



# THE EFFECTS OF FISCAL POLICY ON INEQUALITY AND POVERTY IN IRAQ

*Beenish Amjad, Maynor Cabrera and Lokendra Phadera*

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*Beenish Amjad, Maynor Cabrera and Lokendra Phadera<sup>‡</sup>*

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### ABSTRACT

This study assesses the distributional impacts of public expenditures and taxes on poverty and inequality in the Republic of Iraq. The analysis uses the Commitment to Equity methodology and is based on the survey and government fiscal administrative data for fiscal year 2017. Results from the analysis show that Iraq's fiscal policy is modestly progressive. It reduces short-term inequality by 6.7 and 3.0 Gini points with and without including public spending on education and health services. Both results are less than the global and upper-middle-income country averages. However, driven by direct transfers from poverty targeted social safety net cash transfers and generous pension allowances, the fiscal system reduces short-term poverty by 5 percentage points when evaluated using the international poverty line of US\$5.5. This is one of the largest in the global and upper-middle-income country databases. These positive short-term results are achieved primarily because households pay almost no taxes. Iraq's tax revenues are far lower than even the lower-income countries' average. Unlike in most countries, Iraqi households in all quintiles, even the richest, are net beneficiaries of the fiscal policy. Given oil price volatility and the global movement away from fossil fuels, the high oil dependence and lack of a broader revenue base pose a significant fiscal sustainability challenge in Iraq.

**JEL Codes:** H22, H5, D31, I38 H22, I38, D31

**Keywords:** fiscal policy, social expenditure, taxes, fiscal incidence, inequality, poverty, Iraq

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# The Effects of Fiscal Policy on Inequality and Poverty in Iraq

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**WORLD BANK GROUP**

Poverty and Equity Global Practice

October 2023

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# *The Effects of Fiscal Policy on Inequality and Poverty in Iraq<sup>1</sup>*

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# 1. Introduction

## a. Context

Iraq's economy has endured decades of political instability and oil price volatility. The economy is highly dependent on oil revenues as the hydrocarbon sector accounted for 58 percent of the country's GDP, 99 percent of its exports, and more than 90 percent of the budgetary revenues in 2015 (World Bank, 2017). The volatility of GDP growth reflects the country's frequent conflicts and reliance on oil. Between 2005 and 2019, GDP grew by an average of 5.5 percent, 2.0 percentage points higher than the regional average. However, due to relatively high population growth, GDP per capita grew at an average of 2.7 percent over the same period – significantly lower than the upper-middle-income countries' (UMICs') average of 4.4 percent. High oil dependence, procyclical fiscal policy, insufficient management of oil revenues, and a bloated public sector that acts as a bottleneck for private sector growth have led to a fragile economy. Long-term fiscal sustainability remains an important issue.

Fragility and oil volatility continue to determine Iraq's development trajectory and Iraqis' welfare. National poverty fell slowly after the decline in violence from its peak in 2006. Iraq's poverty rate declined from 22.4 to 18.9 percent between 2007 and 2012. However, the ISIS conflict and the economic crisis induced by the plunge in oil prices in 2014 meant poverty was estimated to have increased to 22.5 percent in 2014 before declining to 20.0 percent in 2017 (Sharma & Wai-Poi, 2019). These national trends in poverty, however, masks significant differences between sub-populations. The rural-urban gap in poverty headcount decreased from 23.0 percentage points in 2007 (39 percent in rural versus 16 percent in urban) to 12.9 percentage points in 2017 (27.5 versus 14.6 percent) (World Bank, 2020). In contrast, the security and economic crises of 2014 left unequal imprints across geographical areas and groups. Poverty is polarized between the chronically poor South and the newly poor North on the one hand, and the relatively low level of poverty in the Center and Kurdistan region on the other.<sup>3</sup> These spatial disparities are driven by significant gaps between the displaced and non-displaced populations. Internally Displaced Persons (IDPs) in both the northern governorates and Kurdistan region, where most of the displaced fled to, are more than twice likely to be poor than non-IDPs (Sharma & Wai-Poi, 2019). The Covid-19 pandemic and, yet another, oil price shock in 2020 have been estimated to exacerbate these trends (Krah, Phadera, Tanner, & Mugera, 2021).

Regional and group disparities persist in non-monetary dimensions as well. As measured by the World Bank's Human Capital Index (HCI), a child born in Iraq today will reach, on average, only 41 percent of her potential productivity when she grows up. This is the lowest among the UMICs and second lowest among the countries in the Middle East and North Africa (MENA) region with available data, and significantly below the UMIC average of 56 percent and the regional average of 57 percent (World Bank, 2021). The food insecurity and multidimensional vulnerability index (MVI), which captures deprivation in health, education, living standards, and financial security dimensions, follows similar spatial distribution as

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<sup>3</sup> The geographical areas are the same as the SWIFT survey's sampling frame and defined as following: Kurdistan: Duhok, Erbil, Sulaymaniyah; North: Nineveh, Kirkuk, Diyala, Anbar, Salah al-din; Center: Baghdad, Babylon, Kerbala, Najaf, Wasit; South: Qadisiya, Muthanna, Thi Qar, Missan, Basrah. See Sharma and Wai-Poi (2019) for more.



monetary poverty – both concentrated mostly in the North and the South (Mansour, Kazemi, Maseeh, Phadera, & Wai-Poi, 2020). Unequal access to education and health services across the regions will likely reinforce the unequal transmission of monetary deprivations. These socioeconomic deficits in the population translate into low levels of productivity and limited resilience, adding to the economic and social exclusions.

## **b. Significance of the Fiscal Incidence Analysis (FIA)**

Due to the increase in oil export prices and quantities produced since 2021, the Government of Iraq has been able to reduce its fiscal and external deficits and run into a budget surplus. This provides an ideal opportunity to address many of its structural challenges to build a resilient economy and orient it on a sustainable growth path. While not yet operationalized, in late 2020, the government proposed an overall economic reform agenda to build a resilient and diversified economy. Proposed reforms included improving the fiscal space through tax reform to broaden the tax base, reduce the public wage bill along with reduction in poverty and increased equity through improved social assistance and transfers. The 2022 government agenda also heavily emphasized the topic of improved social protection. In this context, the fiscal equity consideration of fiscal policy matters. In effect, fiscal policies have multiple objectives including collection of sufficient taxes to fund the public expenditures, efficient mechanism of the transfers to minimize distortions in the economy and achieving the objectives of poverty and inequality reductions. Fiscal equity matters to ensure fiscal sustainability and that gains reach the poor and marginalized sections of the population. Given its importance, the equity aspect of fiscal policies has been included as the official indicator of Sustainable Development Goal 10.4.2, which measures the redistributive impact of the fiscal system on inequality reduction.

The fiscal incidence analysis aims to create evidence on effectiveness of the fiscal policy and reforms to achieve the equity objective of the fiscal system. Taxes, transfers, and fiscal policy more generally are powerful corrective instruments the state has at its disposal for reducing extreme forms of material deprivation and narrowing the gap between economic elites and the rest of the populace. These policies can also help equalize opportunities, through public education for example, and, thus, increase social mobility and the productive potential of the underprivileged. To assess whether governments are using these tools effectively, it is important to quantify how inequality and poverty change from pre-fiscal scenarios to once these instruments are implemented.

The fiscal incidence analysis for Iraq provides the first comprehensive analysis of the fiscal system of the country. The analysis assesses the distributional impacts of the country's main taxes and social expenditures on poverty and inequality using the Commitment to Equity (CEQ) methodology.<sup>4</sup> The analysis is carried out for the fiscal year 2017 primarily for two reasons. First, the analysis required a nationally representative household socioeconomic survey. The 2017/18 Survey of Well-Being via Instant Frequent Tracking (SWIFT) is the most recent such survey available in Iraq. Second, compared to the period before when the country faced the war with ISIS and years after when the Covid-19 pandemic

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<sup>4</sup> The name CEQ refers to studies that were conducted with the methodology developed by the Commitment to Equity Institute (CEQ Institute) at Tulane University. For details, see Nora Lustig (Ed.), Commitment to Equity Handbook. Estimating The Impact of Fiscal Policy on Inequality and Poverty. Brookings Institution Press. 2018.



swept the globe, 2017 was relatively stable economically, politically and security wise. The interventions included in the analysis are major government expenditures including the pensions, Public Distribution System (PDS), the Social Safety Net (SSN), electricity and fuel subsidies. Iraq lacks a strong tax structure and tax mobilization is limited (about 2.8 percent in 2017); the analysis, nonetheless, covers the existing direct personal income taxes, custom taxes, and sales taxes on alcohol and tobacco, airline tickets, mobile telephone services, and hotel and restaurant services.

### **c. Key findings**

Iraq's current fiscal system is modestly progressive. The combination of taxes and transfers modeled in the paper reduce short-term inequality by 6.7 Gini points. When excluding the non-cash education and health services, inequality falls by 3.0 Gini points. Compared to the countries in the 2022 Poverty and Shared Prosperity (PRSP) CEQ database (World Bank, 2022b), Iraq's inequality impact of 6.7 Gini points is less than the global and UMIC averages of 7.5 and 9.1 Gini points respectively. Iraq is ranked in the bottom half among all the countries (34 out of 62) and among UMICs (16 out of 26). Similarly, the cash inequality impact of 3.0 Gini points puts Iraq in the middle of the distribution (bottom of the second quartile) in both samples.

Iraq, however, performs strongly in terms of reducing short-term poverty. The country's fiscal system helps reduce poverty by 6.3 percentage points when evaluated using the national poverty line (IQD 110,881 per person per month in 2017). For cross-country comparison, the analysis is also carried out using the international poverty line for UMICs, USD 5.5 per person per day in purchasing power parity (PPP). Using this poverty line, Iraq's fiscal system reduces poverty by 5.0 percentage points. This is one of the largest impacts in the PRSP database; 3<sup>rd</sup> from the top among the 26 UMICs and 4<sup>th</sup> among all the 57 countries evaluated using the UMIC poverty line.

These short-term positive impacts are, however, achieved primarily because of the lack of substantive taxes Iraqi households pay and oil revenues financing government's expenditures, which pose a long-term fiscal sustainability challenge. Iraq's tax revenues are among the lowest; far lower than even the lower income countries' (LIC) average. Unlike in most other countries, households across the income distribution are net beneficiaries of the fiscal policy. Consequently, Iraq's social spending does not need to offset tax burdens for the poor. This also means that public spending in Iraq is less efficient in reducing poverty and inequality as the same level of spending with poverty targeting will have greater impacts.

The rest of the paper is organized as follows. The next section presents the fiscal context in detail. While section 3 discusses the data, methodology and assumptions, headline results from the analysis are presented in section 4. Detailed results including the marginal impacts of each intervention, their progressivity and effectiveness are presented in section 5. Section 6 concludes with a discussion on policy implications.

## **2. Context**

## a. Fiscal context

Iraq's total fiscal revenue was 77.4 trillion Iraqi dinars (IQD) in 2017 accounting 34.9 percent of its total GDP. Total revenue and its composition for 2017 is presented in Table 1. With limited domestic revenue mobilization, oil revenues continue to dominate the government's overall budget. Accounting for 29.4 percent of total GDP, the oil sector constituted most of the revenue collection in 2017 (84.2 percent of total revenues). While total non-oil revenues stood at 5.5 percent of GDP, tax revenue comprised only 2.8 percent of the GDP. The taxes levied include personal income tax, property tax, sales tax, customs duties, stamp duty, payroll taxes, inheritance, and gift taxes. Out of the total tax collection, 72 percent stemmed from income taxes, and consumption taxes accounted for 28 percent.

*Table 1. Iraq Federal Government Revenue, 2017*

Government Revenue	Value in administrative Accounts (in Iraqi Dinar; in billions)	As share of GDP (%)	Included in Analysis (Yes/No)
<b>Total Revenue</b>	77,422.17	34.9	n/a
<b>Oil Revenue</b>	65,155.57	29.4	n/a
<b>Non-oil Revenue</b>	12,266.60	5.5	Yes
<b>Tax revenue</b>	6,298.27	2.8	Yes
Income Tax	4,533.76	2.0	Yes
Consumption Tax	1,764.51	0.8	Yes
<b>Non-Tax revenue</b>	5,968.33	2.7	No
Fees	790.96	0.4	No
Budget share of the profit of public sector	700.87	0.3	No
Capital revenue	56.95	0.0	No
Manufacturing revenue	2,202.32	1.0	No
Other non-tax revenue	2,217.23	1.0	No

Source: Ministry of Finance (MOF) and World Bank staff calculations.

Note: The table excludes provincial-tax revenue structure.

### i. Taxes

The main source of tax law in Iraq is the Federal Income Tax law, Law #113 of 22 November 1982, as amended in 2003 (the "Federal Income Tax Law"). The tax authority in Federal Iraq is the General Commission for Taxes ("GCT"). The GCT has two main divisions, the Corporate Division, which deals with Iraqi companies, and the Large Taxpayer Department ("LTD"), which deals with foreign companies. The tax authority in the Kurdistan Region is the Income Tax Directorate ("ITD"). The ITD has also established a Large Taxpayer Department to look after companies classified as "large taxpayers." The tax year in Iraq is the calendar year (Deloitte, 2021a). Major taxes collected by the above authorities and departments include personal income tax, payroll tax, property tax, stamp duty, customs, and sales tax. Iraq, however, has no value-added tax (VAT).

#### Personal income tax (PIT)

According to the Federal Income Tax law of 1982, amended in 2003, all income derived from Iraq is subject to tax in Iraq regardless of the recipient's residence. In addition, income realized outside Iraq by Iraqi and other residents, including interest, commissions, investment returns, and profits from trading in currencies, valuable metals, and securities, is taxable if such income arises from funds and deposits held in Iraq. Income subject to tax by the direct deduction method includes salaries, wages, bonuses, and allowances employees earn. Table 2 shows Iraq's PIT tax rate structure on wages and salaries. The tax is imposed on the employee's income after granting her the legal allowances, deductions, exemptions, and exceptions as stated in articles (4), (5), and (6) of the law.

**Table 2. Income tax brackets**

<b>Income</b>	<b>Rate</b>
IQD 0 to IQD 250,000	3%
IQD 250,001 to IQD 500,000	IQD 7,500 plus 5% of the amount over IQD 250,000
IQD 500,001 to IQD 1,000,000	IQD 20,000 plus 10% of the amount over IQD 500,000
IQD 1,000,001 or more	IQD 70,000 plus 15% of the amount over IQD 1,000,000

Source: Iraq Federal Income Tax Law

### **Payroll tax**

There are specific rules for payroll taxation in Iraq, depending upon whether the company employs foreign nationals or local Iraqis. The payroll tax system in Iraq is similar to a pay-as-you-earn (PAYE) system. The employer is obligated to withhold tax from salaries and wages paid to its employees and remit them to the tax authorities (PWC, n.d.).

### **Property tax or real estate tax**

Law No. 162 of 1959, Law 162 of the Real Estate Tax governs taxes on revenue derived from real estate in Iraq. A basic tax of 10% is assessed on the annual revenue for all real estate and is collected from the real estate owner or the long-term lessee (five years). In cases where the owner or long-term lessee cannot be located, the person occupying the real estate is assessed. Prior to the calculation of the annual revenue, each real estate is discounted by 10% for expenses and maintenance before assessing the tax on that real estate (Deloitte, 2021a).<sup>5</sup>

### **Stamp duty**

Stamp Duty Law No. 71 of 2012 states that the signing of contracts should be subject to stamp duty. The contracts are subject to stamp fees at rates that range between 0.1% and 3% of the contract value (PWC, n.d.).

### **Customs**

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<sup>5</sup> There is also an inheritance tax applicable as follows: The first IQD 20 million: Exempted; IQD 20 million to IQD 30 million: 3%; IQD 30 million to IQD 60 million: 4%; IQD 60 million to IQD 90 million: 5%; and over IQD 90 million: 6% (PWC, n.d.).

The applicable customs laws are the Customs Law No. 23 of 1984 and Customs Duty Law No. 22 of 2010. The General Customs Authority (GCA) collects customs duties. Between 2016 and 2020, they represented only 1.5 percent of total government revenues and are small compared to the size of imports (International Monetary Fund, 2021a).<sup>6</sup> Until 2016, a flat tariff duty rate of five percent was applied to any imports. In 2016, the government introduced multiple tariff rate schedules ranging from zero to 80 percent. Since 2018, partly due to weak GCA capacity in goods classification, the tariff structure has been simplified with four customs duty rates: 0, 10, 15, and 30 percent. The effective tariff rate was under 2.6 percent in 2016-2020, while the average statutory tariff rate was 10 percent during those years (International Monetary Fund, 2021b).

### **Sales tax**

Total amount of taxes on goods and services averaged approximately 0.25 percent of GDP between 2007 and 2016 (International Monetary Fund, 2017). Iraq levies sales tax on certain consumer products, including five-star hotels, phone cards, tobacco, and alcoholic beverages. The rates of the sales tax imposed include (Deloitte, 2021a):

- airline tickets (at a rate of 15 percent)
- cigarette products and alcoholic beverages (300 percent, on domestic production and on imports)
- automobile sales (15 percent on import value)
- mobile telephone services (20 percent on scratch cards and phone bills) and on subscriptions for internet usage (also at a rate of 20 percent)
- hotel and restaurant services (10 percent)

### *ii. Social expenditures*

Table 3 presents Iraq's public expenditures for 2017 and the budget for health and education. In total, the government's spending was 74.3 trillion IQD which accounted for 33.5 percent of the GDP. Given the low share of domestic revenue mobilization in the budget, most of the expenditures are financed through oil revenues.

Out of the total expenditures in 2017, a substantial portion (44 percent) was spent on public wages. This is significantly higher compared to the average 22 percent in UMICs.<sup>7</sup> The public sector, a favored vehicle for distributing oil wealth, is, now, by far the largest formal sector employer in Iraq (World Bank, 2017). Since 2004, the number of jobs has increased from 1.2 million to over 3 million and the public sector wage premium compared to the private sector has reached more than 300 percent (World Bank, 2020).<sup>8</sup>

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<sup>6</sup> Average of the last five years (2016-2020).

<sup>7</sup> Source: <https://data.worldbank.org/indicator/GC.XPN.COMP.ZS?locations=IQ-X>.

<sup>8</sup> Given the size of the public sector, a closer look at the necessity of many of these jobs is important. Government spending on employment compensations is usually not included in the CEQ method, but unique to Iraq, if indeed public sector employees are more than needed, one may treat these additional jobs as "redundant" and treat their

Other social expenditures include pensions, subsidies, direct cash and in-kind transfers and investment expenditures. In addition, Iraq spent slightly over 14 trillion IQD (approximately 6.4 percent of its GDP) on education and health through the Ministry of Education, Ministry for Research and Higher Education, and the Ministry of Health and Environment in 2017.

