

Fiscal Policy, Poverty and Inequality in Jordan

The Role of Taxes and Public Spending

POLICY SUMMARY

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This policy note is a non-technical summary of Rodriguez and Wai-Poi (2021).

Executive Summary

Fiscal policy is potentially one of the most powerful tools governments have for reducing poverty and inequality, but not all households are affected in the same way. Fiscal policy—how public revenue is generated through different taxes and how it is spent—can generate sizeable impacts on poverty and inequality. How much income tax a worker pays depends upon how much they earn, what deductions they can claim and often their household composition. How much GST they pay depends upon what they spend upon. And the price of what they buy depends upon the taxes on the inputs to production. At the same time, poorer and more vulnerable households may benefit from social protection but less from investments in tertiary education which their children may not attend. Analysing who benefits from different taxes and spending is important to understand how fiscal policy is affecting poverty and inequality in Jordan. This study traces how the Jordanian fiscal system affects different households, while paying income tax and GST and benefiting from social assistance, and services, such as, electricity and water subsidies and education and health.

Jordan's current fiscal system is modestly progressive, but more could be achieved. We compare household inequality based on their market incomes only with post-fiscal incomes (after paying income and consumption taxes as well as receiving government transfers and subsidised services). On this basis, inequality falls 5.8 points as measured by the Gini Index, from 35.1 to 29.5 points. When we consider only monetary taxes and benefits (that is, excluding non-cash education and health services), inequality falls by only 2.6 points. Moreover, poverty would be almost the same as the official poverty rate if consumption taxes and indirect subsidies were considered. We also examine a database of 47 countries with the degree of inequality reduction from fiscal policy and find that Jordan is ranked in the bottom half, being 25th from the top considering only cash taxes and benefits and in the same rank if we also include education and health.

Nonetheless, the recent expansion of social assistance programs is making Jordan's fiscal policies more equalising. In 2019, Jordan introduced a complementary program (Takaful) to the main social assistance program (National Aid Fund or NAF). Takaful expanded in 2020 and will reach 85,000 households by 2021. The impact of the new program is estimated to reduce inequality by 0.7 points and poverty by 1.4 percentage points. The subsequent planned transition of the current NAF to a more poverty-targeted approach could reduce inequality and poverty by an additional 0.4 and 0.4 points respectively.

Fiscal reforms are necessary in Jordan. In 2019, Jordan's public debt to GDP ratio was almost 99 percent, including arrears (World Bank, 2020). The need for fiscal consolidation existed before the pandemic due to limited fiscal space. Moreover, emergency COVID-19 spending to support vulnerable households and businesses along with lower revenues due to the economic shock will make fiscal reforms even more important in a post-COVID world.

However, there is scope for reforms which would both close the fiscal gap while further reducing poverty and inequality. The paper looks at three reforms: (i) GST; (ii) electricity tariffs; (iii) social protection reforms. Taken together, they reduce poverty by 1.7 percentage points and inequality by 1.3 points while closing the fiscal gap by JOD 115 million. The GST reform eliminates lower rates and exemptions on various goods and services; 60 percent of these foregone revenues go to the richest 30 percent of households. Electricity tariffs are set at the cost of production for the richest 40 percent of households (increasing some tariffs and reducing others) but unchanged or reduced for the majority of Jordanians, reducing both poverty and inequality. The continued expansion of Takaful and recertification of NAF come at some fiscal cost but reduce poverty further. There are further opportunities to close the fiscal gap or reduce poverty or inequality without increasing spending. The current bread subsidy

compensation payments are received by nearly 80 percent of Jordanian households; this spending could be redirected to increase health insurance coverage for current NAF and Takaful beneficiaries, or reduced in coverage with commensurate fiscal savings.

Introduction

There are various policies which governments use to reduce poverty and increase equal access to opportunities for all, such as investments in human capital development, infrastructure and job creation. However, many of these policies can take years if not generations to have significant impacts. Fiscal policy—how public revenue is generated through different taxes and how it is spent— can be changed in the short-term and can generate large short-term effects. For example, a change in the base rate of the General Sales Tax (GST) or changing which goods and services are exempt increases or decreases the cost of living for all households. An expansion of social safety nets or coverage of health insurance can also be implemented quickly.

Fiscal policy has many objectives; providing public goods and services is the most immediate, but it can also be used for longer term goals such as macroeconomic stabilisation, helping to dampen the impact of adverse shocks, stimulate economic growth and aid poverty reduction (Horton and El-Ganainy 2020). Here we focus on the equity goal of the fiscal system, that is, on the implications of the structure of government revenues and expenditures for the welfare of households. Moreover, it is the *net* impact of all fiscal policy which should be taken into account. While specific taxes and services benefit different households in different manners, the aggregate impact on households of all taxes and spending is what matters. Which households pay more into the fiscal system than they receive, and which ones receive more? How much do they pay or receive relative to their income?

This paper is intended for a policy audience and summarises the results of Rodriguez and Wai-Poi (2020). While a brief overview is included on data and methodology, many technical details are excluded and only the high-level results are discussed. For more technical detail and sectoral results and discussion, please see the original paper.

We begin by briefly reviewing Jordan’s fiscal policy and the data used in the analysis. The main results are presented and then placed in international context. The impact of selected potential fiscal reforms is also discussed.

Fiscal Instruments

This section provides an overview of Jordan’s taxes and expenditures in 2018. Although 2019 data are available, the household survey used to determine which households pay different taxes and benefit from different spending was collected from mid-2017 to mid-2018, so we have matched it to the 2018 fiscal data.

Taxes

Tax revenues accounted for around 15 percent of GDP in 2018 (Table 1). The lines in bold type are included in this study. Indirect general taxes on goods and services are by far the largest component, with personal and corporate income taxes making up most of the rest. In this study we do not analyse corporate income tax, the incidence of which cannot usually be allocated out to households.² We

² One exception where the household survey data allow this is Chile (see World Bank 2014).

similarly exclude indirect taxes on the commercial sector. As a result, we only capture just over half of total tax revenues.

Jordan's General Sales Tax (GST) standard rate is 16 percent, and there are reduced 4 percent and 0 percent rates, as well as items exempted from GST. Exempt items do not have GST charged, but there is an indirect 'tax' paid by consumers as producers cannot recover the GST paid on the inputs used to produce them, the cost of which is passed on to consumers. By contrast, zero-rated items have no GST charged but producers can claim the GST on inputs. A Special Sales Tax (SST) applies to cigarettes and tobacco,³ mobile phone subscriptions,⁴ soft drinks⁵ and alcohol⁶ based on the quantity purchased. We cannot distinguish between taxes charged to domestic and imported goods in household consumption and so apply the same rates to both.

Personal income tax (PIT) in 2018 was levied on gross income from all sources less exemptions and deductions.⁷ The income tax rate is progressive on the income level: the first 12,000 Jordanian Dinars (JOD) of an individual's income is exempt; income between JOD 12,000 and JOD 24,000 is taxed at 7 percent; income between JOD 24,000 and 36,000 is taxed at 14 percent; anything above is taxed at 20 percent. A deduction of JOD 12,000 can be claimed for households with one or more dependants, which does not increase by household size. PIT is entirely borne by the worker.

