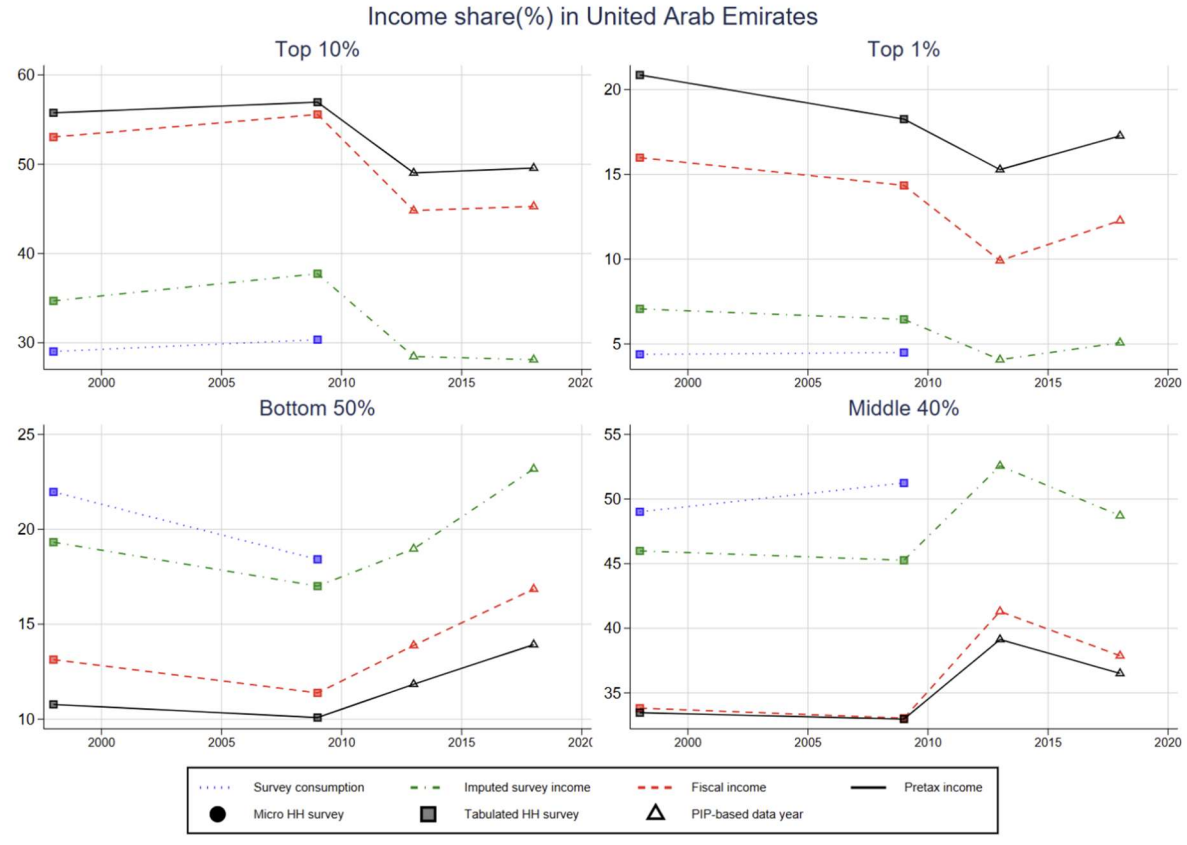

Income share(%) in Qatar
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year


Income share(%) in Saudi Arabia
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year

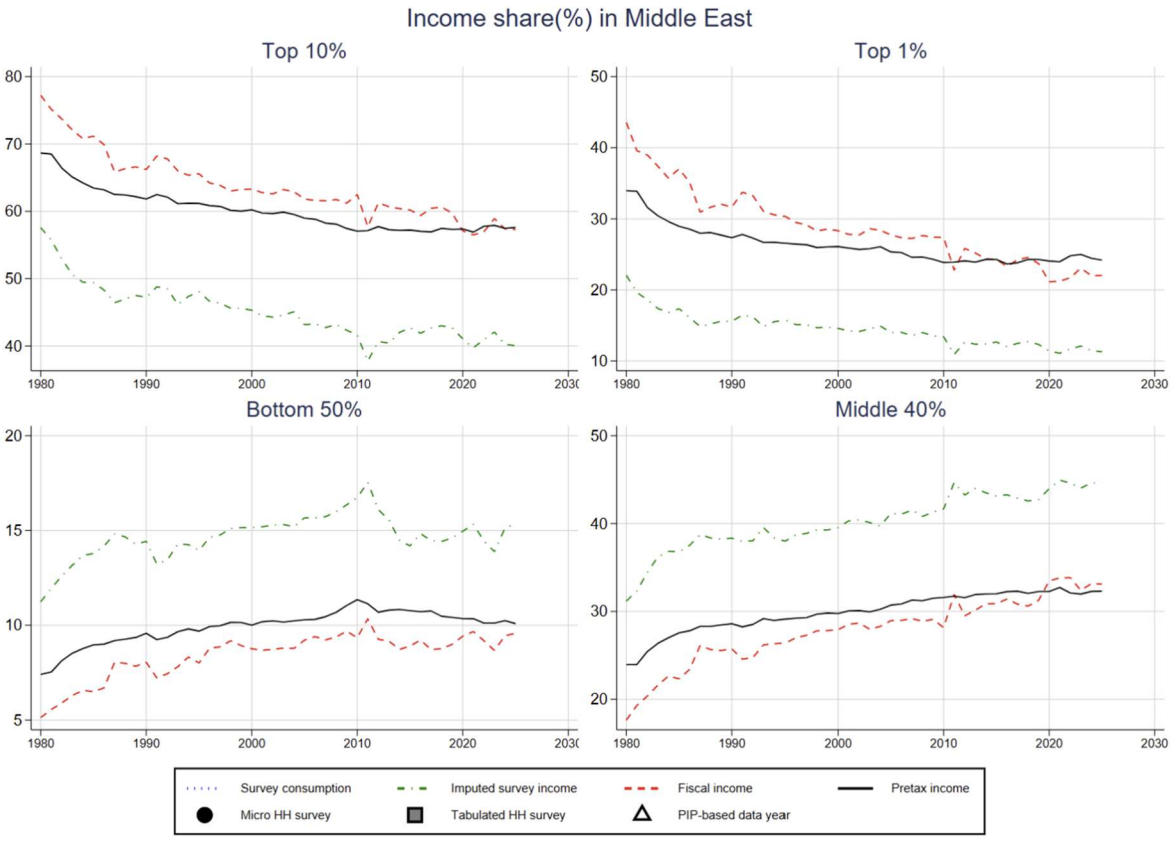

Income share(%) in Syrian Arab Republic
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year


Income share(%) in Tunisia
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year


Income share(%) in Turkey
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year


Income share(%) in United Arab Emirates
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year


Income share(%) in Yemen
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year


Income share(%) in Middle East
Top 10%
Top 1%
Bottom 50%
Middle 40%
Survey consumption
Imputed survey income
Fiscal income
Pretax income
Micro HH survey
Tabulated HH survey
PIP-based data year