*Table 3. Iraq Federal Government Expenditures and Health and Education Budget, 2017*

Government Spending	Value in admin. Accounts (in: Iraqi Dinar; in billions)	As share of GDP (%)	Included in Analysis (Yes/No)
Panel A: Government Expenditure			
<b>Total expenditures</b>	74,360.47	33.5	n/a
<b>Total current expenditures</b>	57,896.01	26.1	n/a
<b>Wage bill</b>	32,866.52	14.8	No
<b>Social welfare</b>	14,822.56	6.7	Yes
Pensions	11,210.95	5.1	Yes
PDS	1,487.02	0.7	Yes
Social Safety Net	1,845.00	0.8	Yes
Social assistance for displaced	228.22	0.1	No
Salaries for care givers for displaced	51.4	0.0	No
<b>Goods and services</b>	3,676.19	1.7	No
<b>Maintenance of assets</b>	358.48	0.2	No
<b>Capital expenditures</b>	112.15	0.1	No
<b>Subsidies and interest payments</b>	4,145.66	1.9	Yes
Subsidies	1,814.93	0.8	Yes
Interest payments	2,330.74	1.1	No
<b>Special programs</b>	236.55	0.1	No
<b>Total other expenditures</b>	1,677.89	0.8	n/a
<b>Investment expenditures</b>	16,464.46	7.4	n/a
Panel B: Current health and education budget			
<b>Spending on Health and Education</b>	14,153.28	6.4	Yes
Ministry of health and environment + Other Spending Units	4,161.1	1.9	Yes
Ministry of Education + Other Spending Units	7,758.0	3.5	Yes
Ministry of Higher Education and Scientific Research	2,234.18	1.0	Yes

Source: Ministry of Finance (MOF) and World Bank staff calculations. Note: Panel A includes all the government expenditures including those reported in panel B. Figures in panel B report current budgets excluding capital and investment budgets for the central ministries and their other spending units. Other spending units are respective health or education governorates

wages as “public transfers”. This, however, will require more detailed administrative and survey data than currently available.

departments/units and federal departments other than the central ministries. Panel B figures are extracted from the Public Expenditure Review for the Human Development Sector in Iraq (World Bank, 2021).

## Social protection

Iraq embarked on a major reform of its social protection sector in 2014 with the enactment of a new Social Protection Law (Law 11/2014). The new law paved the way to shift from categorical to poverty targeting of social assistance, and hence improving its outreach to the poor. The Government of Iraq, in addition, adopted a 2015-2019 Social Protection Reform Roadmap in November 2014 that sought to develop a comprehensive, integrated, and efficient social protection system covering the three pillars of social safety net, social insurance (pension), and labor market. The social protection landscape, however, is still complex and remains fragmented. Three government ministries are involved in each of two administrative areas (Government of Iraq and Kurdistan (GOI and KRG)). The Public Distribution System (PDS), Social Safety Net (SSN) and public pensions are the three main social assistance programs in Iraq. During the Covid-19 pandemic, the government also introduced an emergency program called “Minha”, which provided a one-time cash transfer to mitigate some of the pandemic’s impacts on livelihoods. Table 4 provides the key ministries involved in the management of these social assistance programs at the federal level.

*Table 4. Key actors of GoI involved in Social Safety Net Programs*

Ministry of Labor and Social Affairs	Ministry of Trade	Ministry of Planning
Supervision and implementation of the Pension Program (via the Department of Social Security and Pensions) Social Safety Net (SSN) Administration (Social Assistance/Social Welfare)	Issues Public Distribution System (PDS) cards Supervision and Implementation of the Public Distribution System (in-kind food)	Determination of the National Poverty Line Information Management for PDS and SSN (Social Assistance/Social Welfare) Management of emergency COVID-19 transfers (Minha)

Source: Case study “Humanitarian cash and social protection in Iraq”, Emily Savage and Meraki Labs.

## Public Distribution System (PDS)

The universal food subsidy program, PDS, under the Ministry of Trade (MOT) is the largest social assistance program in Iraq. Instituted in 1990 under the Oil for Food Program, PDS continues to play an important role in all Iraqi households’ budgets and expenditures, providing as high as 75 percent of total calories for the poorest 20 percent of the population and 45 percent for the richest quintile in 2012 (World Bank, 2014). Despite the decreased number of items subsidized under the program from 12 to the present 4 (wheat flour, rice, sugar, and vegetable oil), PDS remains important for Iraqi households and still has extensive coverage – 95 percent of the population received PDS in 2017 (Phadera, Sharma, & Wai-Poi, 2020). The coverage, however, comes at a significant cost. In 2017, the spending on PDS was approximately 1.5 trillion Iraqi dinars accounting for 2.6 percent of 2017 current expenditure (Table 3).

## Social Safety Net (SSN)

The only social protection cash assistance scheme in the country is the MOLSA’s SSN program. Until 2014, the program relied on categorical targeting based on demographic characteristics of the households, resulting in low coverage of the poor and high leakage to the non-poor. Only 10.6 percent of the poor

received benefits through the program, and among those receiving the assistance, only 25.8 percent were poor (World Bank, 2014).

The new 2014 Social Protection Law provided the switch to poverty targeting, which in turn necessitated an objective criterion to identify the poor. Since then, a proxy means test (PMT) formula, developed using the national household budget surveys, is used as a targeting assessment criterion. The SSN now reaches 1.36 million of the poorest households with the monthly cash transfer (Phadera, et al., 2022). In 2017, approximately 1.12 million families received the benefits and the total government spending on the program was 1.8 trillion IQD, about 0.8 percent of total GDP (Table 3).

Table 5 presents the breakdown of the monthly program benefits for the years 2016 to 2021. Depending on the type of and number of family members, eligible households receive between 100,000 and 225,000 IQD. The program currently covers only the 15 governorates of the federal Iraq as the KRG suspended its program in 2015.

**Table 5. Monthly Cash Transfer Benefits through the MOLSA's SSN; 2016-2021**

<b>Male headed households (HH)</b>		
	<b>Number of households members</b>	<b>Amount (IQD)</b>
<b>1</b>	One member	100,000
<b>2</b>	Two members	125,000
<b>3</b>	Three members	150,000
<b>4</b>	Four members and more	175,000
<b>Female headed households</b>		
	<b>Number of households members</b>	<b>Amount (IQD)</b>
<b>1</b>	One member	100,000
<b>2</b>	Two members	150,000
<b>3</b>	Three members	200,000
<b>4</b>	Four members and more	225,000

Source: Ministry of Labor and Social Affairs (MoLSA) and data shared by World Bank country team.

## Pensions

The pension law was implemented in 2014 (Law 9/2014). At present, there are two mandatory pension schemes in Iraq covering public and private sector employees. Despite its high costs, 5.1 percent of GDP (Table 3), there are large coverage gaps. In 2018, only 38 percent (about 3.2 million) of the total current employees contributed to the Iraqi pension system (World Bank, 2021). Among those covered, almost all of them (more than 3 million) are public employees covered under the State Pensions Fund (SPF), while fewer than 3 percent of private sector employees (less than 200,000) are covered by the social security (private) scheme managed by the Pensions and Social Security Department (PSSD) of the MoLSA (World Bank, 2021). Both schemes are contributory and designed as pay-as-you-go benefit programs. The current contribution rate for the public pension scheme is 25 percent (10 percent from employees and 15 percent from the government as employer) and 14 percent for the private pension program. However, the private sector employees also pay for work injury protection and health insurance programs, making the total contribution rate 17 percent (World Bank, 2017).



Iraq's current public pension program is highly generous. In 2019, the average pensionable income was 360,000 IQD, while the average SPF benefit was more than 900,000 IQD resulting in a benefit ratio of over 253 percent for the program (World Bank, 2021). The 2019 amendments of the pension law reduced normal retirement age to 60 from the previous 63 and, unlike in rest of the world, the survivorship benefits continue to be extended to survivors well beyond spouses and children (World Bank, 2021).

In addition to the two contributory schemes, Iraq pays various pension related transfers directly through its general budget. During the SPF's creation, only those who retired after 2006 were transferred into the program and pre-2006 retirees' entitlement responsibilities were transferred to the treasury. Table 6 shows the number of beneficiaries for various type of pensions in 2018. Approximately 1.2 million beneficiaries received pensions based on former employment (before 2006) in security forces, military, and civil service but the majority (63.1 percent) of those were survivors of former public workers. Additionally, 0.64 million Iraqis received "non-employees" based pension transfers that cover the victims of terrorism, martyrs, wounded in popular uprising, etc. In comparison, pension recipients from the public contributory Pension Fund were only 0.4 million and, again, survivorship made a significant portion of the total recipients' pool.

*Table 6. Iraq: pensions beneficiaries by scheme (2018)*

	Treasury – Former employees	Treasury - Nonemployees	Pension Fund
Security forces pensions (survivors)			
Wounded of the popular mobilization		1,544	
Martyrs of the popular mobilization		25,519	
Wounded victims of terrorism		12,458	
Martyrs of terrorist victims		209,726	
Prisoners		87,461	
Martyrs		164,540	
Security forces pensions (survivors)	108,552	2,095	23,354
Military pensions (survivors)	338,286	22,621	13,520
Security forces pensions (retirement)	40,701	9,549	10,368
Civil pensions (survivors)	288,898		130,913
Military pensions (retirement)	167,685	106,756	7,621
Civil pensions (retirement)	221,035		250,413
Total	1,165,157	642,269	436,189

Source: Ministry of Finance

## Education

The Ministry of Education and the Ministry of Higher Education and Scientific Research are responsible for controlling the national education system. Public education is free from primary education to doctoral degrees. Private education institutions exist; however, they are relatively expensive and only a small share of students attend them. The official educational cycle in Iraq extends to 12 years, including 6 years of mandatory primary education, which starts from the age of six years, followed by 3 years of intermediate school, then 3 years of secondary education, which is divided into general secondary of scientific and

literary and secondary vocational industrial, agricultural, or commercial. Levels of schooling are pre-primary education (age 4-5 years), primary school (at age 6), intermediate school (grades 7-9), secondary school (10-12<sup>th</sup> grade), technical and vocational training, teachers' training, bachelor's degree, and university.

According to the Central Statistical Organization (2018), in total 9.93 million students were enrolled in 2017 with the highest number in primary education (5.9 million), followed by secondary education (2.9 million). Education expenditure remained low in 2017, with the current expenditures for the Ministry of Education, other educational units, and the Ministry of Higher Education and Scientific Research being 4.5 percent of GDP (Table 3).

## **Health**

In Iraq, access to health care is limited and geographical disparities are significant (World Bank, 2017). The public sector remains the primary health care provider in the country with limited but gradually increasing private sector and nongovernmental organizations. The National Health Strategic Plan 2014-2018 and National health policy 2014 – 2023 (updated in 2015) provide major policy guidelines for the sector. Aside from these strategies, the government has also implemented the National Reproductive, Maternal, Neonatal, Child, and Adolescent Health Strategy 2016-2020.

The public sector provides health services through a network of primary health care centers (PHCC) and public hospitals at meager charges. The PHCCs provide preventive and primary curative services, and "are recognized as essential sources of health care provision, particularly for the poor." (World Bank, 2017). For secondary and tertiary care, patients are referred from PHCCs to hospitals. However, the World Bank (2017) estimated that only 40 percent of Iraqis have access to these referral services because of the inadequate number and uneven distribution of public hospitals. Small private hospitals also provide secondary and tertiary care.

## **Indirect subsidies: Electricity**

Iraq does not generate sufficient electricity to meet its domestic demand and, as a result, peak summer demand typically exceeds actual generation by almost 50 percent. For example, in 2019, the available peak generation capacity in Iraq was 19.3 gigawatts (GW), much lower than the peak summer demand of 27.5 GW. While net electricity generation has been growing annually, low utilization rates of power plants,<sup>9</sup> distribution losses and lack of infrastructure have all contributed to the inability to bridge the gap between supply and demand (Deloitte, 2021b). The shortage has forced consumers to rely on private generators, leading to significant economic and environmental implications. These structural challenges are compounded by the systemic low level of revenue collection: 51 percent of the total electricity bill in Iraq goes uncollected (World Bank, 2022a). Iraq relies on electricity and gas imports, particularly from Iran, to fill the domestic shortage.

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<sup>9</sup> According to (World Bank, 2022a) "Iraq built up its electricity generation capacity from 15.3 to 34.3 gigawatts (GW), [...] However, only 19.4 GW of the installed capacity is available, leading to a gap in meeting the current peak demand of 29 GW".

Historically, electricity in Iraq has been highly subsidized. The Iraq Public Expenditure Review (Al-Ghelaiah, et al., 2014) estimated that explicit subsidies for electricity use alone constituted 65 percent of all subsidies in the budget and 3 percent of total recurrent budgetary spending in 2010. Not only are the domestic end-user prices low in comparison to prices in other countries, but they are also significantly below the opportunity cost of supply. Electricity revenues cover only 10 percent of total production costs and Iraq has one of the lowest electricity prices among the Arab countries in the Middle East (International Monetary Fund, 2015). A new tariff structure, introduced in January 2016, is applicable to both the residential consumers and industrial and commercial consumers.

Total electricity consumers as of 2017 were 4,576,087, out of which 76.41 percent were residential consumers. The current applicable tariff scheme is based on an escalating consumption slab structure and the customer segment. Iraq does not have a time of day or seasonal electricity pricing. Incremental block tariff is applicable for all residential consumers,<sup>10</sup> and the residential tariff structure is shown in Table 7.

*Table 7. Iraq residential tariff structure*

Units	Rate
1-1500	10
1501-3000	35
3001-4000	80
4001+	120

Source: Ministry of Electricity (information accessed on August 22, 2022).

### **Indirect subsidies: Fuel**

Fuel subsidies in Iraq are administered under a complex system, move in tandem with global oil prices, and complicate budget policy. The structure of fuel subsidies spans the entire chain of production, refinery, and distribution phases. Given the practice of local administered fuel prices, fuel subsidies in Iraq increase substantially whenever global oil market prices pick up and fall as oil prices decline, a volatility that complicates budgeting and adds to the fiscal burden. The total gasoline subsidy amounted to 67.8 billion IQD, while the total subsidy for diesel was 4,252 billion IQD in 2019 (International Monetary Fund, 2021a). There is no data for explicit subsidies on kerosene, LPG, and Natural gas for 2018.

## **3. Data, methodology, and assumptions**

There are several considerations for the effective fiscal policy including fiscal sustainability, economic efficiency, and equity. This fiscal incidence analysis focuses on the equity aspect of the fiscal policy. The fiscal incidence analysis of Iraq focuses on impacts of major fiscal expenditures and existing limited taxes on poverty and inequality. This is the first comprehensive distributional assessment of the country's fiscal system.

<sup>10</sup> Incremental block tariff implies that if the units consumed are 2,000, the consumer will pay the previous rate slab for the maximum units in that slab and the remaining of the next slab, which in this case would be (1,500\*10) and (500\*35).

Fiscal incidence analysis for Iraq is conducted using survey and government data from the 2017 fiscal year. This is primarily due to two reasons. First, the analysis required a nationally representative household socioeconomic survey. The 2017/18 Survey of Well-Being via Instant Frequent Tracking (SWIFT) is the most recent such survey available in Iraq. Second, compared to the pre-2017 period when the country faced the ISIS conflict, and post-years when the Covid-19 pandemic swept the globe, 2017 was relatively stable economically, politically and security wise. This section describes the Commitment to Equity methodology the paper employs and the allocation methodology including the existing data and methods used to fill the data gap, and important analytical assumptions.

#### **a. Commitment to Equity Framework**

This study follows the CEQ methodology to implement a fiscal incidence analysis for Iraq. A CEQ Assessment is a rigorous and standardized fiscal incidence methodology that permits systematic analysis of the distributional impact of taxes and public spending using a common framework developed by the CEQ Institute and presented in the CEQ Handbook (Lustig, 2018 ). Currently, CEQ Assessments have been implemented in over 60 countries.<sup>11</sup>

The building block of a fiscal incidence analysis is the construction of income concepts. Conceptually, in nationally representative survey data, the analysis starts by defining pre-fiscal income,<sup>12</sup> and each new income concept is constructed by including different layers of the fiscal system, or categories of taxes and transfers, as shown in Figure 1. Elements of a fiscal system are constructed by distributing shares of the national tax or transfer budget to households. Once all the fiscal instruments and income concepts are constructed, the inequality and progressiveness, poverty and impoverishment, and the amount of redistribution of a fiscal system are differences between these indicators measured on the income concept that exclude (pre-fiscal) and the concepts that include (post-fiscal) these fiscal policy elements. In countries like Iraq, where consumption is used as a measure of welfare, the analysis starts by setting *Disposable Income* equal to the consumption welfare aggregate and moves backward and forward to calculate other income concepts. Implicitly, this implies a one-to-one relation between income and expenditure i.e., a 1 percent change in income leads to a 1 percent change in expenditure.

When calculating the total impact on inequality-reduction, the analysis measures the change from pre-fiscal income to *Final income*. However, when calculating total poverty reduction, the analysis measures the change from pre-fiscal income to *Consumable Income* – that is, it excludes in-kind health and education transfers. The reason for this is that in-kind health and education transfers are allocated at the average government cost of provision. Cost of provision is different from measuring the change in a household's purchasing power, and poverty is typically defined as the capability of a household to purchase a basic basket of necessities.

A CEQ assessment typically generates two extreme scenarios for the treatment of public contributory pensions. In the first scenario pensions are treated as private income which is saved and spent at a later

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<sup>11</sup> Source: Commitment to Equity Institute ([www.commitmenttoequity.org](http://www.commitmenttoequity.org)).

<sup>12</sup> Pre-fiscal income could be equivalent to market income or market income plus pensions depending on the pension scenario chosen for the baseline.

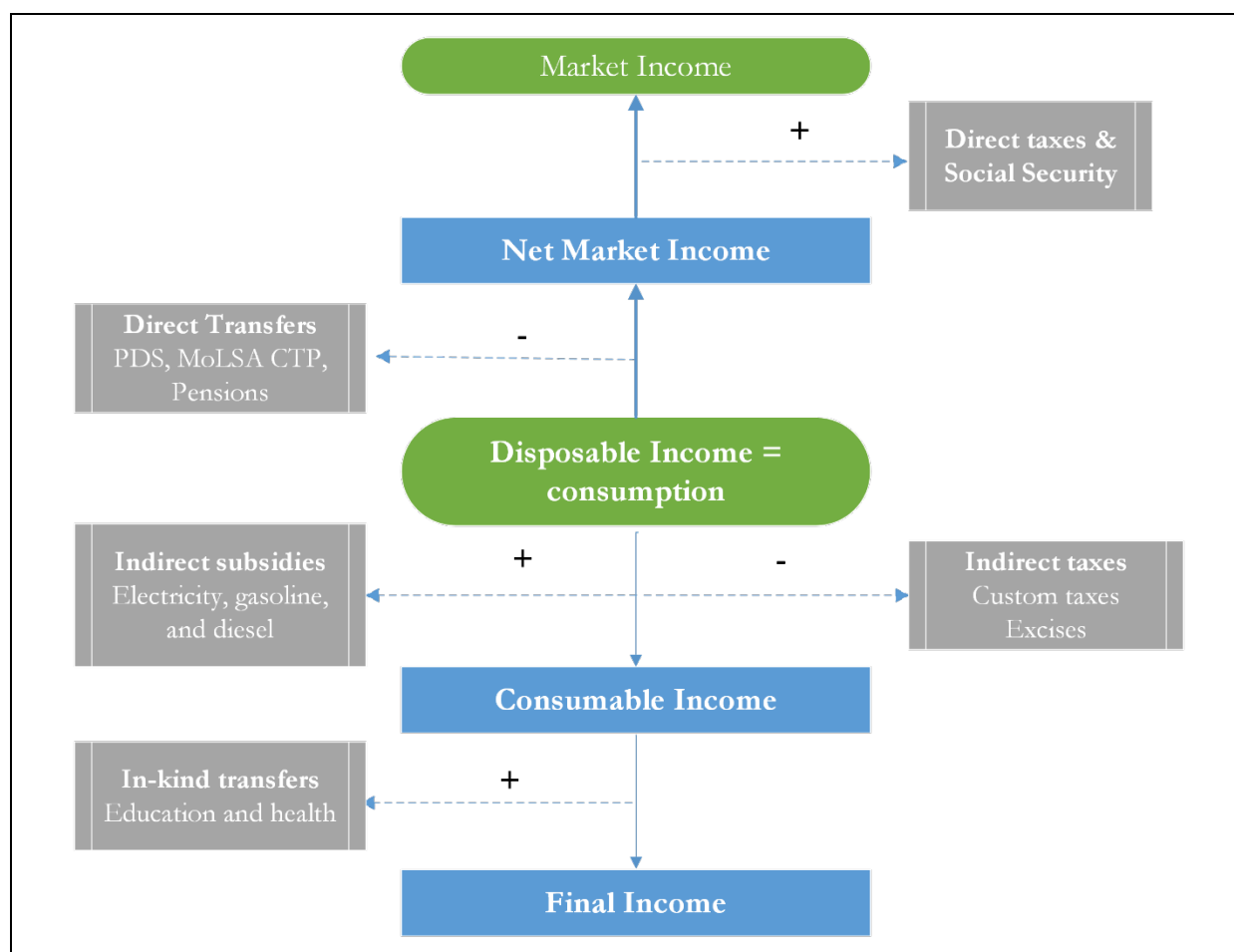
date (PDI), and in the second, pensions are treated as a government transfer (PGT) – a tool for redistribution from one segment of society to another.<sup>13</sup> This paper considers that the main scenario for Iraq is when pensions are considered as transfers, due to the important size of the pensions that are paid directly from the general budget and only a small share as a result of previous saving. PDI scenario results are presented in annex III.