Table 1. Jordan government revenues, 2018

	2018		
	JOD Million	Percent of total revenues	Percent of GDP
<i>Total Domestic Revenues</i>	6,945	100	23
<i>Tax Revenues</i>	4,536	65	15
1 - Taxes on income and profits, of which:	965	14	3
Individuals	53	1	0.2
Salaried Employees	150	2	0.5
Income Tax from Companies & Projects	762	11	3
2 - Taxes on Financial Transactions (real estate's tax)	93	1	0
3 - General Taxes on Goods and Services:	3,185	46	11
Sales Tax on Imported Goods	972	14	3
Sales Tax on Domestic Goods	805	12	3
Sales Tax on Services	522	8	2
Sales Tax on Commercial Sector	885	13	3

³ The SST schedule for cigarettes is based on the number of cigarette packs purchased. Other types of tobacco products (cigar, aarghile, etc.) are subject to a tax per gram of tobacco. We assume that one cigar has approx. 2g, a pack of tombak is 40g and aarghile 40g.

⁴ 26 percent rate.

⁵ 10 percent rate.

⁶ 2.5 fils/lit for beer and 5.5 fils/lit for other types of alcohol. We assume one bottle of beer has 330 litres and one bottle of other alcoholic beverages, 700 litres.

⁷ The personal income tax law was revised in October 2018 to take force at the beginning of 2019. We discuss these changes later.

4 - Taxes on International Trade & Transactions	293	4	1
Customs Duties and Fees	266	4	1
Customs Fines	27	0	0
Non-tax Revenues	2,409	35	8

Note: Lines in bold are included in the analysis

Source: Ministry of finance/ General Government Bulletin: <https://mof.gov.io/en-us/datacenter/financialbulletins/generalgovernmentfinancebulletins/generalgovernmentbulletins2018.aspx>

Expenditures

Jordan's total government spending in 2018 was JOD 8.9 billion. Of this, around 30 percent, or 8.7 percent of GDP, was spent on the various categories of social and non-social spending included in this study. The largest budgets are in the education and indirect subsidies (electricity and water), followed by health and lastly direct cash transfer programmes. Table 2 further breaks out the spending included in the analysis. The water and electricity subsidies are not on the central government budget but are implicitly public spending as the state-owned utility companies finance the gap between tariffs and the cost of delivery; see table notes for details of how they are estimated.

Table 2 Jordan central government expenditures, 2018

	2018		
	JOD Million	Percent of GDP	Percent of total analysed spending
Total government spending^a	8,912	29.7	
Primary government spending^b	7,564	25.2	
Social and non-social spending analysed	2,609	8.7	100.0
Direct Transfers	277	0.9	9.2
NAF	104	0.3	3.5
Bread compensation scheme	171	0.6	5.7
Zakat fund cash transfer	2	0.0	0.1
Education	1,015	3.4	33.7
Preschool	4	0.0	0.1
Basic	717	2.4	23.8
Secondary	102	0.3	3.4
Vocational	25	0.1	0.8
Tertiary	116	0.4	3.9
Administrative	50	0.2	1.7
Health	763	2.5	25.3
Inpatient	711	2.4	23.6
Outpatient	38	0.1	1.3
Other	14	0.0	0.5
CIP	N/A	N/A	N/A
Subsidies^c	957	3.2	31.8
Electricity ^d	445	1.5	14.8
Water ^e	512	1.7	17.0

Other			
Contributory pensions	N\A	N\A	N\A

Sources: Education- Ministry of Education budget (2018); Health - BOOST; Electricity - NEPCO sales (2019); NAF – Ministry of Social Development budget (2018); Bread compensation- Ministry of Finance, may include budget for other small components (2018); Zakat fund annual report. Water – WAJ.

Notes:

a and b. Total government spending = primary government spending plus interest payments on debt plus use of cash adjustment.

c. Subsidies are not included in the central government budget but are still government liabilities. For example, electricity losses incurred by NEPCO (National Electricity Production Company) have been financed not from the government’s budget but from debt raised and guaranteed by the government on behalf of NEPCO (World Bank 2012).

d. We estimate the total cost of both residential subsidies (JD 300m official estimate) and commercial tariff subsidies which go to consumers through cheaper final goods and services (JD 145m based on modelling of indirect consumption in HEIS survey; not an official estimate).

e. We estimate the total cost of both residential subsidies (JD 549m official estimate) less commercial tariff cross-subsidies which go to consumers through more expensive final goods and services (JD 37m based on modelling of indirect consumption in HEIS survey; not an official estimate).

There are multiple social assistance programmes in Jordan. The main cash transfer programme is the National Aid Fund (NAF).⁸ It is an unconditional transfer that targets beneficiaries without income and people belonging to especially vulnerable groups (e.g. families taking care of orphaned children, elderly individuals, persons with disability, families headed by divorced or abandoned women, women with young children, families whose breadwinner is in prison). NAF covered (in 2018) about 101,000 families who receive a monthly cash transfer of approximately JOD 45 per person (up to a maximum of JOD 180 per family) depending on income, assets and family characteristics. Since 2018, NAF has expanded the reach of their cash transfers; a new transfer program for the poor—Takaful—was launched in May 2019 alongside Jordan’s National Social Protection Strategy for 2019-2025.⁹

In addition, the Zakat fund is a small unconditional cash transfer providing JOD 30 per household per month plus JOD 5 per household member for households living on an income below the extreme poverty line.¹⁰ Finally, there has been a cash compensation scheme (‘bread compensation’) in operation since January 2018. A flour subsidy was removed and replaced with a small cash transfer of JOD 27 per person per year given to Jordanian households with earnings under JOD 18,000 per year or to NAF beneficiaries (for whom the transfer was JOD 33 per person). This transfer reaches nearly 80 percent of the population.

Residential water and electricity bills are subsidised in Jordan. The subsidy received depends on the level of household consumption of the utility (kilowatts per hour or cubic metres) according to a tariff structure. For electricity, the lower consumption slabs receive a subsidy while there is a tax imposed on

⁸ This list of programmes is not exhaustive but covers the largest components.

⁹ 25,000 households were added in 2019, 30,000 more are being added in 2020 and a further 30,000 are planned for 2021, first enrolling the ‘poorest’ (according to the Takaful targeting methodology) who were not already benefiting from NAF monthly cash transfer programmes. The selection of Takaful beneficiaries is made based on a combination of formal/informal earnings and asset ownership filters and then on a ranking of households on a poverty score. The benefit level per household is also determined based on a formula score, being around JOD 100 on average.

¹⁰ <https://socialprotection.org/programme/national-zakat-fund-monthly-cash-assistance>

the higher consumption slabs (see appendix 2). The proportion of household consumption in brackets with tariffs below the cost of delivery for electricity (120 fils/kwh) and water (JOD 2.19/m³ for water) are subsidised,¹¹ while the proportion above is effectively taxed. The water bill also varies depending on the governorate of residence¹² and by whether the household is connected to sewage, in which case the bill also includes a charge for this service. The electricity bill also includes a fuel adjustment cost (FAC) of 10 fils, which is charged to households whose overall consumption is above 300 kw/month.¹³

In addition to the incidence of water and electricity subsidies through residential tariffs, there are subsidies and levies on the industrial and commercial sectors. The extent of cross-subsidisations would be reflected in higher consumer prices as water and electricity are important inputs in the production of many goods and services in the economy. The industrial tariff for water is uniform, except for the agricultural sector, which pays a lower tariff cross-subsidised by the cost in other industries. On the other hand, Jordan has a complex industrial electricity tariff structure; the tariffs, and hence the indirect household impact of these, differ widely by sector of economic activity, with some sectors being subsidised and some paying cross-subsidies.

Public education and health¹⁴ expenditures included here account for about 6 percent of GDP in 2018. Early childhood education (KG1 and KG2) starts at age 4. Basic schooling (primary and middle school) is free and education is compulsory for all children in this cycle (between the ages of 6 and 15). Enrolment rates in the basic cycle are close to universal, except for children in the bottom decile where 8 percent of children are not enrolled in school. Most children at this level attend public schools, over 70 percent in deciles 1 to 7 and still a sizeable share, 53 and 35 percent respectively, in the top two deciles. Secondary schooling lasts 2 years and has a vocational and an academic track, the latter being followed by tertiary education.¹⁵

Jordan provides public insurance through the Ministry of Health (MOH), as well as through the Royal Military Service and the University Hospitals.¹⁶ The focus in this study is on the Civil Insurance Program (CIP), managed by MOH and which has a contributory and a subsidised component. CIP covers mostly civil servants and their dependents, who contribute 3 percent of their monthly salary up to a maximum contribution of JOD 30 per month, as well as children under 6 years old and older adults above 60 years old and those affiliated to NAF and other poor households being referred to by the MoSD, whose premiums are fully subsidised by the government. Those insured under CIP can receive mostly free care at public facilities but have to pay a 20 percent co-payment for care at private facilities. In addition to

¹¹ For water, these estimates represent the full cost-recovery reflecting the production costs after taking into account all other losses. Estimates are from the World Bank Water team based on Water Authority of Jordan audited financials.

¹² The Water Authority of Jordan (WAJ) is the main entity responsible for the water supply in the country. Amman, Aqaba, Irbid, Jerash, Aljoun, Mafraq and Zarqa are served by subsidiary water companies.

¹³ Fuel prices adjusted monthly since discontinuation of fuel subsidies.

¹⁴ Not accounting for CIP premiums transferred by NAF to MOH.

¹⁵ See Abu-Ghaida (2016).

¹⁶ See Halasa-Rappel *et al.* (2019).

the insured, the subsidised public MOH services can also be accessed by uninsured individuals with a 20 percent co-payment.

The public pension system in Jordan is a mandatory contributory pension system managed by the Social Security Corporation. It covers private sector workers, government employees, as well as army officers.¹⁷ The contribution rate is on average 17.5 percent of the employee's salary, of which 6.5 percent is paid by the employee and the rest by the employer. Self-employed workers pay the entirety of the contribution. Pensionable age is 60 years for men and 55 years for women, with at least 180 months of contributions (paid or purchased). However, around 60 percent of the people retire before the legal age.

Data and Methodology

Data

The work follows the 'CEQ' methodology, an internationally recognised fiscal incidence diagnostic method developed by the Commitment to Equity Institute. This approach uses standard incidence analysis for each tax and transfer. The taxes and transfers from the fiscal accounts are allocated out to households based on the information in national representative household surveys, which include information on household employment and income (determining PIT and receipt of social assistance benefits) and expenditures (indirect taxes and subsidies) as well as use of social services such as health and education. The innovation of the CEQ approach is to combine the sectoral incidence analysis to model the *net* impact of Jordan's taxes and transfers on households and determine their welfare and distributional impacts.

The primary data source for households is the 2017-18 HEIS (Household Expenditure and Income Survey) conducted by Jordan's Department of Statistics. It contains detailed data on household expenditure and income, as well as on direct transfers and household use of education services. The data are the basis for official poverty estimates. The HEIS is representative of Jordanian households with close to 16,000 households interviewed over the course of a year, from August 2017 to July 2018.

Income and the value of taxes and transfers are reported in per capita Jordanian Dinars per year. Per capita values are obtained by dividing total value by the total number of permanent household members. To calculate the indirect effect of consumption taxes and subsidies, we use a 23 sector Input / Output (IO) table from 2010 updated to 2016.¹⁸

Income concepts before and after fiscal interventions

A CEQ assessment uses six different income concepts starting from 'pre-fiscal' or 'market income'; that is, the income before any fiscal interventions.¹⁹ This includes all income from work (salaries and self-

¹⁷ Government employees recruited before 1995 are in the Civil Pension system and armed forces members recruited before 2002 are in the Military Pension system, both of which are being phased out. In 2019, the total amount of these schemes represented JD 1.4 billion.

¹⁸ Constructed in Refaat *et al.* (2020).

¹⁹ See Lustig (2018).

employed income), capital, self-provision of goods and services, remittances and other private transfers, private pension income²⁰ and the value of imputed rent.²¹

Figure 1 shows how different direct and indirect taxes and subsidies affect market income until we reach 'final', or 'post-fiscal income'. 'Disposable income' adds direct government cash and near-cash transfers to and subtracts direct taxes from market income. 'Consumable income' then subtracts indirect taxes and adds indirect subsidies. 'Final Income' adds the public cost of providing in-kind transfers (services which are not received as cash benefits, namely health and education).

To assess the impact of fiscal policy on poverty we use the national poverty line and estimate poverty at each different income concept. Impacts across deciles of the consumption distribution and the Gini coefficient are used to capture the distributional impacts.²² We model the following fiscal instruments: personal income tax (PIT); benefits from NAF, the bread subsidy compensation scheme and other cash transfers; sales taxes (GST and SST); water and electricity subsidies;²³ and health and education non-cash (or 'in-kind') benefits. The allocation of the fiscal instruments to households is done primarily based on the reported information in the household survey,²⁴ making some adjustments to reconcile administrative and national accounts figures from 2018 when necessary. This means that analysis already incorporates possible inclusion and exclusion errors in the allocation of different interventions.

²⁰ Under the CEQ approach, there are two options for treating pensions. Throughout this study, we use Pensions as Deferred Income (PDI), which uses *market income plus pensions* as the starting point of the assessment. This treats contributions to pensions made during working-years as deferred and mandatory savings that will be enjoyed later in life; during retirement the income from contributory pensions are considered part of the pre-fiscal income. An alternative is to treat the income from Pensions as a Government Transfer (PGT) and the contributions as direct taxes. Rodriguez and Wai-Poi (2020) includes the results from the PGT alternative.