Figure 1 presents the steps employed in the paper to construct different income concepts for Iraq. Using the 2017/18 Survey of Well-Being via Instant Frequent Tracking (SWIFT), the analysis starts by defining *Disposable Income* equivalent to the consumption aggregate that the country uses to calculate official poverty and inequality figures. Given that the *Disposable income* defined here already includes certain layers of the fiscal system, the analysis works backward by removing those layers to reach the income of origin, *market income*, which is a measure of income solely from private sources. Direct transfers (PDS, SSN, and Pensions) are deducted first to reach *net market income*; then, values of direct taxes and social security contributions are added to define the pre-fiscal, *market income*. The analysis works “forward” from *Disposable income*, adding additional layers into the fiscal system, to reach the end income -income once all the taxes and transfers modeled here have been included. *Consumable income* is calculated by adding indirect subsidies on electricity and fuel to *disposable income* and subtracting indirect taxes (customs duties and excise taxes). In-kind education and health transfers are, then, added to reach the *final income*.

*Figure 1. CEQ Income Concepts*

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<sup>13</sup> Pensions can result in different types of redistribution. They can redistribute within the contributing population, for example by placing a floor and a cap on pension income, they can generate inter-distributional redistribution based on demographics and economic growth, they redistribute from workers who contribute but not enough to receive the benefits, and when the social security system is in a deficit, they redistribute from tax-paying individuals to pension recipients.



Source: authors based on (Lustig, 2018 ).

While broadly applied, the CEQ methodology suffers from certain methodological limitations. Besides not accounting for certain important government spendings such as infrastructure, security, and interest payments, the methodology is primarily a partial equilibrium accounting activity. It is a static model and fails to capture behavioral responses and intra-household bargaining, nor does it account for the life cycle and the general equilibrium effects. Quality of public service delivery is also absent from the model. Box 1 summarizes some of these shortcomings in detail.

**Box 1: Methodological limitations to the CEQ assessments**

- a) **A CEQ assessment does not account for certain categories of tax**, such as corporate income tax. This tax does not, however, constitute significant part of the revenue system of Iraq.
- b) **Certain categories of the fiscal expenditure are excluded from the CEQ assessment**. The expenditure categories which are excluded are infrastructure spending, defense spending, and interest payments. These categories of expenditures are considered as expenditure neutral

and, therefore, the benefits and burdens of these expenditures are not assigned to any single individual.

- c) **The CEQ analysis, presented here, does not account for intra-household disparity due to the fiscal policy.** Although certain methodologies have been developed to assess the impact of fiscal policy on gender and age, such an analysis would be part of future policy simulations and not accounted for in this baseline scenario.
- d) It is a standard incidence analysis without behavioral, lifecycle or general equilibrium effects.
- e) This fiscal incidence analysis does not account for the quality of services delivered by the government in education and health.
- f) **Top of the missing income,** due to the tendency of poor representation of richer households in the national household surveys used for analysis.

Adapted from Lustig (2018).

## b. Allocation methodologies

In this section we describe in detail the allocation methodologies used to model each tax and transfer included in the analysis.

### *Data*

This fiscal incidence analysis is conducted using the survey data from the 2017/18 Survey of Well-Being via Instant Frequent Tracking (SWIFT), also known as the Rapid Welfare Monitoring Survey 2017/18. The survey was conducted by the Central Statistical Organization (CSO) and Kurdistan Regional Statistics Office (KRSO). At the time when the full-scale household surveys such as the Iraq Household and Socioeconomic Survey (IHSES) was infeasible to implement, the goal of the survey was to provide interim estimates of welfare and well-being in Iraq until another survey comparable in scope and coverage to IHSES could be fielded. The survey questionnaire, thus, utilized questions from previous rounds of IHSES with few additional questions to assess the impacts of the 2014 twin crises, when Iraq faced both the ISIS conflict and an economic shock induced by the sharp collapse of oil prices in the international market.

The full survey was designed to be representative of 18 governorates of Iraq. It sampled 8,615 households with all responding to a short module on the non-monetary topics of household composition, education, labor market status, dwelling characteristics, ownership of assets, access to social assistance, negative shocks, and subjective wellbeing. A subset of 1,500 sampled households answered a set of additional questions on household food and non-food expenditures (long-form) designed to provide a full consumption aggregate. The “long-form” sample was representative only of four areas – Kurdistan region, North, Center, and South – and formed the basis for updating official poverty and welfare estimates for Iraq. The survey, however, is not strictly comparable to previous surveys due to an updated survey methodology and lack of full geographical coverage.<sup>14</sup> Moreover, due to the timing of data collection

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<sup>14</sup> Given the scope of the survey and various implementation issues, the SWIFT survey differs from the previous surveys. Due to continued ISIS presence and insecurity, the survey could not be implemented in nine districts of Nineveh governorate, three in Anbar, one in Baghdad, and one in Salah al-din. The official poverty estimates (20.0 percent national rate and disaggregated estimates by the four geographical areas) account for the missing 14 districts by using a simulation strategy. Estimates reported in the paper, however, are direct estimates without



when ISIS was still present in the northwest of the country, the data may lack an accurate bottom-up picture of the fiscal situation. Many displaced people, for example, lost access to PDS and cash transfers due to loss of documentation and frictions in accessing the benefits at another locations.

Despite these constraints, the paper relies on the 2017/18 SWIFT survey and uses its “long-form” sample of 1,500 households with information on consumption expenditures. It is the latest welfare monitoring survey and 2017/18 was a relatively stable period in Iraq both politically and economically. The last round of the national comprehensive survey to monitor welfare, IHSES, was in 2012. Since then, the country has experienced significant changes including the major security crisis of the ISIS conflict and a deep economic recession induced by the drop in oil prices. The country has also enacted several critical fiscal policies, including transforming its Social Safety Net (SSN) to poverty targeted rather than a categorical targeted program. The 2012 IHSES data, thus, is outdated for performing this analysis.

Other surveys, however, are used to fill the critical missing information in the SWIFT survey. Despite collecting information on employment status, the SWIFT survey lacks information on wages and income. The exercise uses IHSES 2012 data to impute individual wage and household income. Details of the imputation strategy are presented in Annex I. Similarly, vital to identifying workers contributing to social security, SWIFT lacks information on employees’ formality status. Information from the 2021 Iraq’s Labor Force Survey (LFS) is used to fill the data gap (see Annex II for estimation strategy).

Administrative data from different official sources is used for macro-validation of the modeled fiscal interventions (see annex IV). Social protection data for the main social programs on budget, beneficiaries, and allocation rules are obtained from the Ministry of Labor and Social Affairs (MoLSA) and the World Bank Social Protection team. Information on indirect subsidies for domestic electricity distribution and fuel obtained from the Ministry of Electricity and the World Bank Energy team is used for validation. Education expenditure and students’ enrollment as reported in the Iraq’s Human Capital Public Expenditure Review (World Bank, 2021). In addition, data on health expenditure and health cases from the Ministry of Health and World Bank health team are used for modeling.

#### *i. Direct taxes and social security contributions*

The first step to estimate the personal income tax is determining which employees are formal. For the estimation purposes, we assumed that only formal employees paid personal income tax and social security contributions. Using the Labor Force survey 2021, we fitted a probit model to estimate the probability of being formal based on age group, sex, education level, and region of the country (see Annex II for detail). Using the estimated parameters, we allocated formality based on probability score until the proportions of formal in the SWIFT data matches the estimates from the LFS.

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accounting for the missing districts. Insecurity necessitated a change in data collection methodology as well. While a 7-day diary method was used to collect household food consumption in the previous household socioeconomic surveys, the SWIFT used a 7-day recall method. Another important difference is that, unlike the previous national surveys to monitor welfare, the 2017/18 SWIFT was not designed to be a year-round survey. Details on the survey design including the questionnaire and comparability issues with the previous household surveys are presented in Sharma and Wai-Poi (2019).

After identifying which workers have formal jobs, we simulated PIT by applying Iraqi statutory tax rates<sup>15</sup> to labor income. We assumed that income estimated in the survey is net of taxes, so we grossed up the labor income to estimate tax payments. Besides simulating labor income and status of formal workers in the SWIFT 2017/18 survey, not having reliable administrative data to validate numbers of taxpayers remain other major limitation. Social security contribution is calculated by applying the statutory rate (10%) to labor income of formal workers.

Due to lack of information on the formula for calculation of the property taxes, they are not modeled in the analysis.

## ii. *Social protection*

The SWIFT 2017/2018 collected information on whether any member of a household receive pensions in the past 12 months. The model uses this information to identify pension-beneficiary households in 2017 and used IHSES 2012 parameters to estimate pension amount (see Annex I). However, as discussed above, there are different pension schemes in Iraq (Table 6). Although the pensions are estimated at a family level, inability to determine which pension regime each pensioner belongs to due to the lack of information in the SWIFT survey to identify individual pensioner/s within a household and type of pension/s she receives may pose a challenge to accurately determine pension amount.

The model includes two additional large direct transfer programs: the universal Public Distribution System (PDS) and poverty targeted MoLSA's cash transfer program called the Social Safety Net (SSN). The SWIFT survey collected detailed information on beneficiaries and consumption of ration-food by households as part of the consumption aggregate. Ration food items are valued at market prices. The total PDS benefits from the survey, however, is higher than the administrative budget data. The PDS benefits, thus, are scaled down to match the total PDS budget for the year.<sup>16</sup>

The survey directly identifies SSN beneficiary households and, additionally, reports household size and points out household head in the roster. Using Table 5, the information allows to calculate cash transfer benefits for SSN recipients. While only those self-reported SSN beneficiaries in the survey are modeled, the administrative data reports significantly more SSN beneficiaries, which remain a major limitation of the analysis.

## iii. *Indirect taxes*

The sales tax modeling applied statutory rates to taxable items (mobile phone services, hotel and restaurant services, airline tickets, and alcoholic beverages). The model assumes consumers take the full burden of these taxes. This is because the taxed goods are not inputs for producing other goods and services and the indirect effects are likely trivial. The available input-output lacked detailed information to estimate tax effective rates, so the statutory for excises are used instead.

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<sup>15</sup> See Table 2 for statutory rates and income tax brackets.

<sup>16</sup> The total ration-food value evaluated at market price in the survey was 1.54 times higher than the administrative data.

To simulate custom duties, we estimate an effective rate of imports to consumption from national accounts (1.0%), following a simpler version of the methodology applied by (Younger & Khachatryan, 2017). We used the effective rate only for goods and excluded services from the custom tax base. As with most household budget surveys, the SWIFT lacks information on whether the items consumed are imported to model appropriately.

#### iv. Indirect subsidies (electricity and fuel)

The SWIFT collected expenditures on public electricity and private generators. The analysis focuses only on the electricity consumption from the public grid. Using the total reported electricity expenditure in the survey and the prices shown in Table 8 the study calculates quantity of electricity consumed by households. Using these quantities, electricity subsidies are calculated as difference between the cost of electricity provision per kW/h (138.29 IQD/kWh for 2017/18)<sup>17</sup> and the actual price consumers pay. Given the very generous tariff structure, almost all the households in the survey fall under the first slab (1-1,500 kWh) and pay the minimum tariff.

The model focuses on gasoline and diesel for fuel subsidies. They are defined as the difference between supply costs and consumer prices (using IMF data from 2019)<sup>18</sup> and only direct effects are accounted in the model.

**Table 8. Pricing structure of fuel products**

	Unit	Consumer Price	Supply Cost	Explicit subsidy, LCU per unit
Gasoline (2019)	LCU / liter	709.29	718.98	9.69
Diesel (2019)	LCU / liter	347.97	883.53	535.56
Kerosene (2018)	LCU / liter	912.82	842.98	None
LPG (2018)	LCU / liter	696.19	642.92	None
Natural gas – residential (2018)	LCU / GJ	22,195.52	20,497.19	None

Source: International Monetary Fund (2021a)

#### v. In-kind benefits (education and health)

We define individuals currently enrolled in public schools (primary, secondary, and tertiary) as public education beneficiaries and allocate average education transfers to those beneficiaries in the SWIFT data. Average transfers are calculated by dividing public spending on education (primary vs. secondary vs. tertiary) by the number of students enrolled in public schools (primary vs. secondary vs. tertiary) as reported in the administrative data. The limitation to this method is that the analysis is based on national

<sup>17</sup> Source: Data provided by the World Bank Energy team.

<sup>18</sup> Gasoline consumer price in 2019 was 709.29 and supply cost was 718.98, resulting in a subsidy of 9.69 IQD/liter. Similarly, the diesel subsidies in 2019 was 535.56 IQD/liter given the consumer price of 347.97 and supply cost of 883.53 IQD/liter. Source {International Monetary Fund (2021a)}.

average transfers i.e., it assumes students in all the regions and schools receive the same transfer per education level.

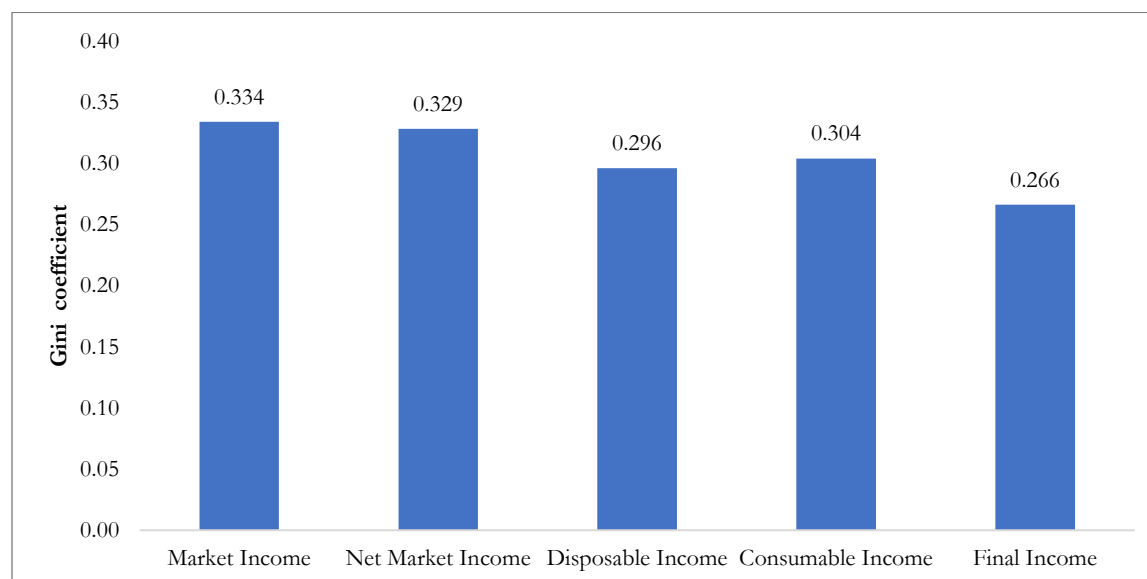
Health analysis applies the “usage approach”. Beneficiaries are defined as those individuals reporting having used a government hospital or health centers in the survey. The average health transfer is the government health expenditure divided by the sum of the households reporting the use of hospitals and health centers. Modeling the in-kind health transfers faced several limitations. This includes lack of a health module in the SWIFT survey with access and utilization of public health services, hence, accurately calculating benefits remain a challenge. Moreover, the public health expenditure data is not disaggregated by region nor by type of health services.

## 4. Headline results

### a. Poverty and inequality

Figure 2 presents Iraq’s Gini indices calculated at different income concepts. While the pre-fiscal inequality is on the lower side (the Gini coefficient of 33.4 at market income is one of the lowest among the UMICs), Iraq’s fiscal system is modestly progressive. The combination of taxes and public transfers modeled for 2017 reduce inequality by 6.7 Gini points from 33.4 at market income to 26.7 at final income. However, most of the inequality reduction is driven by in-kind benefits of health and education services. When these non-cash services are excluded, inequality falls by 3.0 points. Most of this inequality reduction is a result of direct transfers (PDS, SSN and Pensions) - Gini coefficient falls by 3.3 points between net market and disposable income.

*Figure 2. Inequality (Gini coefficient) at pre- and post-fiscal income concepts.*

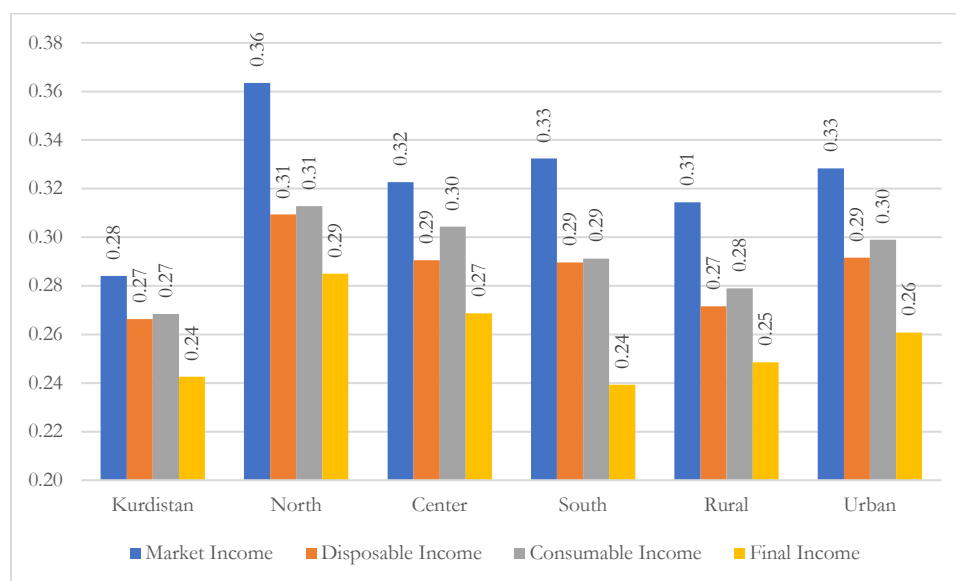


Source: authors' estimates based on SWIFT 2017/18.

Pre-fiscal inequality is higher in urban areas than in rural locations. In both places, there are important reductions in inequality due to direct and in-kind transfers, while subsidies and indirect taxes increase

inequality in both the places (see Figure 3). The most unequal region before taxes and transfers is the North, followed by the South and the Center, while inequality is lowest in the Kurdistan region. In general, the reduction in inequality due to direct transfers is more in pre-fiscal unequal regions i.e., North, and South. Effects are modest in Kurdistan and the Central areas. Consistent with the results at the national level, in-kind transfers (education and health) are the most equalizing factors in all the regions.