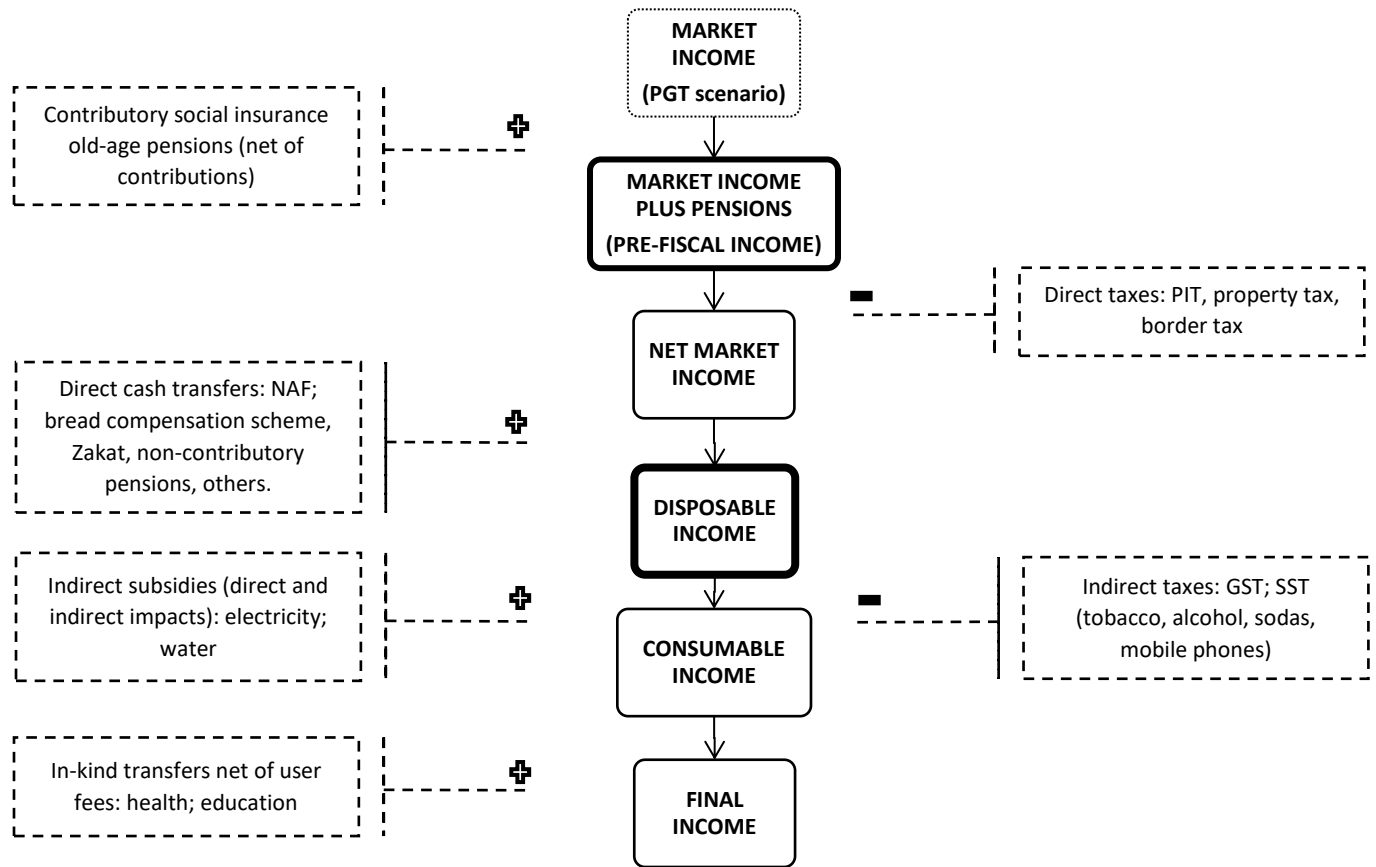
²¹ A house owned by the household can be rented out or resided in. To compare across households making different decisions, the foregone rent for those who live in houses they own is estimated and added to household income.

²² HEIS contains information on both household income and consumption. Since official poverty and inequality measures are based on consumption, we begin calculation of the income concepts by equating household consumption to disposable income and then working backwards (subtracting direct transfers and adding direct taxes) to construct market income.

²³ Water and electricity subsidies allocations and reform scenario are not final; the figures presented here still need reconciliation with administrative records.

²⁴ Additional information on health utilisation is taken from the 2018 Jordan Demographic Health Survey (DHS).

Figure 1. Definition of CEQ Income Concepts and Fiscal Interventions in Jordan



Source: Adapted from Lustig (2018).

Main Results

Impact of taxes and transfers for household across the income distribution

This paper sets out to estimate which households pay different taxes (and how much) and which benefit from different social spending (and by how much). It also asks what the net impact on households is when all taxes and transfers are taken into account. Figure 2 and Figure 3 summarise the results across the income distribution. Households are ranked according to market income and allocated to ‘deciles’, which are groupings of 10 percent of all people. The poorest 10 percent are Decile 1, the next poorest 10 percent Decile 2 up to the richest 10 percent (Decile 10). Figure 2 shows in JOD terms how much is paid and received across the income distribution, while Figure 3 shows how much is paid and received as a percentage of market income.

In absolute terms, the net benefit of taxes and transfers is greatest for poorer individuals in the lowest deciles and declines as households get richer. That is, the payments in taxes from households in Decile 1 are less than the benefits (including non-cash health and education) they receive (‘Total Impact’ dot line on chart). The poorest 80 percent of the population are net beneficiaries to the system—that is, they

receive more benefits from the public spending analysed than they pay in taxes and user fees—and those in the top 10 percent are net contributors.²⁵

However, much of the progressivity of Jordan’s fiscal system comes from health and education spending. If we exclude these in-kind or non-cash benefits (‘Total Cash Impact’ triangle line in Figure 2), only individuals in the bottom forty percent of the distribution are net beneficiaries of fiscal policy, the next three deciles are basically neutral, while the rest of the population on average pays more into the budget than they receive (although net contributions to the system remain higher for those in the highest deciles). We present the cash-only impact on households in addition to the aggregate impact because health and education in the CEQ methodology are valued at the cost of providing these services for the government.²⁶

Moreover, another way of thinking about the impact of the fiscal system on households is not in terms of how much they pay in taxes or receive in benefits in absolute terms, but relative to their income. Paying JOD 100 in GST is a much greater burden to households with low incomes than for those with high incomes; similarly, the value of a JD 100 transfer received means more to those with lower incomes. When considered relative to household market incomes, the impact of the fiscal system changes (Figure 3). The poorest decile receives cash transfers worth 26 percent of their market income and cash and non-cash benefits equal to 68 percent. However, while the richest 20 percent are by far the largest net contributors to the fiscal system in absolute terms, their net contributions represent only about 8 percent of their market income. Furthermore, the net cash fiscal contribution as a share of market income increases only modestly from Deciles 6 (0.1 percent) to 10 (7.6 percent), indicating that the pattern of taxes and spending could be made to benefit the poor and middle class further.

Breaking out the different taxes and spending, indirect taxes (GST and SST) are paid far more in absolute terms by richer households, as these are based on overall consumption, but represent a greater burden on poorer households relative to what they can afford (percentage of market income). Individuals in the bottom decile receive more in direct transfers than those at the top, and the top three deciles obtain only a small amount of direct transfers. However, the absolute amount received in direct transfers by deciles 2 to 7 is almost flat, meaning that many middle-income households receive as much in direct transfer benefits than poorer households. Residential subsidies in water and electricity²⁷ are received in similar absolute amounts across deciles 1 to 8 in the income distribution, reflecting the fact that these subsidies are not targeted to the poor but based solely on the amount of electricity or water consumed; since households in the top two deciles tend to consume slightly more, they also receive more benefits in indirect subsidies. Still, these subsidies are higher relative to market income for poorer households,

²⁵ Individuals in Decile 9 receive nearly as much as they contribute to the fiscal system.

²⁶ However, households may not value these services at the cost of provision. For example, in some countries, poor quality services—teacher absenteeism or lack of diagnostic equipment—may mean that households do not benefit from ostensible services provided. In Rodriguez and Wai-Poi (2020) we show that the value of health and especially education spending benefits for households in the bottom deciles falls once we adjust for the lower quality of service that people at the bottom receive, but this results in a small change in the share of the total benefits received by the bottom forty percent of households or the progressivity of in-kind spending overall.

²⁷ Water and electricity subsidies allocations and reform scenario are not final; the figures presented here still need reconciliation with administrative records.

indicating the potential adverse impacts if removed without mitigating measures; this result is common in most countries. The indirect impact of electricity and water subsidies – that is, the cascading impact of cross-subsidies to the industrial and commercial sectors – grows as income increases. Like indirect taxes, the amount of subsidy received indirectly depends on overall consumption and as richer households consume more, they receive more in subsidies. Finally, education and health non-cash benefits are progressive, although much more so for education. More education benefits are received in both absolute and relative terms by poorer households, reflecting their greater number of children in the household and the significant use of private education by richer households. Health spending benefits are shared relatively evenly in absolute terms across the distribution, meaning they still benefit poorer households more as a percentage of market income, but not as much as in the case of education).²⁸

²⁸ Education and public health spending are broken down by level (primary, secondary and tertiary) and type (in- and out-patient). Average costs per student and health visit are allocated to households with children enrolled at that level or individuals using that particular health service.

Figure 2 Payments of Taxes and Benefits of Public Spending by Household Consumption Decile (Million JOD)

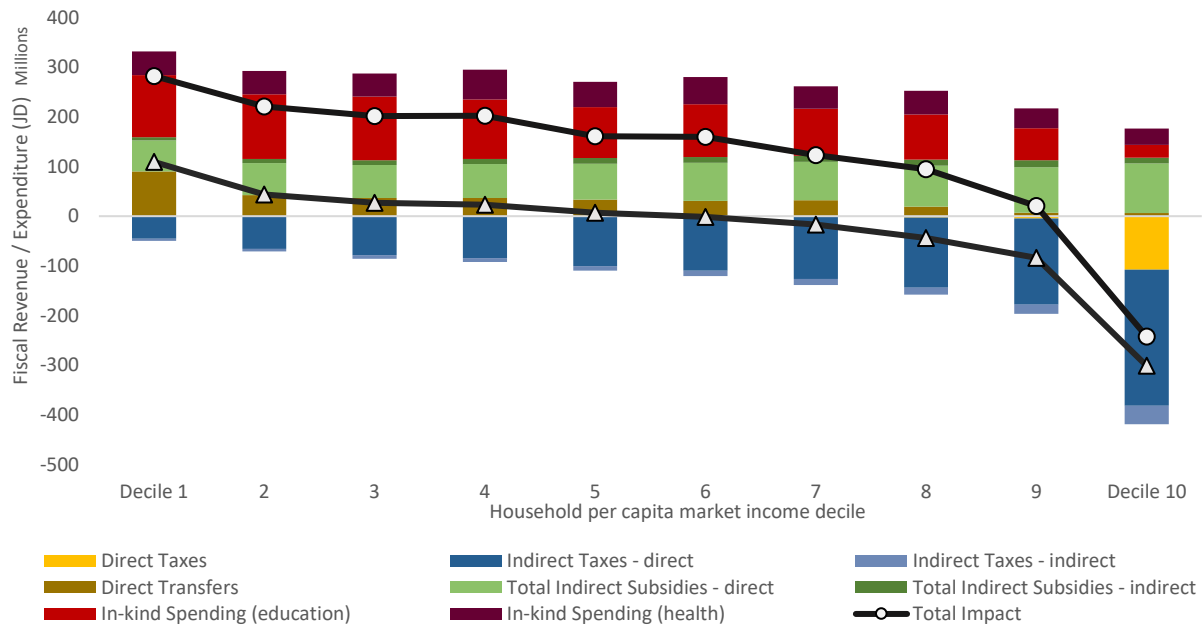


Figure 3 Payments of Taxes and Benefits of Public Spending by Household Consumption Decile (Percentage of Market Income)



Notes: Households are grouped into per capita market income deciles. Direct taxes include personal income tax, property tax and border exit tax. Indirect taxes include GST and SST. Indirect taxes-indirect is the cascading indirect effect of GST exemptions on selected goods and services. It has been modelled using the 2010 IO table uprated to 2016. Direct transfers include NAF, bread subsidy compensation and other government transfers. Indirect subsidies include electricity and water. Indirect subsidies -indirect is the cascading impact of commercial and industrial tariffs on households. In-kind spending includes health and education, net of costs or user fees. In-kind spending on health based on use of inpatient and outpatient healthcare. Contributory pension contributions and receipts are treated as deferred savings and income. Total Cash Impact excludes in-kind benefits.

Impact on measured poverty and inequality

In cash and non-cash terms, Jordan's fiscal policy appears modestly progressive; the poorest households receive more benefits than they pay while other households pay more into the system at a rate which slowly increases as they get richer. How does this impact inequality as commonly measured by the Gini Index?

Jordan's inequality (Gini) is measured in the HEIS at 35.1 points based on market income—before the fiscal system affects households—and at 29.3 points based on final income—after accounting for all fiscal policy (Figure 4.).²⁹ This indicates that overall fiscal policy reduces inequality in Jordan by 5.8 points. The largest fall is observed between consumable and final income, which is when in-kind transfers (health and education) are included. In purely cash terms, inequality falls modestly by 2.6 points from market to consumable income.

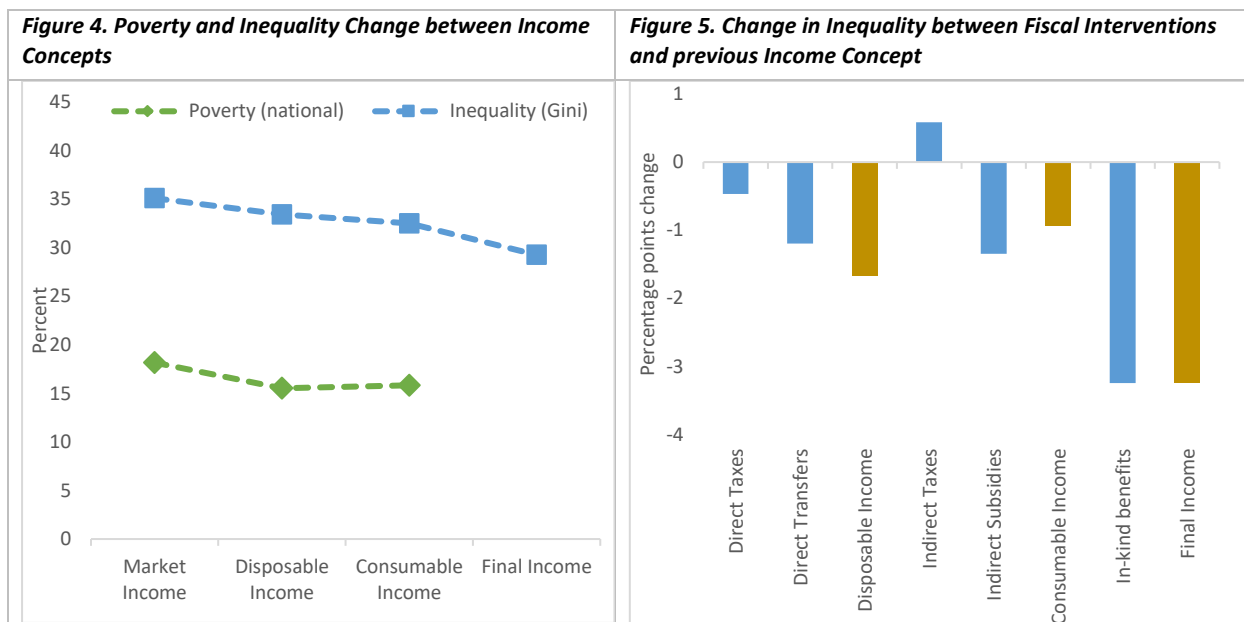
In-kind health and education benefits reduce inequality by 3.1 points. After in-kind benefits, direct transfers are the most equalising spending (reducing inequality by 1.2 points). The significantly large expenditures on water and electricity subsidies reduce inequality by a similar amount (1.4 points). On the revenue side, direct taxes (PIT) marginally decrease inequality (0.1 points) while indirect taxes (GST and SST) increase inequality (0.5 points).