**Figure 3. Inequality (Gini coefficient) by geographical area**



Source: Authors' estimates based on SWIFT 2017/18.

In cross country comparison, inequality impact of Iraq's fiscal system is lower and is ranked in the bottom half among all the countries included in the 2022 PRSP CEQ database. Figure 4 presents the redistributive impacts of fiscal policies across countries both with (Fig: 4-B) and without (Fig: 4-A) the in-kind health and education benefits. While the reduction of the Gini coefficient by 3.0 points from market income to consumable income in Iraq is comparable to the database average of 3.0 points, it is below the UMIC average of 3.2 points. Iraq is ranked 27 out of the total 62 countries and 13 out of the 26 UMICs in the database. With the in-kind transfers, the global and UMIC average inequality reductions of 7.5 and 9.1 Gini points are above the Iraq's 6.7 Gini points and Iraq is ranked 34 and 16, respectively, in the two samples.

**Figure 4. Change in inequality at pre- and post-fiscal income concepts, selected countries (Gini points)**

Fig: 4-A From Market to Consumable Income

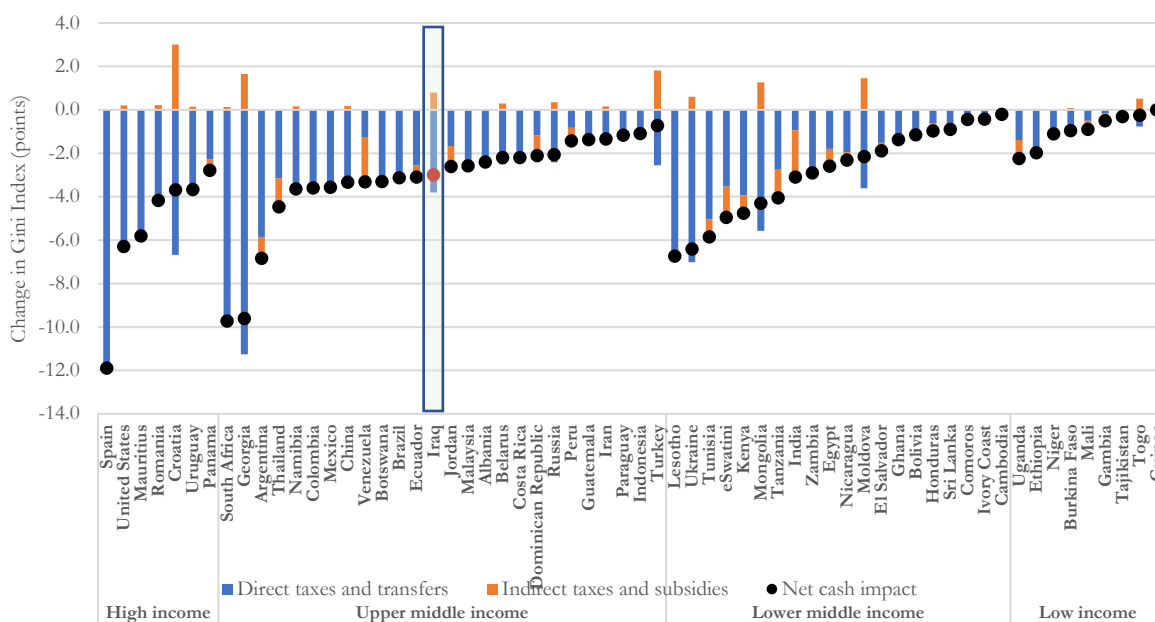
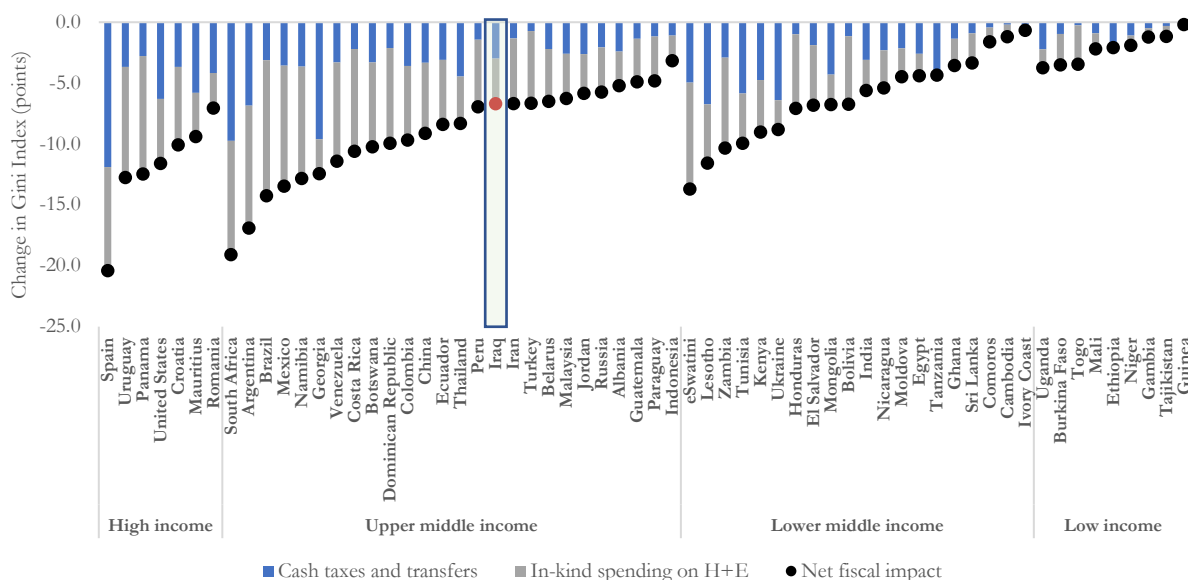


Fig 4-B From Market to Final Income



Source: 2022 PRSP CEQ database (World Bank, 2022b).

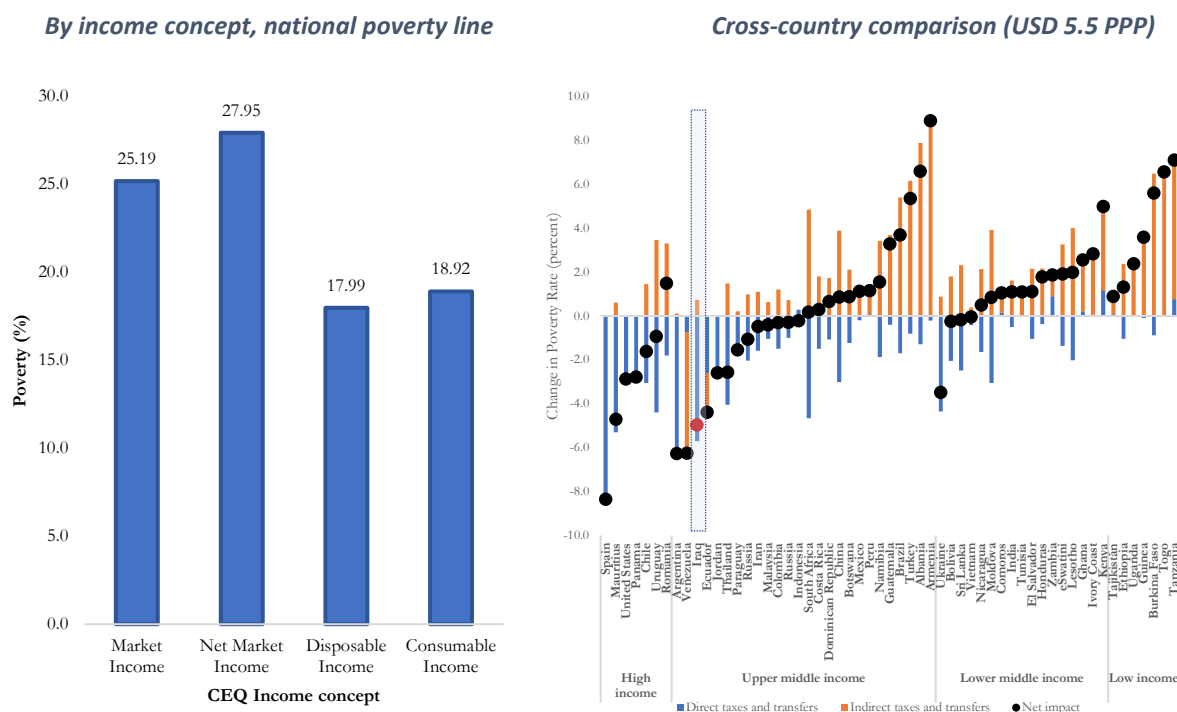
The impact of Iraq's fiscal system on poverty, on the other hand, is high and among largest in the cross-country comparison sample. Figure 5 (right panel) shows poverty headcount at different income concepts.<sup>19</sup> Given the difficulty of quantifying benefits from the government's provision of health and education services monetarily, poverty impacts are evaluated between market and consumable incomes excluding the two in-kind transfers. Fiscal policy in Iraq helps reduce poverty by 6.3 percentage points

<sup>19</sup> These are direct estimates from the SWIFT data without accounting for the 14 districts where the survey could not be implemented due to the continued security reason.

when evaluated using the national poverty line (IQD 110,881 per person per month in 2017). While breaking down by specific fiscal policies, direct transfers of pensions, poverty targeted SSN cash transfer, and the universal PDS drive most of this poverty reduction; poverty falls by almost 10 percentage points between net market and disposable income. As expected, indirect taxes, in particular taxes on alcohol and tobacco, increase poverty headcount and so do direct taxes and social security contributions but on a smaller extent. The highly subsidized electricity and fuel, on the other hand, have positive impacts on poverty, but the impact sizes are minimal.

Cross-country comparison using the international poverty line for UMICs (USD 5.5 PPP per person per day) is presented in Figure 5 (right panel). Using this international poverty line, Iraq's fiscal system reduces poverty by 5.0 percentage points. This is one of the largest impacts in the PRSP database; 3<sup>rd</sup> from the top among the 26 UMICs and 4<sup>th</sup> among all the 57 countries evaluated using the UMIC poverty line.

**Figure 5: Poverty Headcount (share of population below poverty line)**



Source: Authors' estimates based on SWIFT 2017/18.

Note: Iraq PPP is based on estimates from Atamanov, et al. (2020), table A1.<sup>20</sup>

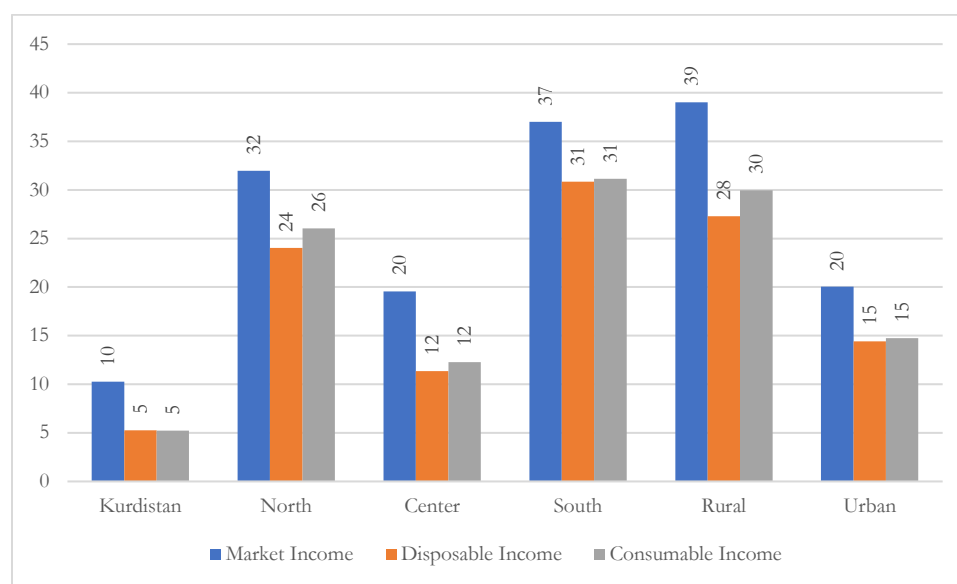
Within Iraq, fiscal interventions have heterogeneous impacts on poverty across places (Figure 6). Compared to urban areas, pre-fiscal poverty rate is higher in rural areas but falls significantly by 9

<sup>20</sup> The World Bank in its estimates of global poverty does not use the published 2011 PPPs for six countries. In the Arab Republic of Egypt, Iraq, Jordan, the Lao People's Democratic Republic, Myanmar and the Republic of Yemen large differences were found between the price changes implied by the 2005 and 2011 PPPs, and domestic consumer price index (CPI) inflation (Atamanov, Lakner, Mahler, Tetteh Baah, & Yang, 2020).



percentage points between market and consumable income compared to 5 percentage points in urban areas. Similarly, pre-fiscal poverty is polarized between higher rates in the North and the South on the one hand and relatively low levels in Kurdistan and the Center on the other. The poverty rate in Kurdistan region is halved with all the fiscal interventions (5 percentage points reduction), whereas it decreases by 6 percentage points in the southern and northern areas. The central region with the reduction of 8 percentage points, benefits the most from the fiscal system (see Figure 6).

**Figure 6. Poverty Headcount (share of population below poverty line) by geographical areas**

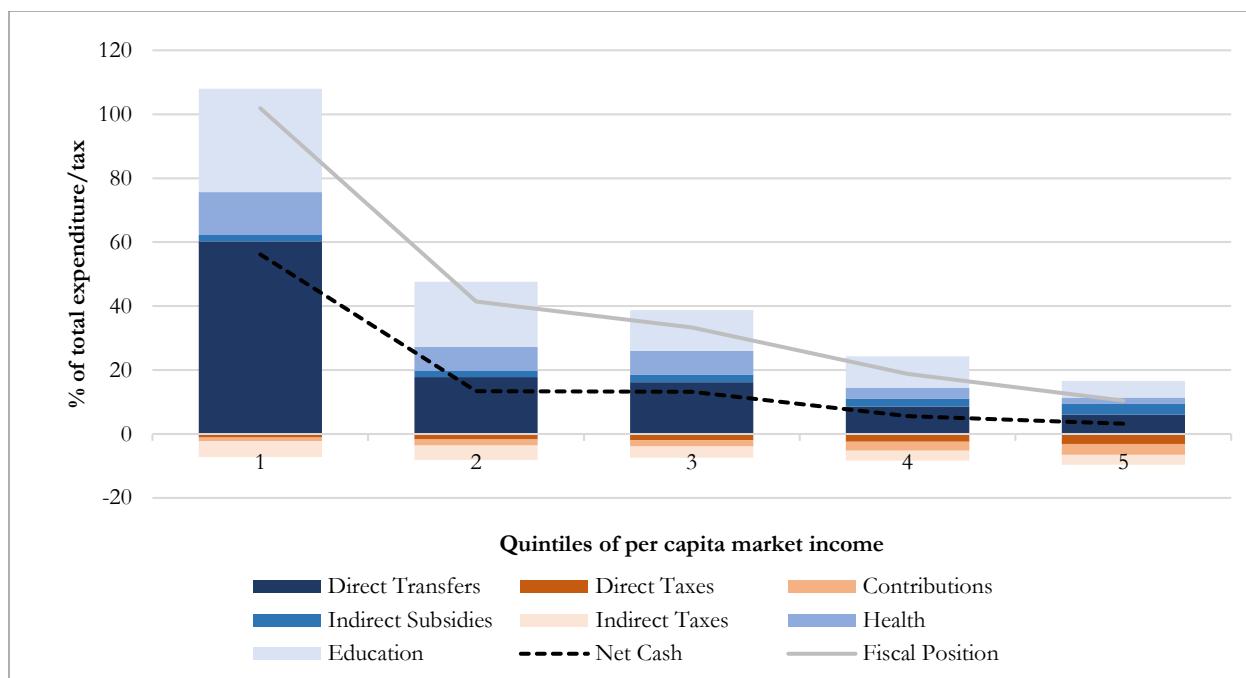


Source: Authors' estimates based on SWIFT 2017/18.

## b. Net beneficiaries

The analysis shows that Iraq's overall fiscal policy only generates net beneficiaries. This can be seen in Figure 7, where the size of direct transfers as a proportion of market income is much larger than the total taxes paid across all income quintiles. Thus, the net cash position, i.e., the sum of direct transfers plus subsidies minus direct and indirect taxes, results in a positive balance for all quintiles. When education and health benefits are added, the positive balance is even greater. While the poorer households benefit the most from the interventions, even the richest households in Iraq are net beneficiaries. This is atypical when comparing internationally, where strong tax base contributes significantly to the government revenues and richer households (at least in the top deciles) typically are net contributors.

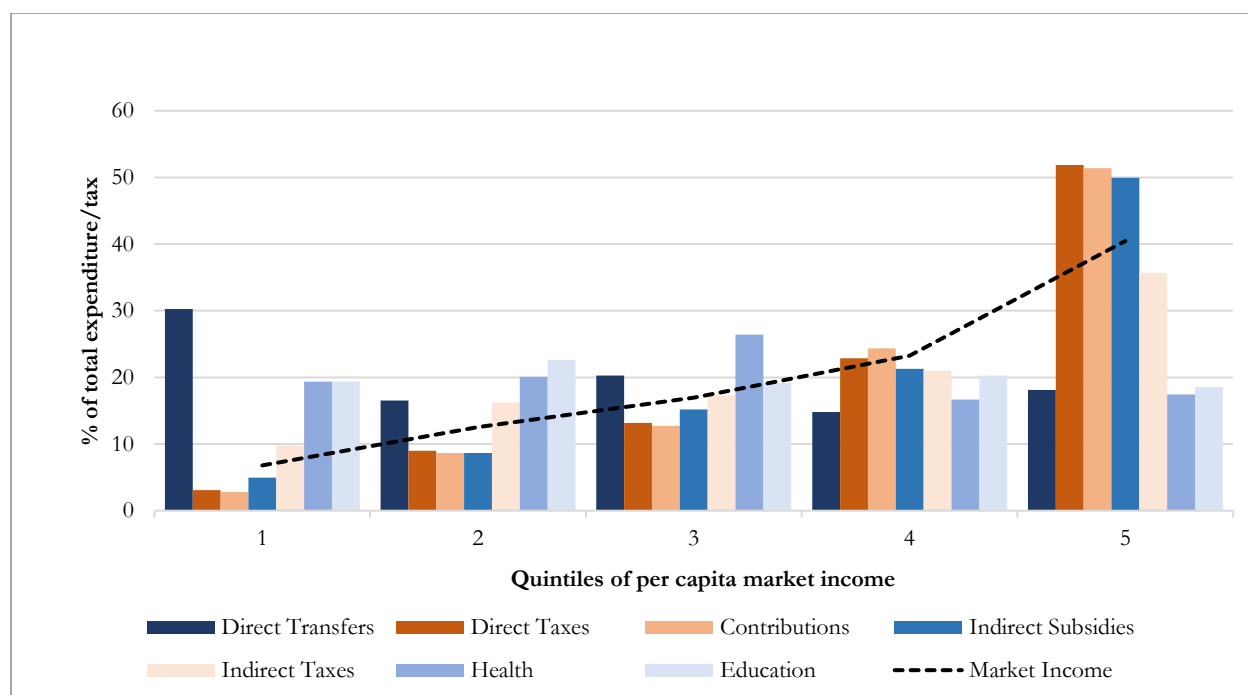
**Figure 7. Net payers/beneficiaries by decile (as a percentage of market income)**



Source: Authors' estimates based on SWIFT 2017/18.