Official poverty is measured using the household per capita consumption aggregate and results in a poverty rate for Jordanians of 15.7 percent. In the CEQ framework this is equivalent to disposable income.³⁰ When measured with the national poverty line but based on market income, poverty is 18.2 percent. That is, the combination of direct taxes and direct transfers reduces poverty by 2.6 percentage points. When indirect subsidies and indirect taxes, which have a disproportionate burden on the poorest, are considered, poverty measured at consumable income would rise slightly to 15.8 percent. That is, while poorer households do pay indirect taxes (12 percent of market income for Decile 1), this is compensated by the benefit from indirect subsidies (equivalent to 17 percent of market income for Decile 1). Nonetheless, there are a number of vulnerable households who live just above the poverty line, so the net impact on the cost of living from indirect taxes affects poverty (as felt by households if not measured officially).³¹

²⁹ The Gini Index is the most commonly used measure of income or consumption inequality. It ranges from 0 (perfect equality) to 100 (perfect inequality where one household has all income). In international context, a Gini less than 30 is quite equal, from 30 to 50 increasingly less equal, and above 50 quite unequal.

³⁰ Poverty at disposable income is 15.5 percent. The small difference arises from the adjustment made in a small number of cases to prevent negative net market income values.

³¹ The poverty impact of in-kind transfers is not reported, since these benefits are not cash (as all the taxes and other spending benefits are), nor are considered when constructing the poverty line. This is standard under the CEQ approach.



Note: Poverty is measured at the national poverty line. Inequality is measured by the Gini Index. Market income includes all income from wages and earnings, capital incomes and rents, and private remittances. Disposable income subtracts direct taxes and adds direct transfers. Consumable income subtracts indirect taxes and adds indirect subsidies. Final income adds in-kind health and education spending.

Effectiveness of taxes and transfers at reducing inequality

The previous section estimates how much different fiscal instruments increase or reduce inequality in Jordan in absolute terms. However, the *effectiveness* of different fiscal instruments in reducing inequality depends not just upon how much they reduce inequality but also on how much they cost (in the case of spending) or revenues they bring in (in the case of taxes). Table 3 summarises these impacts across the distribution as marginal changes to inequality (measured by the Gini Index) along with the magnitude of tax revenues collected or transfer expenditures made. For example, considering revenues, PIT has only a very small progressive marginal contribution to inequality, reducing the Gini by 0.1 points (marginal contributions are expressed in terms of points of Gini *reduced*), while indirect taxes (GST and SST) make a significant negative marginal contribution, increasing inequality by 0.5 points. Despite being highly progressive, PIT has little impact on inequality because it collects so little revenue relative to indirect taxes. This is captured in Figure 6, which shows the proceeds collected from taxes or spent on different items (blue bar) as well as the cost-effectiveness of each as a tool for redistribution, given as the change in Gini Index divided by the total revenue or expenditure (orange dot); that is, how much inequality goes up or down for each Dinar collected or spent. Since PIT is very progressive, it has a high effectiveness rating, but since so little of it is collected, its marginal contribution in Table 3 is very small. Indirect taxes, by contrast, represent by far the largest revenues. Even though their effectiveness indicator is only modestly negative (-0.5), the heavy reliance on them means they have a large negative overall contribution.

On the spending side, compared with water and electricity subsidies, direct transfers have a much lower budget allocation but provide a similar contribution to inequality reduction. Total direct transfers reduce inequality by 1.2 points compared to 1.4 points from electricity and water subsidies. Households benefit

from both direct (lower consumer electricity prices reduce inequality by 0.5 points) and indirect electricity subsidies (lower producer electricity prices and so lower cost of final goods and services, reducing inequality by a further 0.2 points). Subsidised consumer water prices reduce the Gini by 0.8 points and the small cross-subsidisation of industrial water tariffs has almost null effect on inequality.

Within direct transfers, the bread subsidy compensation and NAF perform similarly in terms of effectiveness in reducing inequality, although bread subsidy expenditures were significantly higher than NAF's in 2018. Although they have comparable performances, it is for different reasons. NAF is categorically targeted (for example, to widows or families looking after orphans), which does cover a number of poorer families but excludes many others and does not reach many households higher up the distribution. The bread payment, on the other hand, covers roughly 80 percent of households, so very few households in the bottom half are excluded, and while many richer households also receive it, the flat benefit level represents a significantly higher share of market income for poorer households, meaning inequality is reduced. Finally, Takaful, a poverty-targeted cash transfer program, was only launched in 2019, expanded in 2020 to 55,000 households and will reach 85,000 by 2021. We have simulated this expansion including the targeting methodology and included it for reference in the table and figure. At a similar budget to NAF and less than the bread subsidy compensation, Takaful is projected to reduce inequality by 0.7 points, making it by far the most effective inequality reducing program.

Finally, although their intention is not to redistribute but to develop human capital for all, education benefits are the most equalising of any tax or spending, albeit expensive. Together, they reduce inequality by 3.1 points, which for the money spent makes them more effective at reducing inequality than subsidies but less effective than direct transfers. Health spending is much more neutral, reducing inequality only by 0.3 points.

Table 3 Kakwani Coefficient and Marginal Contribution of Main Taxes and Transfers

	Kakwani Coefficient ^a	Marginal Contribution ^b
Main taxes		
PIT	0.6	0.1
GST and SST	-0.2	-0.5
Direct transfers		
NAF	0.7	0.4
Bread subsidy compensation	0.6	0.7
Other direct transfers	1.9	0.0
<i>Total Direct transfers</i>	3.2	1.2
Estimated Takaful (2021)	0.9	0.7
Indirect transfers		
Electricity total subsidy	1.7	0.7
Water total subsidy	1.2	0.8
<i>Total Subsidies</i>	2.9	1.4
In-kind transfers		
Education net benefits	0.5	2.8
Health net benefits	0.4	0.3

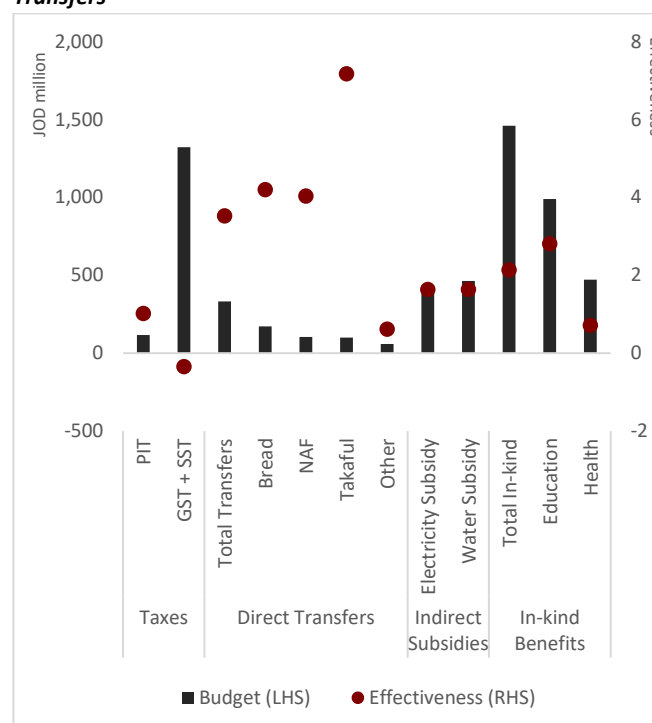
Notes:

- Kakwani coefficients measure whether a fiscal intervention exercises an equalizing or unequalizing force. It is measured as the difference in the concentration curve of the tax and the Gini for market income (or the inverse in the case of transfers). Progressive interventions have positive Kakwani coefficients, and regressive ones have negative coefficients.
- Marginal contribution is the points which the Gini Index is reduced between market income and consumable income, or between Consumable and Final income (for in-kind transfers); a positive contribution is a reduction in Gini, negative contribution is an increase in Gini.