Households across the income distribution benefit heterogeneously from different fiscal interventions. Figure 8 presents the share of total government spending or revenue collection from households for each fiscal intervention by income quintile. Households in the poorest quintile receive a relatively higher share (about 30 percent) of direct transfers compared to households in the other 4 quintiles, where the share varies between 14 to 20 percent. Notably, the richest fifth quintile receives a substantial share of 18 percent. Indirect subsidies, on the other hand, tend to benefit richer households significantly more (50 vs 5 percent for the richest and poorest quintiles). Benefits from the in-kind education and health services are relatively even across the income distribution with slightly higher shares for the bottom 3 quintiles. Direct taxes and contributions are concentrated in the highest income quintile contributing more than 50 percent of the total direct taxes and contributions. Indirect taxes, similarly, are skewed towards the fifth quintile but with a lower proportion.

**Figure 8: Concentration shares by quintile (as a percentage of total expenditure/tax)**

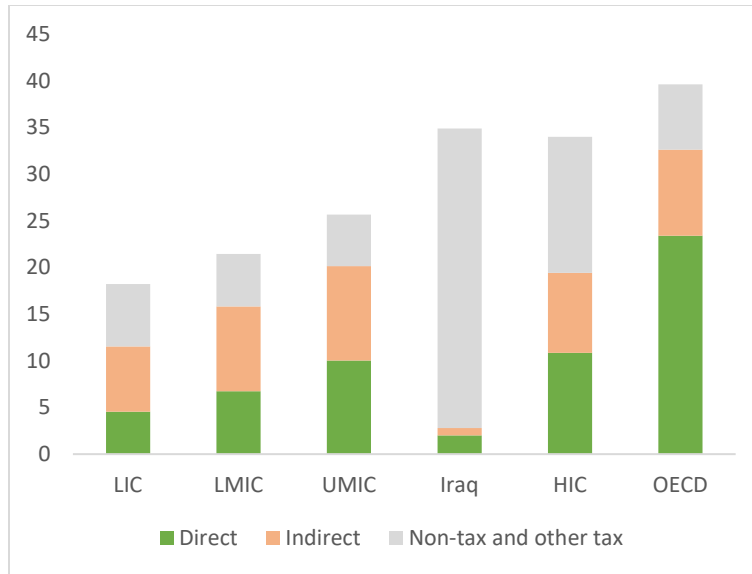


Source: Authors' estimates based on SWIFT 2017/18.

### c. Drivers of the poverty and inequality impacts

The short-term positive poverty and inequality impacts are achieved primarily because households in Iraq pay almost no taxes directly or indirectly. Figure 9 and Figure 10 break down government revenues from different sources for the PRSP 2022 database income groups and countries, respectively. Iraq's revenue of 34.9 percent of GDP for 2017 is much higher than the UMIC average of 25.7 percent, slightly more than the non-OECD HIC average of 34.0 percent, and almost comparable to the OECD average of 39.6 percent (Figure 9). It has the 9<sup>th</sup> highest revenue collection (as share of GDP) among the 48 countries in the database with the information for 2017 and 6<sup>th</sup> highest among the UMICs (Figure 10). However, unlike in other countries, almost all the revenues in Iraq are non-tax revenues. In 2017, oil revenues and other non-tax revenues accounted for 84.2 and 7.7 percent of the total government revenue, totaling almost 92 percent.

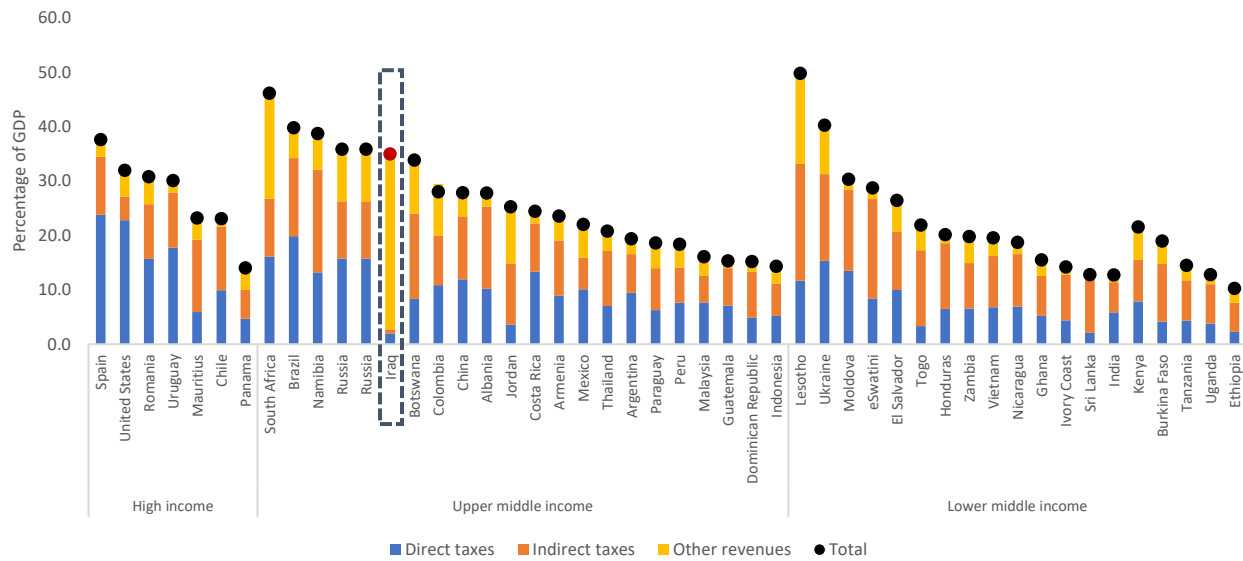
*Figure 9. Government revenues as percent of GDP by income groups*



Source: 2022 PRSP CEQ database (World Bank, 2022b) and Iraq's Ministry of Finance (MOF).

As seen in Figure 10, tax collection in Iraq is extremely low. Direct taxes made up only 5.7 percent of the total revenue (2.0 percent of GDP) in 2017. Indirect tax collection was even lower at 2.3 percent of government revenue or 0.8 percent of GDP. The entire tax collection of 2.8 percent of GDP (8 percent of revenue) is the lowest in the database and is less than half of the second lowest country's tax collection - Ethiopia with 7.6 percent of GDP (Figure 10). This is far lower than even the LIC average of 11.5 percent of GDP (4.5 direct and 7.0 indirect). For comparison, the average tax collection for LMIC, UMIC, HIC and OECD are 15.8, 20.2, 19.4, and 32.6 percent respectively (Figure 9).

Figure 10: Composition of government revenues in 2017



Source: IMF Government Finance Statistics

Consequently, Iraq's social spending does not need to offset tax burdens for the poor. While public sector jobs remained Iraq's preferred vehicle to distribute oil wealth, a notable portion of the revenue is transferred to the public through different social programs. In 2017, Iraq's overall spending budget was 33.5 percent of its GDP, which is comparable to the UMIC average (World Bank, 2022b). However, almost half of that, 44.2 percent (14.8 percent of GDP), was for employees' compensation. Spending on social protection including the pensions, PDS and SSN cash transfer was 6.7 percent of GDP, while the country also spent 6.4 percent of its GDP on health and education (Table 3). Direct and indirect subsidies are other tools through which government distributes its revenue to Iraqi households. This significant cashflow difference between the government to households and households to the government results in even the richest Iraqi households being net beneficiaries of the fiscal system. This, however, comes at the cost of long-term fiscal sustainability, especially with fluctuating oil prices and the global move away from fossil fuels. In addition, it also implies that the social spendings in Iraq achieve less than their potential in terms of poverty reduction and equity. The same level of social spending with poverty targeting will achieve greater impacts.

## 5. Detailed analysis

### a. Marginal impacts of fiscal interventions

Marginal impacts are a summary statistic of the incidence of taxes or transfers, where incidence indicates the benefit or burden of the tax as a share of income. Marginal impacts consider both the progressivity and the size of an instrument, or group of instruments. They are calculated by measuring the change in the poverty/inequality indicator with and without the tax/transfer of interest. A positive marginal contribution signifies that the instrument is inequality/poverty reducing. This sub-section examines the marginal contributions of the taxes, and transfers. Marginal impacts are calculated once all other cash

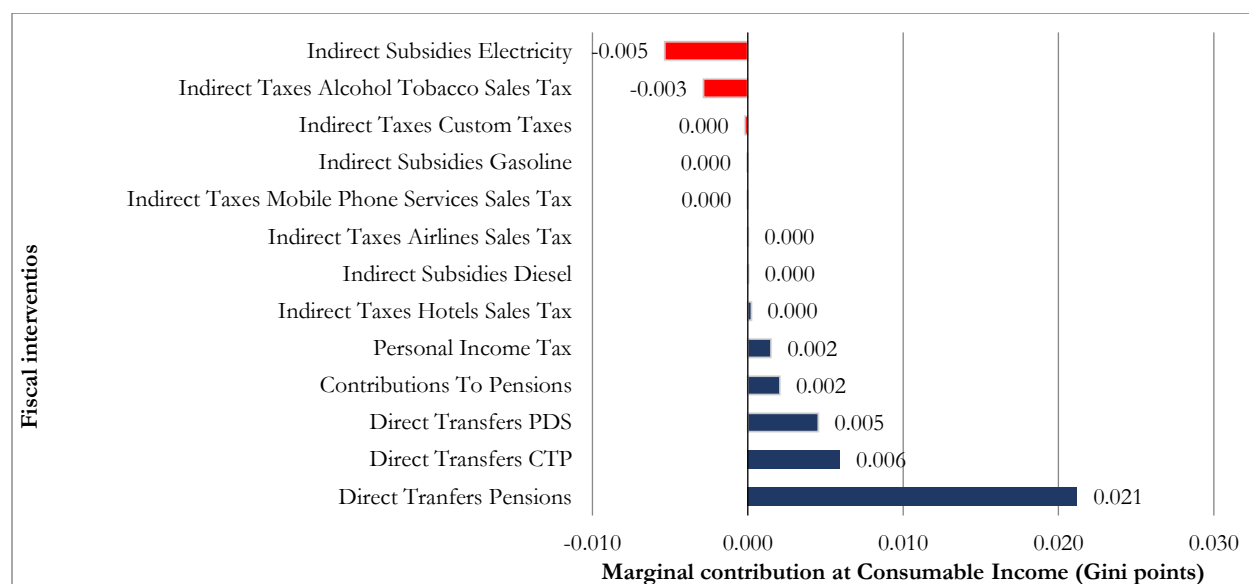
taxes and transfers are included in the system at consumable income to account for the interaction effects of the system.

#### i. Inequality

Figure 11 presents the marginal effects of fiscal interventions on inequality evaluated using consumable income. The highly generous public pensions contribute significantly to inequality reduction in Iraq. In addition to having a benefit ratio of more than 253 percent (average pension payments to average pensionable income), survivorship entitlements in Iraq are extended to wide range of people beyond spouses and children as in rest of the world. As seen Table 6, majority of pension recipients are survivors or non-employee-based pensioners, and for many these benefits account as a main source of income. The poverty targeted cash transfer through SSN is another major driver of inequality reduction. The universal PDS program, which has been reducing ration items over time, also reduces inequality but to a lesser extent. The rest of the interventions have minimal equalizing impacts except the electricity subsidies, which has a noticeable but negative impact on inequality.

PIT's redistributive impact is limited in Iraq. This is due to the lack of a strong tax system and a broader tax base. While most of the Iraqi workforce is employed in the private sector, the sector remains mostly informal and is dominated by the poorer segment of the population. More lucrative public sector jobs, on the other hand, continue to dominate the formal sector. As a result, the PIT is slightly progressive but with the limited size, the impacts are trivial.

**Figure 11. Marginal effect to inequality (consumable income)**



Source: Authors' estimates based on SWIFT 2017/18.

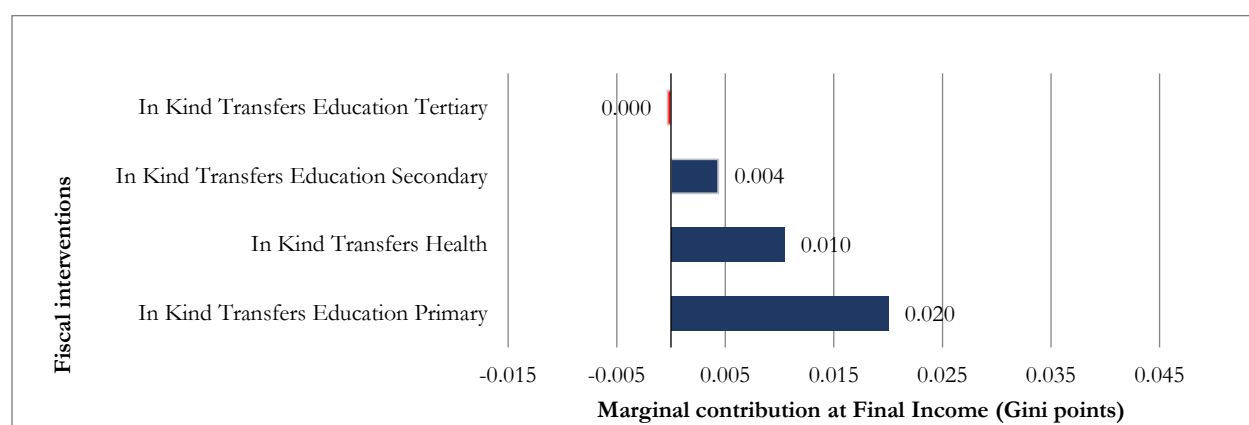
Notes:

[1] Marginal contributions are the change in the inequality indicator that results with the inclusion of a tax or transfer of interest.

[2] A positive bar represents a reduction in poverty or inequality, while a negative bar represents an increase.

When considering the effects of in-kind transfers, primary education, and health spendings have the highest redistributive impacts (Figure 12). In both cases, the high level of coverage, especially among the poorer segment of the population, makes the marginal effects on inequality important. While the public spending on secondary education decreases inequality, the marginal effect of tertiary education on inequality is negative. Impact sizes of both the spendings, however, are negligible. Given the CEQ's methodology of defining benefits as average government spending per user of these services, these results are consistent with the fact that poorer households tend to have greater number of children, many of which attend primary schools but do not continue into secondary or tertiary education.

**Figure 12. Marginal effect to inequality of in-kind transfers (final income)**



Source: Authors' estimates based on SWIFT 2017/18.

Notes:

[1] Marginal contributions are the change in the inequality indicator that results with the inclusion of a tax or transfer of interest.

[2] A positive bar represents a reduction in poverty or inequality, while a negative bar represents an increase.

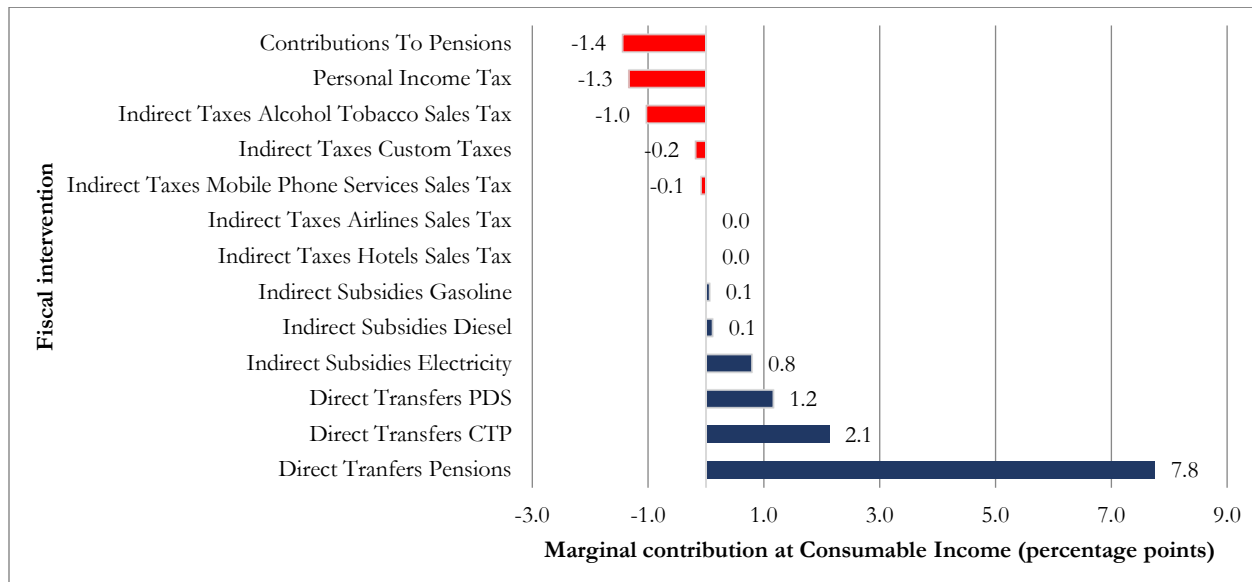
## ii. Poverty

Figure 13 presents the marginal impacts of different interventions on poverty headcount. As discussed above, direct transfers contribute the most in reducing poverty. While the marginal impact of highly generous pension is 7.1 percentage points, the poverty targeted SSN cash transfer, and the universal PDS reduce poverty by 2.1 and 1.2 percentage points. In contrast, social security contributions and personal income taxes have a poverty-increasing effects. Unlike taxes on costlier items such as airline tickets and hotel services, taxes on alcohol and tobacco, customs, and telephone that tend to be consumed by households across the income distribution have negative impacts on poverty headcount.<sup>21</sup> Although positive, indirect subsidies including, the substantial electricity subsidies, have limited impact on poverty reduction.

<sup>21</sup> The impacts of tobacco and alcohol taxes are immediate impacts and do not account for the long-term health benefits i.e., taxpayer's reduction in out-of-pocket medical expenditure, and impacts on lifetime earnings, longevity, years of productive life etc. These "sin taxes", typically, are progressive and have significant fiscal gains when lifetime health benefits are factored in.



**Figure 13: Marginal contributions to poverty**



Source: Authors' estimates based on SWIFT 2017/18.

Notes:

[1] Marginal contributions are the change in a poverty indicator that results with the inclusion of a tax or transfer of interest.

[2] A positive bar represents a reduction in poverty or inequality, while a negative bar represents an increase.

[3] As a standard practice in CEQ methodology, we do not calculate contributions to poverty for in-kind transfers.

## b. Progressivity

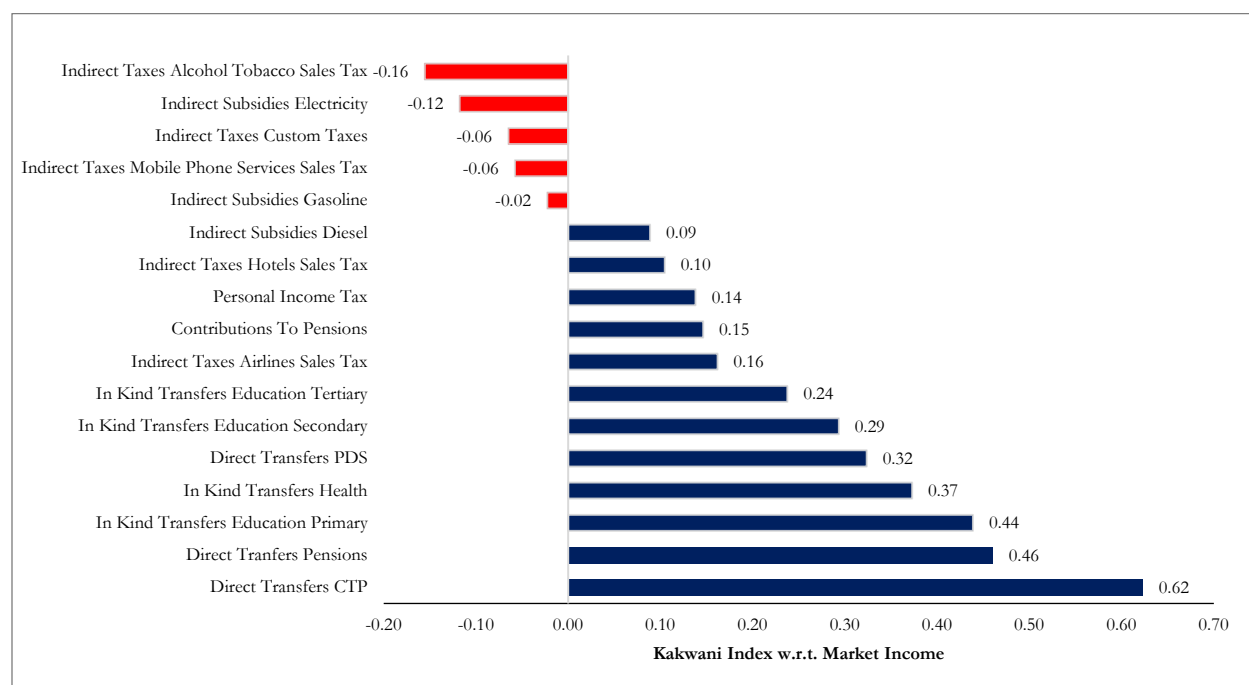
The Kakwani Index is a summary statistic of progressivity. It is calculated for taxes by subtracting the concentration coefficient from the Gini coefficient of a reference income (in this case market income),<sup>22</sup> and for transfers by subtracting the Gini coefficient from the concentration coefficient. A value greater than zero represents a progressive tax or transfer, while a value below zero represents a regressive tax or transfer. The minimum and maximum values of the Kakwani Index depend on the size of the Gini coefficient.

The Kakwani Index for each fiscal instrument in Iraq is shown in Figure 14. Most of the fiscal instruments analyzed in Iraq are progressive, except for fuel subsidies and indirect taxes. Fuel subsidies results signify that the richer households capture a larger share of these transfers than the poorer households. Therefore, these instruments are not an effective means of supporting the poor. The direct and in-kind transfers are the most progressive instruments in Iraq. Not surprisingly, the poverty targeted SSN cash transfer is pro-poor and is the most progressive instrument. Provision of public primary education is another instrument that is pro-poor and contributes highly to equity. Personal Income Tax is usually one

<sup>22</sup> The concentration coefficient is a summary statistic of concentration shares and is, thus, a measure of absolute distribution of a tax or a transfer. It is measured similarly to the Gini coefficient, and a positive concentration coefficient indicates that the rich pay a greater share of a tax (or receive a greater share of a benefit) than their share of the population, while a negative concentration coefficient indicates the opposite.

of the most progressive instruments in a country's domestic revenue mobilization toolkit. However, it is not the case in Iraq; the Kakwani Index for PIT is just 0.14, less progressive than the airlines sales tax.

**Figure 14. Progressivity of taxes and transfers**



Source: Authors' estimates based on SWIFT 2017/18.

Notes:

[1] The Kakwani Index is a summary statistic of progressivity [ $>0$  = progressive].

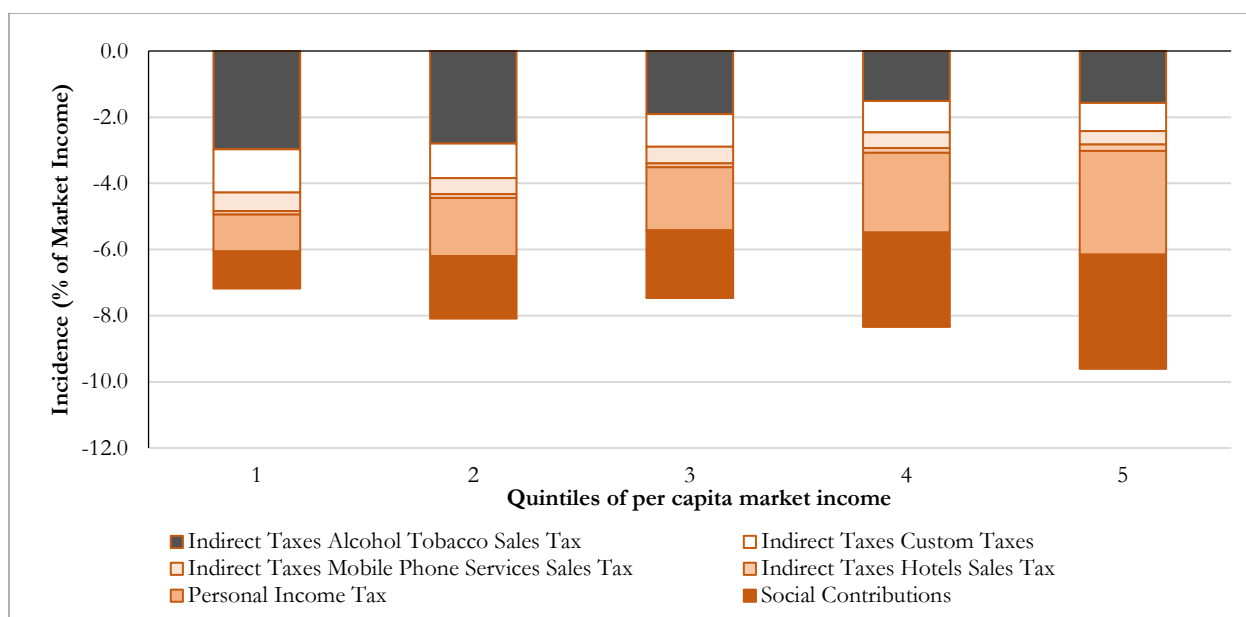
[2] It is calculated for taxes by subtracting the Gini coefficient from the concentration coefficient.

[3] It is calculated for transfers by subtracting the concentration coefficient from the Gini coefficient.

### c. Distributional analysis

Overall, taxes in Iraq are modestly progressive, primarily due to the personal income taxes and social security contributions. An important assumption here is that only formal employees pay taxes and contribute to social security. As seen in Figure 15, the share of taxes paid by household increases along the income distribution. Households in the first quintile pay close to 1 percent of their market income for PIT and social contributions, while this is almost threefold (3 percent of market income) for the fifth quintile. In contrast, the share of sales tax on alcohol and tobacco relative to market income decreases along the income distribution. Households in the bottom quintile spend almost 3 percent of their market income on alcohol and tobacco taxes compared to 1.5 percent by the top quintile. Custom taxes are also relatively important in terms of size and direction, with a higher incidence at the bottom quintiles and lower at the top quintile.

**Figure 15. Incidence of Taxes (percent of market income)**



Source: Authors' estimates based on SWIFT 2017/18.

Notes:

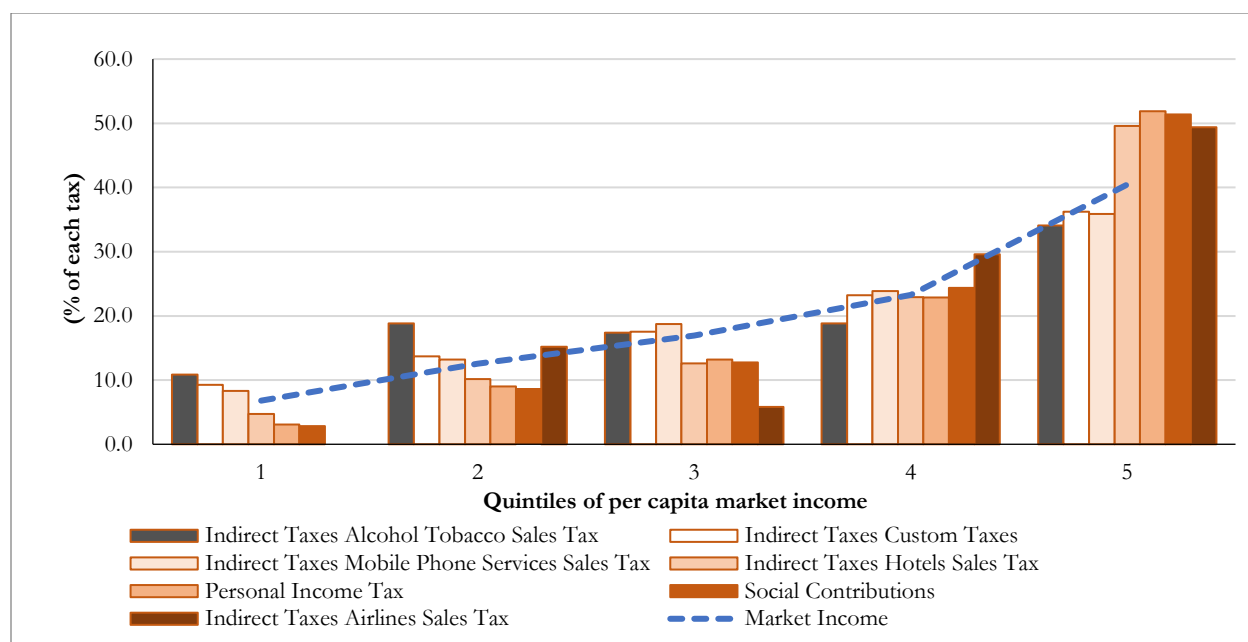
[1] Incidence is a measure of size and distribution relative to a reference income.

[2] Transfers are shown as a positive bar and taxes are shown as a negative bar.

[3] Households are ranked over Market income.

In line with the rest of the world, taxes in Iraq are concentrated mostly in the higher income quintiles (Figure 16). Sales taxes on airline tickets and hotels, and personal income tax along with the social security contributions show a high concentration in the highest income quintile. Taxes on cell phones and customs taxes are also concentrated in the fifth quintile, but to a lesser extent. Although the sales taxes on alcohol and tobacco are concentrated the most in the top quintile, the concentration distribution is more comparable across quintiles than other taxes.

*Figure 16. Concentration of Taxes*



Source: Authors' estimates based on SWIFT 2017/18.

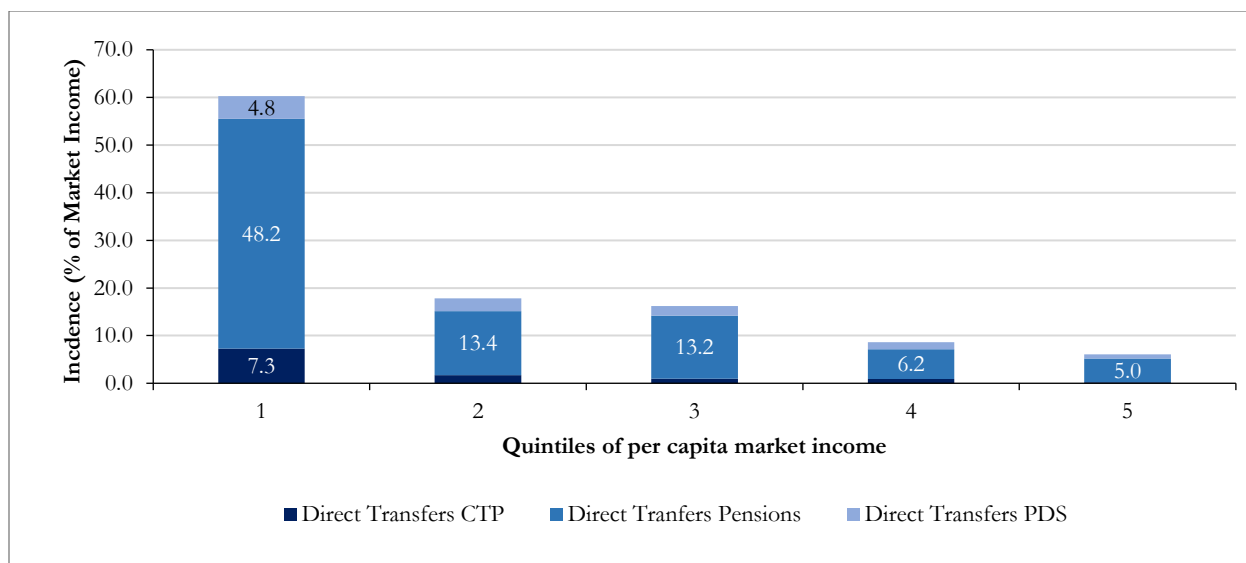
Notes:

[1] Concentration shares show the proportion of each tax/transfer paid by / benefitting each decile. They sum to 100%.

[2] Households are ranked over Market income.

Incidence of direct transfers by market income quintile is presented in Figure 17. Direct transfers are high relative to their market income for the households in the first quintile. In particular, pension transfers are substantial; they add up to almost half of market income (Figure 17). Higher income households benefit significantly from the transfers as well - pension transfers account for 13.4 to 5.0 percent of market income for households in second to top quintiles. Not surprisingly, the universal PDS program that provides four ration items monthly remain relevant for all Iraqi households, especially, for those in the first quintile (4.8 percent of market income). The poverty targeted SSN's monthly cash transfer is equivalent to slightly above 7 percent of market income among households in the bottom quintile. As seen earlier, the high incidence relative to market income is associated with the higher marginal contribution to poverty reduction of the direct transfers.

**Figure 17. Incidence of Direct Transfers (% of market income)**



Source: Authors' estimates based on SWIFT 2017/18; LFS 2021.

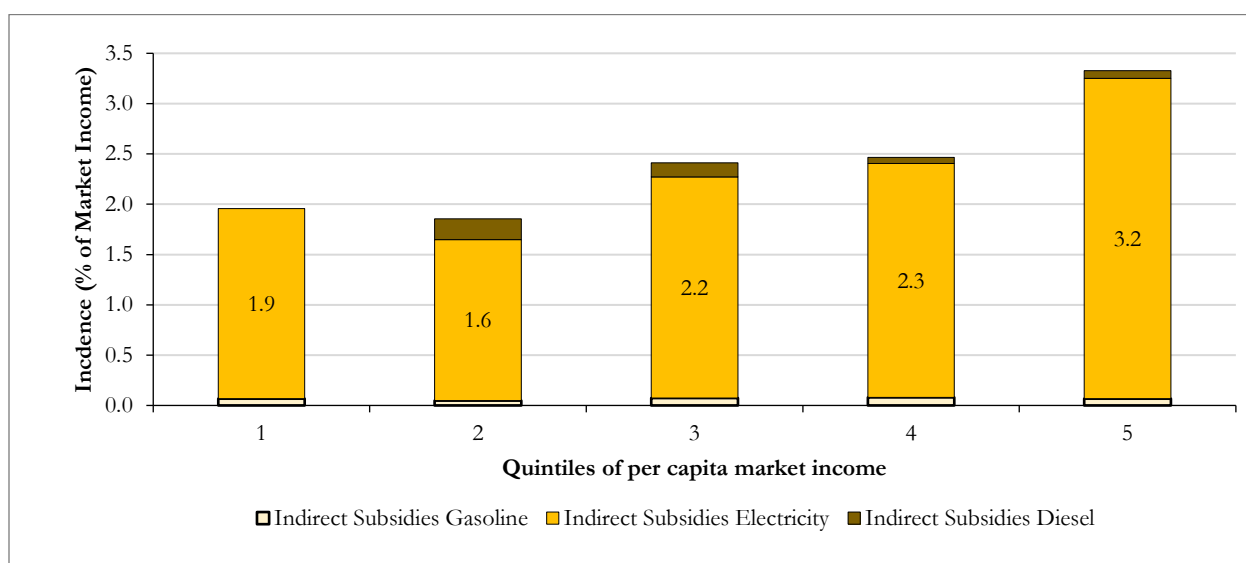
[1] Incidence is a measure of size and distribution relative to a reference income.

[2] Transfers are shown as a positive bar and taxes are shown as a negative bar.

[3] Households are ranked over Market income.

Indirect subsidies, on the other hand, are regressive. As seen in Figure 18, benefits as a percentage of market income are significantly lower for poorer households compared to richer households. Of these subsidies, the electricity subsidy is significant across the income distribution but benefits disproportionately the richer households. While it is equivalent to 1.9 and 1.6 percent of their market income for the bottom two quintiles, it is 3.2 percent for the top quintile.

**Figure 18. Incidence of indirect subsidy (% of Market Income)**



Source: Authors' estimates based on SWIFT 2017/18; LFS 2021.

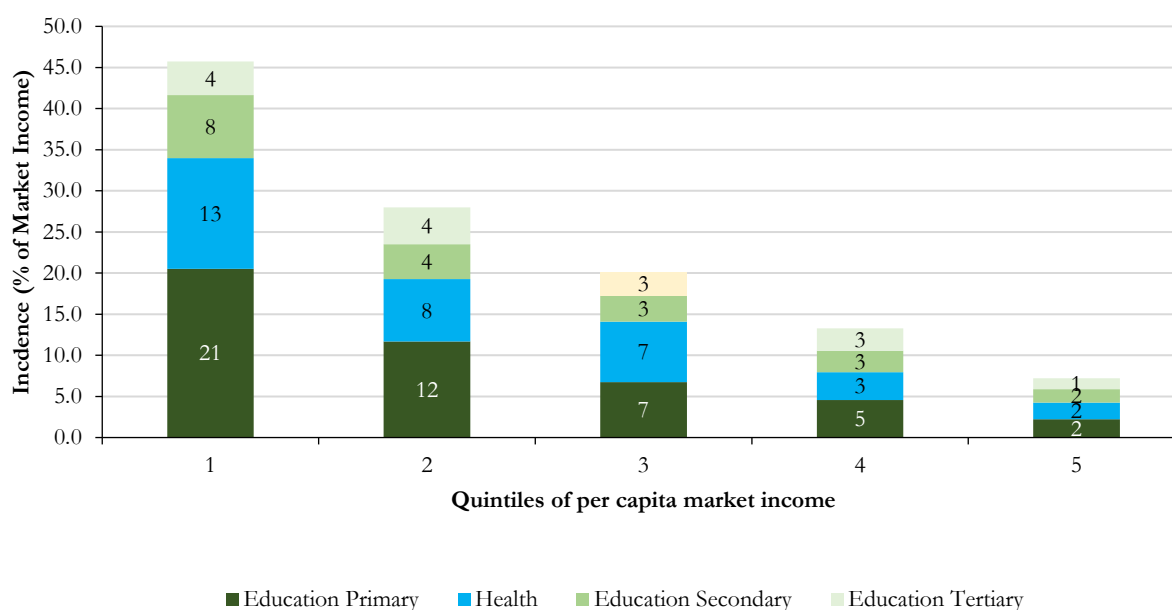
[1] Incidence is a measure of size and distribution relative to a reference income.

[2] Transfers are shown as a positive bar and taxes are shown as a negative bar.

[3] Households are ranked over Market income.

The monetized benefits of education and health are reported in Figure 19. Benefits are calculated as average government spending per user of these services. As a result, these in-kind transfers amount to a significant portion of market income for households in the bottom quintile (48 percent). The share decreases gradually with income; 28, 18, 14, and 7 percent for the second, third, fourth, and the top quintiles, respectively. The most important item is primary education, which is equivalent to almost one-fifth of market income for the bottom quintile. Secondary and tertiary education, on the other hand, are less important (8 and 4 percent respectively). These are likely driven by the fact that children from poorer households tend to attend primary schools but have higher chances of discontinuing their education into secondary or tertiary levels and, at a lesser extent, richer households are more likely to send their children to private schools. According to the 2012 Iraq Household Socioeconomic Survey (IHSES II), most of the current primary school enrollees are from the poorest five deciles (57 percent), on the other hand, almost half (48.9 percent) of those in higher secondary and tertiary levels come from just the top two richest deciles. While public schooling is popular (98.2 percent of those currently in school attend public schools), among those attending private schools, majority (52 percent) are from the richest (tenth) decile, 17 percent are from the 9<sup>th</sup> decile, and only 8.1 percent are from the poorest five deciles combined. Similarly, government investment in health relative to households' market income is more pronounced in the bottom quintiles as higher income households may use private medical services more and travel outside the country for treatment while poorer households may rely on public health care.