Budget is the budget identified in the survey. Effectiveness is marginal contribution / budget. GST and SST include the cascading indirect effect of GST exemptions. Total electricity and water subsidies include residential subsidies and the indirect effect of commercial and industrial (cross) subsidies.

Source: 2017-18 HIES, 2018 Government Budget, administrative data and World Bank analysis.

Figure 6 Budget (JOD m) and Effectiveness of Main Taxes and Transfers



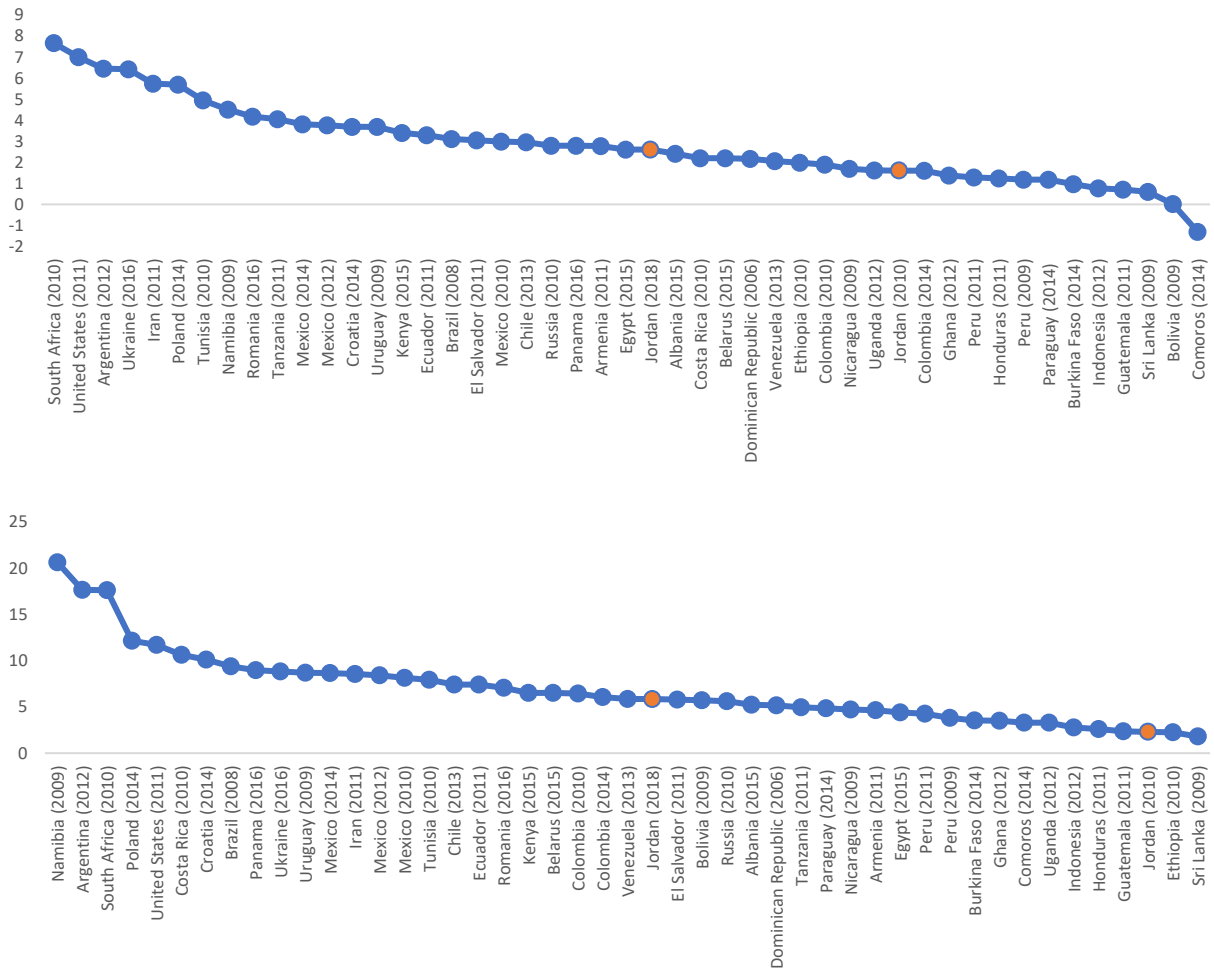
Results in International Context

In this section we compare Jordan's performance to other countries in terms of fiscal space and distributional impact (complete data are included in Rodriguez and Wai-Poi, 2000). The database we use is from the CEQ Institute and includes 42 different countries, some with multiple years of studies. We begin by looking at the overall progressivity of Jordan's fiscal system relative to other countries.

Figure 7 presents the extent to which fiscal policy in 42 countries (with six countries having two entries) reduces inequality as measured by the Gini Index. It shows both the reduction in Gini when moving from market income to consumable income—that is, taking only cash taxes and benefits into account (upper panel)—and from market income to final income—that is, including public spending on health and education (lower panel). The charts are ranked from most inequality reducing to least. Whether we consider inequality in strictly monetary terms or also in-kind health and education benefits, Jordan could do better. In 2018, Jordan's fiscal policy reduced inequality by 2.6 points in monetary terms (25th out of

47) and 5.8 points including health and education (25th). In 2010, the reductions were 1.6 points (35th) and 2.3 points (3rd worst), although as we mentioned the 2010 and 2018 results are not comparable for a variety of technical reasons.³²

Figure 7. Fiscal Impact on Monetary Inequality (upper panel) and Monetary plus Non-cash Inequality (lower panel) (points reduction in Gini Index)



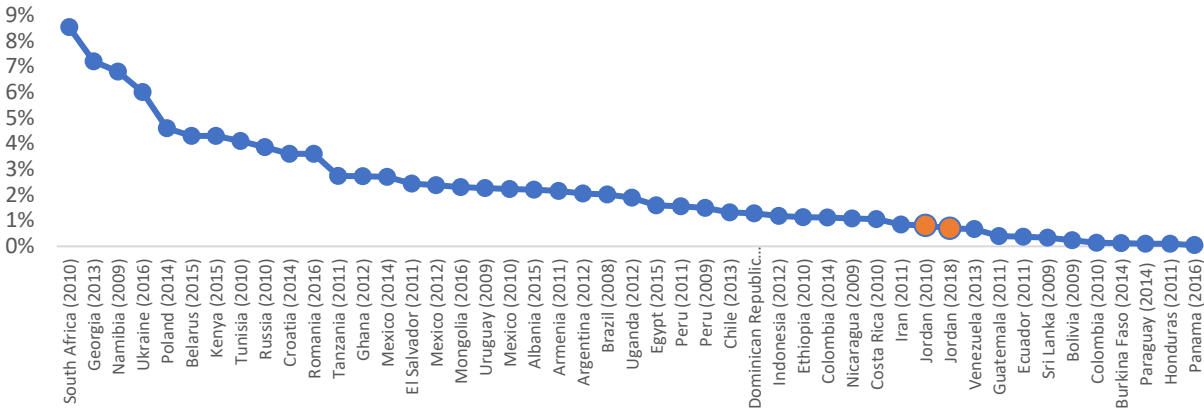
Source: CEQ Institute database (as at May 2020)