*Figure 19. Incidence of in-kind transfers (% of Market Income)*



Source: Authors' estimates based on SWIFT 2017/18.

[1] Incidence is a measure of size and distribution relative to a reference income.

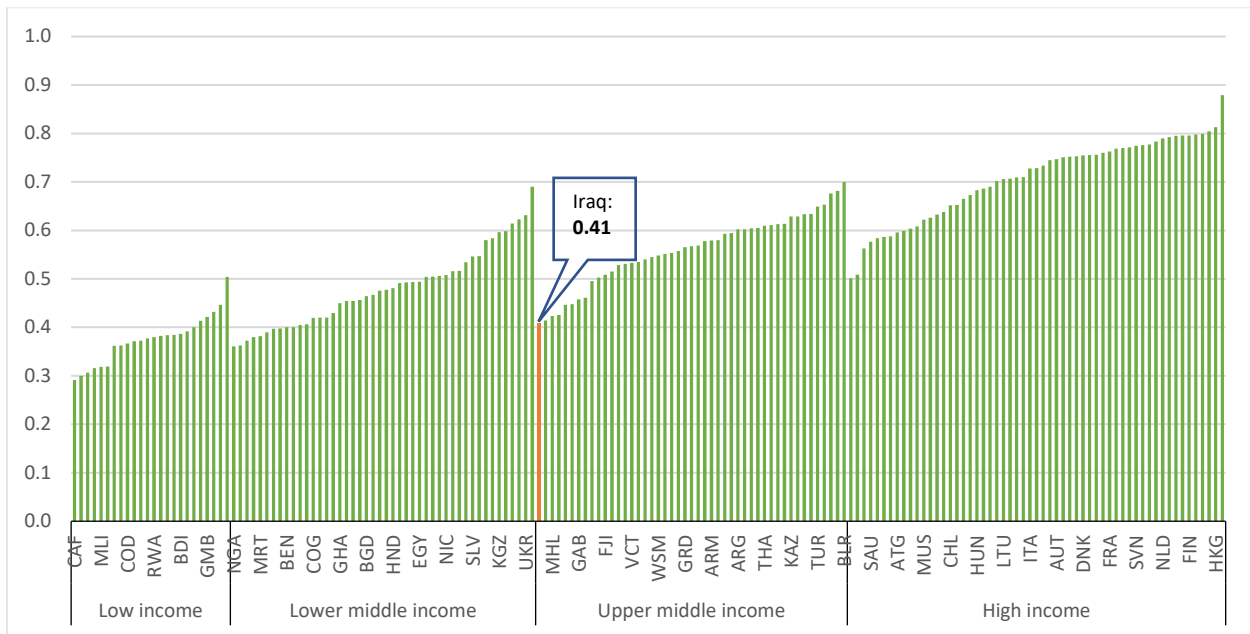
[2] Transfers are shown as a positive bar and taxes are shown as a negative bar.

[3] Households are ranked over Market income.

Iraq's levels of health and education spending are relatively low, and quality remains a challenge. Iraq's overall health and education expenditures amounted to 1.9 and 4.5 percent of its GDP in 2017 (Table 3). In comparison, the average health spending for the UMICs was 3.6 percent of GDP, while education spending was 4.7 percent (World Bank, 2023). The education spending falls short of the agreed minimum international benchmark set out in the Education 2030 Incheon Declaration for public education, which calls for countries to spend at least 15 to 20 percent of total public expenditure to education in order to achieve the Sustainable Development Goal 4 (SDG4) (World Bank, 2021). Similarly, Iraq's health spendings as a share of its total budget are lowest compared to its peer countries in the Middle East and North Africa (MENA) region and other countries with similar GNI per capita (World Bank, 2021).

Low level of human capital investment and quality are reflected on Iraq's poor health and education outcomes. According to the World Bank's Human Capital Index (HCI), a newborn in Iraq will achieve only 41 percent of her potential productivity when she grows up (World Bank, 2020c). This is lowest among the UMICs, one of the lowest in the region, and lower than even the LMIC average of 48 percent (Figure 20). This is mostly driven by extremely low level of learning – an Iraqi child is expected to complete only 6.9 years of schooling by age 18 and when adjusted for amount of learning she is expected to achieve even lower 4.0 years of schooling, while stunting among under 5 also remain relatively high at 13 percent (World Bank, 2020c). Other indicators such as maternal and child mortality, while improving, remain elevated – under-5 mortality is twice as high as the average in UMICs. Against this backdrop, Iraq is the country most impacted by Covid-19 in the MENA region. The pre-existing conditions are likely to have been exacerbated by the pandemic. An average Iraqi child may have lost 0.9 learning-adjusted years of schooling due to the pandemic (World Bank, 2021).

**Figure 20: Human Capital Index (HCI) 2020**

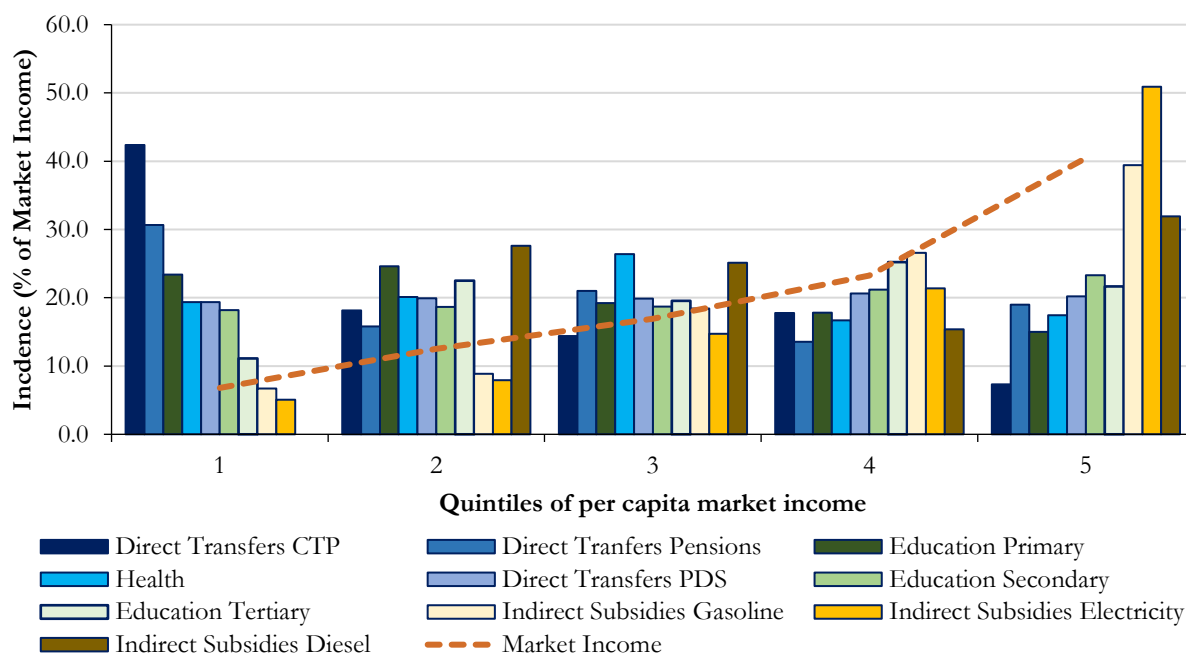


Source: Human Capital Project, World Bank (<https://www.worldbank.org/en/publication/human-capital>). The HCI measures the amount of human capital that a child born today can expect to attain by age 18, conveying the productivity of the next generation of workers, compared to a benchmark of complete education and full health.

Figure 21 presents concentration shares of social transfer programs and subsidies by market income quintiles in Iraq. Direct transfers (CTP and pensions) and primary education are highly concentrated in the bottom quintile. More than 40 percent of cash transfers (CTP) from the SSN, 30 percent of the pensions, and 20 percent of primary education investment is transferred to the bottom quintile. On the other hand, benefits of indirect subsidies are concentrated disproportionately at the top quintile. The top 20 percent of the population receives a majority of these indirect subsidies. More than half of electricity (50.9 percent), two-fifths of gasoline (39.4 percent), and one-third of diesel (31.9 percent) subsidies go to the richest quintile households. While the concentration of value of the in-kind health investment is comparable across the income distribution, share of benefits from the secondary and tertiary education investment increase with income.

**Figure 21. Concentration shares of Transfers.**





Source: Authors' estimates based on SWIFT 2017/18; LFS 2021.

[1] Concentration shares show the proportion of each tax/transfer paid by / benefitting each decile. They sum to 100%.

[2] Households are ranked over Market income.

#### d. Effectiveness Indicators

Effectiveness of a fiscal instrument can be defined as returns in terms of poverty and inequality reduction on the instrument's budget expenditures. One approach to measuring efficiency is through cost-effectiveness indicators, i.e., poverty and inequality reduction per GDP point spending. The cost-effectiveness indicators of inequality presented here measure marginal impacts of instruments relative to resources invested on the instruments, i.e., by how many Gini points inequality is reduced (marginal impact) for each point of GDP invested on the instrument. Similarly, the poverty cost-effectiveness indicators measure the percentage points of poverty reduction per unit of investment in terms of GDP.

Inequality and poverty cost-effectiveness indicators are shown in Table 9. The SSN's poverty targeted CTP is the most cost-effective instrument in Iraq in reducing inequality followed by the universal PDS, which still plays an important role in meeting many Iraqis daily calorie requirements. Despite higher marginal impact, pension program with its large budget is less cost-effective – half as effective as the CTP. While 1 percent of GDP spending on the CTP and PDS would reduce inequality by 0.8 and 0.7 Gini points, inequality would reduce by only 0.4 Gini points if the same amount were to be spent on the pension program. Given energy subsidies' negative marginal impact, it is not surprising that they are ineffective in reducing inequality – an additional 1 percent of GDP spending would increase inequality by 0.2 Gini points.

Table 9. Cost-effectiveness indicators

Inequality	Poverty
------------	---------

<b>PDS</b>	0.7	1.7
<b>CTP</b>	0.8	2.6
<b>Pensions</b>	0.4	1.5
<b>Energy subsidies (average)</b>	-0.2	0.3

Source: Authors' estimates based on SWIFT 2017/18; LFS.

The targeted cash transfer program also has the highest returns in terms of poverty reduction. Additional expenditures equivalent to 1 percent of the country's GDP on the program would reduce poverty by 2.6 percentage points. In comparison, untargeted ration program (PDS) and pensions would reduce poverty by only 1.7 and 1.5 percentage points. While energy subsidies are regressive in terms of inequality reduction, they, however, decrease poverty but marginally. Iraq's poverty rate would decrease by 0.3 percentage points with additional energy subsidies equivalent to 1 percent of its GDP.

An alternative measure of a program effectiveness is so called the "impact effectiveness indicator". It is a summary of how well a fiscal policy instrument reduces inequality (or poverty headcount/poverty gap) relative to the maximum possible reduction achievable with the same budget. We focus on the inequality impact effectiveness indicator and examine how each fiscal instruments in Iraq reduce inequality with respect to their potential.<sup>23</sup> A positive impact effectiveness score shows that the fiscal instrument reduces inequality. A score of 1 impact effectiveness indicator shows that that the fiscal policy instrument in question is perfectly distributed to reduce pre-fiscal inequality by the maximum possible amount with the same budget. Negative size indicates that the fiscal policy instrument increases inequality.<sup>24</sup>

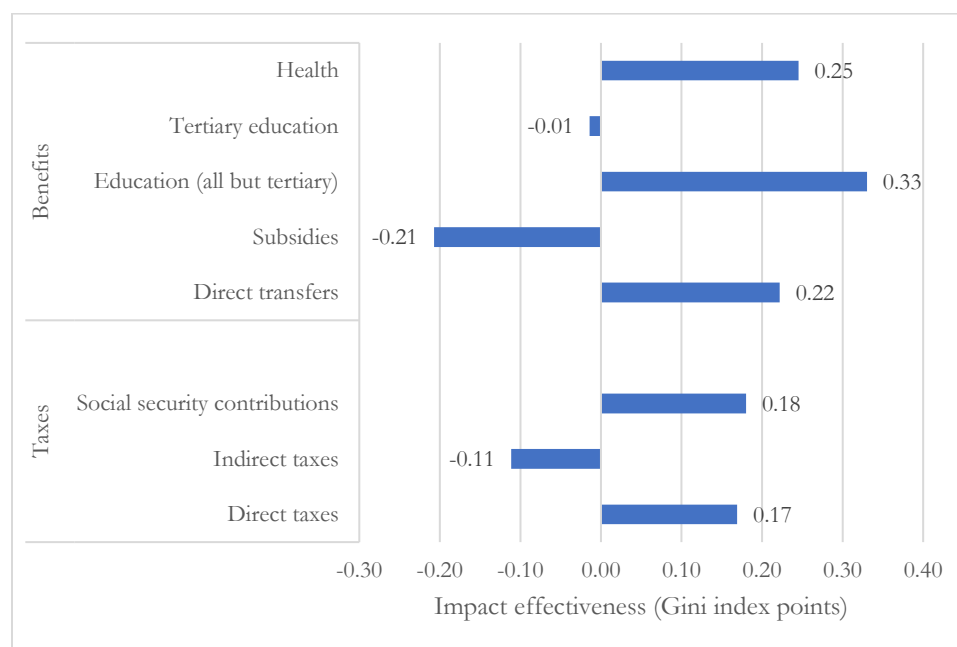
Impact effectiveness estimates of Iraq's fiscal system are presented in Figure 22. Most of the fiscal interventions examined in the paper have a potential to reduce inequality; however, their impacts are relatively low compared to their maximum potentials. The results show that education (excluding tertiary) is the most effective instrument to reduce inequality in the country followed by health investment and direct transfers. With an impact effectiveness score of 0.33, education reaches 33 percent of its maximum potential inequality reduction. Government investment in health care reaches 25 percent of its potential, while all the direct transfers combined reach 22 percent of their maximum potential inequality reduction. These are expected findings considering relatively higher concentration of primary education in lower quintiles, equal concentration of health investment across income distribution, and SSN's CTP concentration among the poorer households. In contrast, indirect taxes, subsidies, and tertiary education increase inequality. As presented earlier in the paper, all these interventions are regressive. Among taxes,

<sup>23</sup> According to Lara Ibarra et al. (2019) the "inequality impact effectiveness indicators for expenditures and taxes [...] indicate the size of the actual marginal impact a fiscal instrument had on inequality relative to its potential maximum impact [...] if the fiscal intervention would have been designed in such a way to maximize its inequality-reduction impact, keeping the amount collected or spent fixed." In other words, inequality impact effectiveness is a measure that evaluates how efficiently fiscal interventions lower inequality. It compares the actual reduction in inequality achieved by these interventions, i.e., the marginal effect on redistribution, with the maximum possible reduction that could be achieved with the same resources but allocated most optimally. An algorithm finds this optimal allocation for each intervention.

<sup>24</sup> For more details about effectiveness indicators, see Enami (2018).

while indirect taxes increase inequality, social security contributions and direct taxes have positive redistributive impacts reaching 18 and 17 percent of their potential maximum impacts.

**Figure 22: Inequality Impact Effectiveness Indicator Evaluated at Final Income**



Source: Authors' estimates based on SWIFT 2017/18.

Iraq's fiscal instruments, in general, achieve less of their maximum potentials in reducing inequality compared to other countries in the region. All the government expenditures in Iraq are less effective than the mean effectiveness estimates for eleven low and middle-income African countries presented in Lara Ibarra et al. (2019). Effectiveness of Iraq's direct transfers is lower by almost 30 percentage points (23 percent for Iraq vs average of almost 50 percent for the eleven countries). Even the most effective instruments, education (primary and secondary) and health, in Iraq achieve less in comparison. The lower effectiveness scores indicate that the government expenditures in Iraq are larger than they need to be to achieve positive welfare impacts. Moreover, subsidies in Iraq have negative impact on inequality while contrarily, the impact is positive in the comparison countries. Direct taxes achieve significantly less of their maximum potential inequality reduction in Iraq (17 percent) than in the 11 African countries (average of almost 60 percent). Unlike in the other countries, indirect taxes in Iraq are regressive and increase inequality.

## 6. Conclusion and discussion

This study carried out a fiscal incidence analysis for Iraq using a broadly applied CEQ methodology. The analysis is based on the 2017 fiscal year mostly due to the availability of a household budget survey for the year, the 2017/18 Survey of Well-Being via Instant Frequent Tracking (SWIFT). The exercise maps the country's major fiscal policies and assesses their impacts on poverty and inequality. The analysis covered direct personal income taxes, custom taxes, and sales taxes on alcohol and tobacco, airline tickets, mobile

telephone services, and hotel and restaurant services. However, over-reliance on oil and limited domestic revenue mobilization meant that taxes accounted for only 2.8 percent of GDP or about 8 percent of revenue in 2017. Public expenditures accounted for 33.5 percent of GDP in 2017 and, of which the study covers government's social spendings on pensions, PDS, and targeted SSN, subsidies on electricity & fuels, and education & health expenditures.

Iraq's current fiscal system has modest inequality impacts but performs well in terms of reducing short-term poverty. The combination of taxes and transfers modeled with and without the non-cash health and education services reduces inequality by 6.7 and 3.0 Gini points. These are modest results compared to a database of 62 countries with 26 UMICs, as Iraq is ranked in the middle considering only cash taxes and benefits (27<sup>th</sup> among all the 62 countries and 13<sup>th</sup> among the 26 UMICs) and in the bottom half if we also include education and health (34<sup>th</sup> and 17<sup>th</sup> respectively). In contrast, Iraq's poverty impacts are one of the largest in the database. The country's fiscal system helps reduce poverty by 6.3 percentage points when evaluated using the national poverty line. When comparing internationally using the UMIC poverty line, the impact is 5.0 percentage points. This places Iraq 4<sup>th</sup> from the top among all the 57 countries evaluated using the UMIC poverty line and 3<sup>rd</sup> among the 26 UMICs.

The short-term positive impacts, however, are achieved primarily because households in Iraq pay almost no taxes directly or indirectly and oil revenue finances the public budget, which comes at the cost of long-term fiscal sustainability. While Iraq's total revenue of 34.9 percent of its GDP for 2017 rivals that of the OECD countries' average, its total tax collection of only 2.8 percent of GDP is far lower than even the LICs' average of 11.5 percent. On the other hand, Iraq's public spending is akin to that of the UMIC average (33.5 percent of its GDP in 2017). A smaller but a notable share of the public budget is spent on social programs, health, education, and subsidies. Consequence of all this is a significant gap between transfers *to* and *from* Iraqi households resulting in only net beneficiaries of the fiscal system. Unlike in most other countries, even the households in the top quintile of the income distribution are net beneficiaries of the current fiscal policy. While it means Iraq's social spending does not need to offset tax burdens for the poor, it also implies that the spendings achieve below their maximum poverty reduction and equity potentials as the same level of social spending with poverty targeting will achieve greater impacts. Furthermore, given the oil price volatility and the global move away from fossil fuels, the mounting gap between government revenue mobilization and expenditures provides a long-term sustainability challenge.

## **Policy Discussion**

After the pandemic induced sharp recession in 2020, Iraq's GDP has continued to rebound, surpassing pre-pandemic levels, and driving fiscal and current account surpluses. The recovery, however, has been led by the extractive capital-intensive oil sector, which employs less than 1 percent of the workforce and has limited linkages to the non-oil sectors. Positive spillovers into the broader economy are yet to be realized. Labor market outcomes have worsened since 2017, with the record high unemployment rate and one of the lowest labor force participations among females and youths in the world. Given the context, Iraq's fiscal policy priorities should focus both on today and on tomorrow. It should be geared towards short-term inclusive recovery with an eye to long-run growth and sustainability.

Iraq's short-term spendings should reorient towards more targeted social protection covering the poor and vulnerable in the time of recovery. The fragmented current welfare system that is split into core components of the cash transfer, PDS, pensions, and various subsidies, is mostly untargeted and inefficient. Cash transfers are one of the most effective mechanisms to reach the poor and vulnerable population around the world (World Bank, 2022b). Not surprisingly, Iraq's cash transfers program (SSN), the only poverty targeted program in the country, is the most effective support program in Iraq. It is twice as cost-effective in reducing poverty and inequality than the other direct transfers, pension transfers and the PDS, while the fuel and electricity subsidies increase inequality. It is also both progressive and pro-poor. Within the current system, the program can be more effective with regular updating of the targeting formula and assessing eligibility. This will require regular poverty and welfare monitoring through implementing household budget surveys and other innovative tools and updating the population registry.

Energy subsidies and PDS can be better targeted and possibly be reoriented towards targeted cash transfers. Most of the current indirect subsidies in Iraq are regressive. Both the electricity and gasoline subsidies increase inequality. Based on the SWIFT survey data, richer households have substantially higher electricity consumption than poorer households but given the current tariff structure, even the richer households do not exceed the consumption beyond the maximum threshold under the first slab. As such everyone in the income distribution faces the same level of lowest tariff rate. This results in subsidies benefiting mostly the richer households and increasing inequality. On the other hand, the in-kind food ration program, PDS, has played an important role in fulfilling all Iraqi households' caloric needs over the years (World Bank, 2010; World Bank, 2014) and even during the time of conflict (Phadera, Sharma, & Wai-Poi, 2020). However, the program is not targeted, covers almost the entire population - 95 percent of the population received the food assistance in 2017 (Phadera, Sharma, & Wai-Poi, 2020), and its fiscal burden remains elevated. While in-kind transfers tend to pursue a multiplicity of goals and remain widespread throughout the low-and middle-income countries (Alderman, Gentilini, & Yemtsov, 2017), cash transfers are significantly more cost-effective in comparison (Gentilini, 2016). Similarly, subsidies are an expensive way of targeting support to poor households as richer households tend to receive larger per capita benefits and there is little evidence of their persistent positive impacts (World Bank, 2022b).

In contrast, cash transfers can help households make crucial long-run investments such as in child education and health. There is increasing and consistent evidence that cash support to households improves child nutrition (Manley, Alderman, & Gentilini, 2022), reduces monetary poverty, and improves child educational and health outcomes across the low- and middle-income countries (Bastagli, et al., 2019). In the long run, these transfers to poor families help children attain higher education, earn more income, and live longer during their adulthood (Aizer, Eli, Ferrie, & Lleras-Muney, 2016). Therefore, reorienting spending away from energy subsidies to targeted cash transfers will have greater impacts on the Iraqi households who need it most, especially during the current challenges of rising inflation. As discussed in Phadera, Sharma, & Wai-Poi (2020), Iraq could consider downsizing its PDS program and target only the poor households while using the fiscal savings to expand the poverty targeted cash transfer program, the SSN. In the long run, the ration program could be gradually phased out in favor of a targeted cash transfer. The PDS program, however, is entrenched within the Iraqi economy. With its reliance on food imports and universal nature, the program creates macroeconomic distortions and has altered consumption behaviors - household consumption of PDS food items is relatively inelastic to price changes

(Krishnan, Olivieri, & Ramadan, 2019). As such, any PDS reform should be accompanied by a compensatory measure (e.g., through SSN expansion) for those current beneficiaries likely to be impacted negatively.

Depending on the appetite and feasibility, Iraq should consider a comprehensive pension reform to make it more equitable and sustainable in the medium term. The current pension system is fragmented and remains inadequate (see IMF (2023) for the current state of the pension system). According to current projections, both the private and public contributory schemes are not sustainable in the medium to long run.<sup>25</sup> The private sector scheme has a very low coverage (approximately 9.5 percent) and has lower benefits than the public sector scheme. These differences along with the overall fragmented pension system distort labor incentives, adversely affect private sector development, and result in fragmentation of the risk pool.<sup>25</sup> In addition, budget-financed schemes continue to dominate the number of public pensioners (more than 80 percent), accounting for most of the social protection budget. Both spending and the number of beneficiaries in budget-financed schemes are in increasing trends and are expected to remain elevated due to extensive survivor benefits that are relatively generous in international comparison (International Monetary Fund, 2023). While these generous transfers have positive impacts on reducing poverty and inequality, they are less cost-effective than the targeted cash transfers and may not be the best use of the limited social spending in a relatively young population. Iraq, therefore, would benefit from a parametric reform establishing unitary regulation for both public and private sector schemes either through integration or harmonization<sup>25</sup> and strengthening eligibility verification and reconsidering survivorship benefits to be in line with international best practice (International Monetary Fund, 2023).

The long-term improvements in Iraqi households' welfare will be driven by better access to quality public services and higher incomes through private sector jobs. Fiscal policy alone cannot drive this, but it can help finance the needed public investments as well as help short-term poverty and inequality reduction. Investments in health, education, physical infrastructure, R&D, etc. that the private sector is unlikely to make and that tries to address market failures are effective to support long-run income growth. Consistent with analyses from other countries, because of greater utilization among poorer households, provisions of public education and health services contribute the most to short-term inequality reduction in Iraq. However, Iraq will need to spend more on these services and improve their quality for greater long-run returns. Iraq's current education spending is well short of the minimum recommended international benchmark of 15 to 20 percent of total expenditure to achieve the SDG4, while it also spends the lowest share of its total budget on health compared to its peer countries in the Middle East and North Africa (MENA) region and other countries with similar GNI per capita (World Bank, 2021). As a result, Iraq's health and education outcomes such as the HCI, and child and maternal mortality, are among the lowest among these countries. Expanding provisions of schools and health services overall, and in poorer and underserved areas will be crucial for enhancing equitable long-term growth. Improving the quality of the workforce in health care sector through customized training and standardized provider assessments will contribute to that. Similarly, teacher training and improving school resources can contribute to children learning. Given significant disparities in primary and secondary completion rates between richer and

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<sup>25</sup> ILO-WB-IMF. "Towards an inclusive, equitable and sustainable pension system in Iraq", IMF IV Consultations December 4, 2022.

poorer households (UNICEF, 2020) and, particularly, in the southern governorates of Muthanna and Missan with high chronic poverty (Sharma & Wai-Poi, 2019), it is important to target such households and governorates. Incentives such as provisions of quality school meals (Frisvold, 2015; Anderson, Gallagher, & Ramirez Ritchie, 2018) and scholarships to attend secondary schools (Duflo, Dupas, & Kremer, 2021) not only promote school attendance but lead to greater educational attainment, knowledge, skills, preventive health behaviors, and better labor market outcomes in the long run.

Reforming the labor market and job creation are important for both economic mobility and government revenues. Public sector employment, mostly financed by oil revenues, continues to dominate formal employment. As a result, the private sector, dominated by the poor and vulnerable segments of the workforce, remains largely informal and stunted. Many of these jobs tend to be casual and low-paying and are highly vulnerable to shocks including climate change. For instance, private sector workers suffered the most during the Covid-19 pandemic (Krah, Phadera, & Wai-Poi, 2020). A legacy of conflict, political instability, and weak governance further disincentivizes private sector investment and growth. Iraq will benefit from a broader labor market reform with active labor market policies promoting labor market participation, particularly, among women and youth. Creating the right environment for private sector development by addressing barriers to private employment, skill mismatch between the labor supply and demand, and its formalization will not only likely improve the welfare of those employed in the sector, but also likely enhance government revenues.

Iraq needs to diversify its economy and broaden its revenue base for a sustainable and more equitable fiscal system. Given the minimal tax collection, in addition to private sector development and its formalization, Iraq could undertake an overall tax reform to improve the progressivity of the personal income tax (PIT) and corporate tax. Indirect taxes could be enhanced to form a greater basis for overall government revenue. This should be accompanied by revisiting the effectiveness of social spending to offset any burden on the poor. Property taxes typically have little impact on poor people. Indirect taxes on items such as tobacco, alcohol, and sugary beverages, also referred to as “sin taxes”, appear regressive in the immediate term (as in this analysis); however, they are progressive under an extended cost-benefit analysis accounting for taxpayers’ out-of-pocket medical expenditures, longevity, years of productive life, lifetime earnings, etc., and offer large fiscal gains.



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## 8. Annexes

### a. Annex I: Income imputation

The 2017/18 SWIFT survey lacks important information on wages and incomes needed to carry out a fiscal incidence analysis. However, it provides critical information on individuals' employment status and sector of employment (Public, Private and Self-employment), and whether households received no-labor income through both private (remittances, gifts, etc.) and public transfers (PDS, pensions, SSN, etc.). This paper uses data from the second round of the Iraq Household Socioeconomic Survey (IHSES II) conducted in 2012 that collected comprehensive information both on household expenditures and incomes from an exhausting list of possible sources. The following steps are taken to impute the missing income information in the SWIFT:

- i. Total family income is estimated by assuming constant expenditure-to-income ratios over time. For each consumption decile, the expenditure-to-income ratio is calculated using the 2012 IHSES and is applied on the SWIFT survey data.
- ii. Shares of labor and non-labor incomes are assumed to be similar over time. For non-labor income, the paper assumes the same share of income from different sources within public and private transfers: private transfers: remittances vs other; public transfers: ration vs pensions vs SSN and other. This implies to only SWIFT households that indicated receiving transfer from a particular source, otherwise, income from the source is assumed to be zero.
- iii. Total family labor income is estimated by aggregating estimated individual income/wages in the family. For each sector of employment (public wage, private wage, and self-employment) and skill

level (low < intermediate school and high ≥ intermediate school), the following Mincer equation is estimated in in 2012 IHSES data:

- a.  $\ln(labor\ income)_{i,j,z} = \alpha + \beta'INDChar_{i,j,z} + \delta'location_{i,j,z} + \epsilon_{i,j,z}$ ; where the model is estimated for an individual  $i$ , belonging to a skill group  $j \in (low, high)$ , working in sector  $z \in (public\ wage, private\ wage, self\ employment)$ . Individual characteristics,  $INDchar$ , are age, age squared, level of educational achievement, gender, and marital status. Geographical locations,  $location$ , are urban/rural and governorate fixed effects.
- b. For each sector and skill group, estimated parameters from the 2012 data are used to calculate workers' wages in the SWIFT data. Predicted wages, then, are adjusted (scaled -up/down) to add up to the total family labor income.
- iv. Finally, the total family income is adjusted to add up to the different components of the estimated incomes in the family.

## b. Annex II: Estimation of informality

With the 2017/18 SWIFT lacking information to classify a worker as formal/informal, a similar strategy as above is applied. In particular, a probabilistic model is fitted using the 2021 Labor Force Survey (LFS) that has the information on formality. The recovered parameters, then, are used to calculate probability of each wage worker in private and public sectors in the SWIFT data. Given the limited/or lack of information on formality in the country before the 2021, within each sector (private, public), the paper assumes same share of formal employees in 2017 as in 2021. Workers with the highest estimated probabilities of being formal employees are assigned the status of formal employees such that the total share of formal workers in each sector matches that of LFS 2021. Below is the estimated probit model:

$$PR(formal = 1) = \Phi(age, gender, urban\ location, geographical\ regions, education)$$

	formal
Age group	
20-24	0.838 (0.109)
25-29	1.256 (0.107)
30-34	1.645 (0.106)
35-39	1.896 (0.106)
40-44	1.988 (0.107)
45-49	1.964 (0.107)
50-54	1.889 (0.108)
55-59	1.944 (0.111)
60-64	1.482

	(0.128)
65-69	1.097
	(0.147)
70-74	0.963
	(0.202)
75-79	0.765
	(0.402)
80-84	1.313
	(0.679)
85+	1.387
	(0.637)
female	0.059
	(0.032)
urban	-0.025
	(0.020)
Education	
(Aggregate	
level)	
2 - Basic	0.402
	(0.032)
3 -	
Intermediate	0.642
	(0.038)
4 -	
Advanced	1.038
	(0.025)
5 - Level not	
stated	0.561
	(0.158)
4 regions	
North	-0.124
	(0.029)
Center	-0.125
	(0.028)
South	0.016
	(0.029)
Intercept	-2.254
	(0.106)
Number of	
observations	20518

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Source: author estimates using LFS 2021.

### c. Annex III: Results for Pensions as Deferred Income (PDI) Scenario

	Gini	National Moderate Poverty Line	USD 1.9 PPP	USD 3.2 PPP	USD 5.5 PPP
Market Income + Pensions	0.331	0.265	0.020	0.056	0.175
Net Market Income	0.329	0.280	0.020	0.056	0.181
Gross Income	0.298	0.165	0.000	0.005	0.093
Disposable Income	0.296	0.180	0.000	0.005	0.096
Consumable Income	0.304	0.189	0.000	0.009	0.103
Final Income	0.266	0.079	0.000	0.000	0.028

	Size (wrt Original Income) 1	Concentration Coefficient	Redistributive Effect	Poverty Reduction Effect		
			Marginal Contribution	Marginal Contribution ( \$ 3.2 PPP )	Marginal Contribution ( \$ 5.5 PPP )	Marginal Contribution (National Moderate PL)
<b>Disposable Income</b>	<b>1.1139</b>					
Personal Income Tax (per capita)	-0.0252	0.4365	0.0016	0.0000	-0.0029	-0.0149
All direct taxes	-0.0252	0.4365	0.0016	0.0000	-0.0029	-0.0149
Contributions to pensions (per capita)	-0.0277	0.4458	0.0022	0.0000	-0.0029	-0.0137
All contributions	-0.0277	0.4458	0.0022	0.0000	-0.0029	-0.0137
Direct Transfers PDS (per capita)	0.0173	0.0121	0.0044	0.0054	0.0108	0.0090
All direct taxes and contributions	-0.0529	0.4414	0.0046	0.0000	-0.0039	-0.0242
Direct Transfers CTP (per capita)	0.0120	-0.2860	0.0055	0.0029	0.0089	0.0160
Direct transfers: pensions (per capita)	0.1097	-0.1224	0.0205	0.0321	0.0559	0.0741
All direct transfers excl contributory pensions	0.1391	-0.1198	0.0321	0.0510	0.0852	0.0996
<b>Consumable Income</b>	<b>1.1062</b>					
All indirect subsidies	0.0277	0.4473	-0.0054	0.0001	0.0015	0.0098
Indirect subsidies: electricity (per capita)	0.0260	0.4569	-0.0053	0.0001	0.0015	0.0080
Indirect taxes: alcohol & tobacco sales tax (per capita)	-0.0191	0.1860	-0.0029	-0.0015	-0.0071	-0.0103
All indirect taxes	-0.0354	0.2350	-0.0027	-0.0042	-0.0107	-0.0160
All taxes	-0.0606	0.3188	-0.0013	-0.0042	-0.0131	-0.0290
Indirect taxes: custom taxes (per capita)	-0.0098	0.2714	-0.0002	-0.0027	-0.0046	-0.0018
Indirect subsidies: gasoline (per capita)	0.0007	0.3547	0.0000	0.0000	0.0000	0.0007
Indirect taxes: mobile phone services sales tax (per capita)	-0.0047	0.2772	0.0000	0.0000	-0.0012	-0.0009
Indirect taxes: airlines sales tax (per capita)	-0.0002	0.5083	0.0000	0.0000	0.0000	0.0000
Indirect subsidies: diesel (per capita)	0.0010	0.2558	0.0001	0.0000	0.0000	0.0012
Indirect taxes: hotels sales tax (per capita)	-0.0016	0.4401	0.0002	0.0000	0.0000	0.0000
All taxes and contributions	-0.0883	0.3586	0.0014	-0.0042	-0.0149	-0.0384
Personal Income Tax (per capita)	-0.0252	0.4365	0.0015	0.0000	-0.0055	-0.0133
All direct taxes	-0.0252	0.4365	0.0015	0.0000	-0.0055	-0.0133
Contributions to pensions (per capita)	-0.0277	0.4458	0.0021	0.0000	-0.0055	-0.0144
All contributions	-0.0277	0.4458	0.0021	0.0000	-0.0055	-0.0144
All direct taxes and contributions	-0.0529	0.4414	0.0043	0.0000	-0.0077	-0.0224
Direct Transfers PDS (per capita)	0.0173	0.0121	0.0045	0.0052	0.0164	0.0116
Direct Transfers CTP (per capita)	0.0120	-0.2860	0.0059	0.0029	0.0119	0.0213
Direct transfers: pensions (per capita)	0.1097	-0.1224	0.0212	0.0383	0.0547	0.0775
All direct transfers excl contributory pensions	0.1391	-0.1198	0.0335	0.0527	0.0914	0.1050
<b>Final Income</b>	<b>1.2690</b>					
<b>All Indirect subsidies</b>	<b>0.0277</b>	<b>0.4473</b>	<b>-0.0053</b>			
<b>All Indirect taxes</b>	<b>-0.0354</b>	<b>0.2350</b>	<b>-0.0020</b>			
In-kind transfers Education: Tertiary (per capita)	0.0256	0.0794	-0.0004			
<b>All Direct taxes</b>	<b>-0.0252</b>	<b>0.4365</b>	<b>0.0024</b>			
In-kind transfers Education: Secondary (per capita)	0.0294	0.0366	0.0042			
In-kind transfers Health (per capita)	0.0465	-0.0335	0.0112			
Net health transfers	0.0465	-0.0335	0.0112			

In-kind transfers Education: Primary (per capita)	0.0613	-0.1055	0.0199	
Net education transfers	0.1163	-0.0288	0.0243	
<b>All Direct transfers excl contributory pensions</b>	<b>0.1391</b>	<b>-0.1198</b>	<b>0.0250</b>	
<b>All net in-kind transfers</b>	<b>0.1628</b>	<b>-0.0301</b>	<b>0.0379</b>	

#### d. Annex IV: Macro validation

	Survey	Actuals Admin Data	Ratio
Contributions to pensions	- 2,376.0	N.A.	N.A.
Personal Income Tax	- 2,161.3	- 1,925.6	1.12
Pensions	9,417.1	9,419.9	1.00
CTP / MoLSA	1,031.4	1,031.3	1.00
PDS	1,487.0	1,487.0	1.00
Indirect subsidies	2,375.2	1,814.9	1.31
Electricity subsidy	2,231.3		
Gasoline subsidy	60.9		
Diesel subsidy	82.9		
Indirect taxes	- 3,039.5	1,764.5	1.72
Indirect taxes on goods and services	- 2,197.6	635.4	3.46
Indirect tax mobile	- 404.2		
Indirect tax hotels and restaurants	- 135.3		
Indirect tax airlines	- 17.8		
Indirect tax tobacco and alcoholic beverages	- 1,640.3		
Indirect taxes: custom tax	- 841.9	1,129.2	0.75
Education primary + secondary	7,779.2	7,758.1	1.00
Primary	5,257.5		
Secondary	2,521.6		
Tertiary	2,200.8	2,234.2	0.99
Health	3,989.7	4,161.1	0.96

Source: authors' estimates based on SWIFT 2017/18, Ministry of Finance (MOF) and World Bank staff calculations.