Why does Jordan’s fiscal policy not have as much impact on equity as in many other countries? Jordan’s revenue and spending as a percentage of GDP is relatively high at the aggregate level compared to other countries in the CEQ database. However, the composition of both has historically been less progressive than elsewhere. We first look at the revenue levels and composition. In terms of total fiscal revenue as a

³² There have been significant changes in both HEIS survey data and CEQ methodology. These changes are discussed at length in Rodriguez and Wai-Poi (2020). Changes in fiscal policy, including the elimination of fuel and bread subsidies and the introduction of bread subsidy compensation and Takaful, have also occurred, but the aggregate effect is difficult to estimate due to the technical changes.

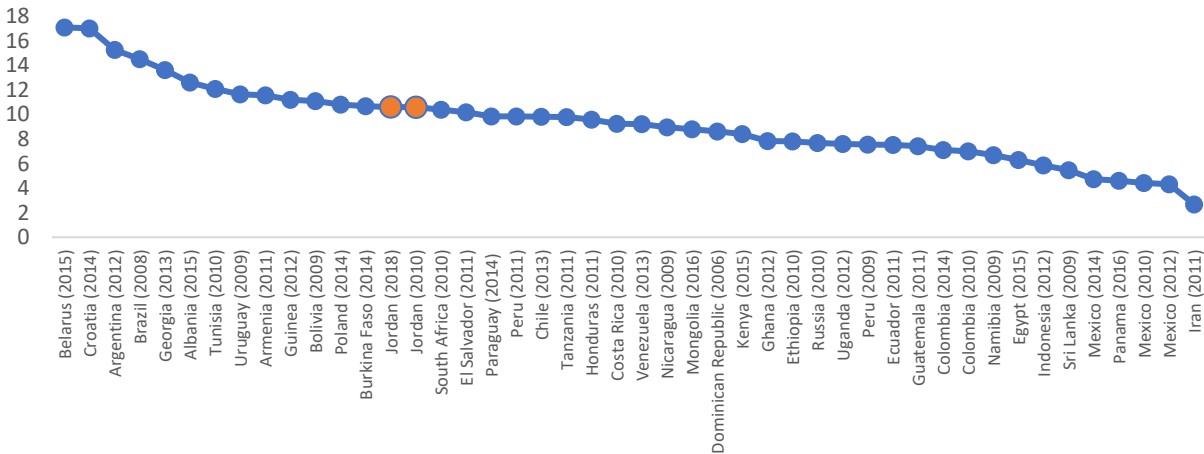
percentage of GDP, Jordan performs in the middle of the database; at 24.8 percent of GDP in 2010, it was 18th best of the 49 country-years, although that had fallen to 26th by 2018. However, this masks Jordan’s significant reliance on non-tax revenue. In terms of total tax revenues, Jordan was 25th (2010) and 28th (2018) at 15.7 percent and 15.0 percent respectively. Finally, at less than 1 percent of GDP (Figure 8), Jordan’s revenue collection from PIT—the most progressive revenue mechanism—is particularly low, while its dependence on indirect taxes (around 10.5 percent of GDP) is relatively high (Figure 9).

Figure 8. Total Personal Income Taxes (percent of GDP)



Source: CEQ Institute database (as at May 2020)

Figure 9. Total Indirect Taxes (percent of GDP)



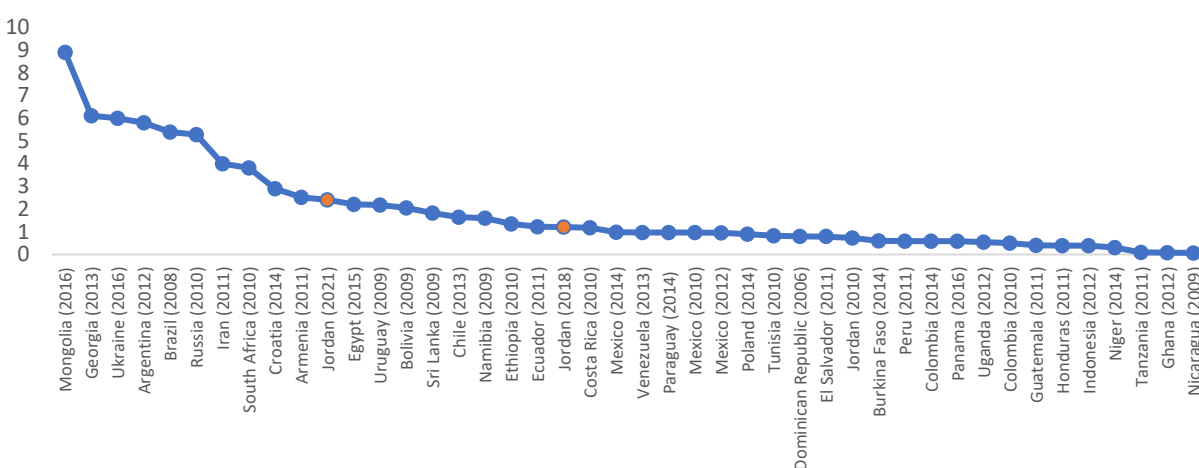
Source: CEQ Institute database (as at May 2020)

On the spending side, Jordan’s central public expenditures in 2018 were 18th out of 46 country-years observations almost the same as 2010 (15th) as a percent of GDP. However, considering in-kind expenditures on health and education where Jordan achieves the greatest absolute inequality reduction,

total education spending was still only 33rd out of 47 in 2018 (38th in 2010), and 32nd (2018) and 24th (2010) out of 48.³³

Nonetheless, significant policy changes in social protection spending between 2010 and 2018 (mostly in the last couple of years) have had a material impact. In 2010, total direct transfer spending (generally the most progressive type of spending) was 30th out of 43; by 2018 it was 17th. Once Takaful expansion is completed in 2021, it would be 11th. Moreover, the poverty-targeted approach of Takaful compared to the less progressive NAF categorical targeting and near-universal bread subsidy compensation benefits means the impact on inequality has also been increasing. The impact of direct transfers on inequality was only 30th out of 43 country-years, reducing inequality by only 0.7 points (Figure 10). By 2018 it was 20th (1.2 points) and our projections for 2021 once the full Takaful expansion is taken into account is 11th (2.4 points), meaning inequality is reduced by direct transfers alone by 2.4 points.

Figure 10. Total Direct Transfers Reduction in Inequality (points reduction in Gini Index)



Source: CEQ Institute database (as at May 2020)

Potential Reforms

We have seen that Jordan’s current fiscal system does relatively little to reduce poverty and inequality. At the same time, pre-COVID fiscal pressures combined with COVID-related pressures mean that fiscal reforms are necessary. The need for such reforms presents both a challenge and an opportunity. The challenge is how to increase revenues and reduce or redirect spending in a manner which least affects the poor and vulnerable. The opportunity is that such reforms may be politically feasible in the shadow of the COVID-19 crisis and, furthermore, that they can potentially be done in distributionally neutral or even progressive manner.

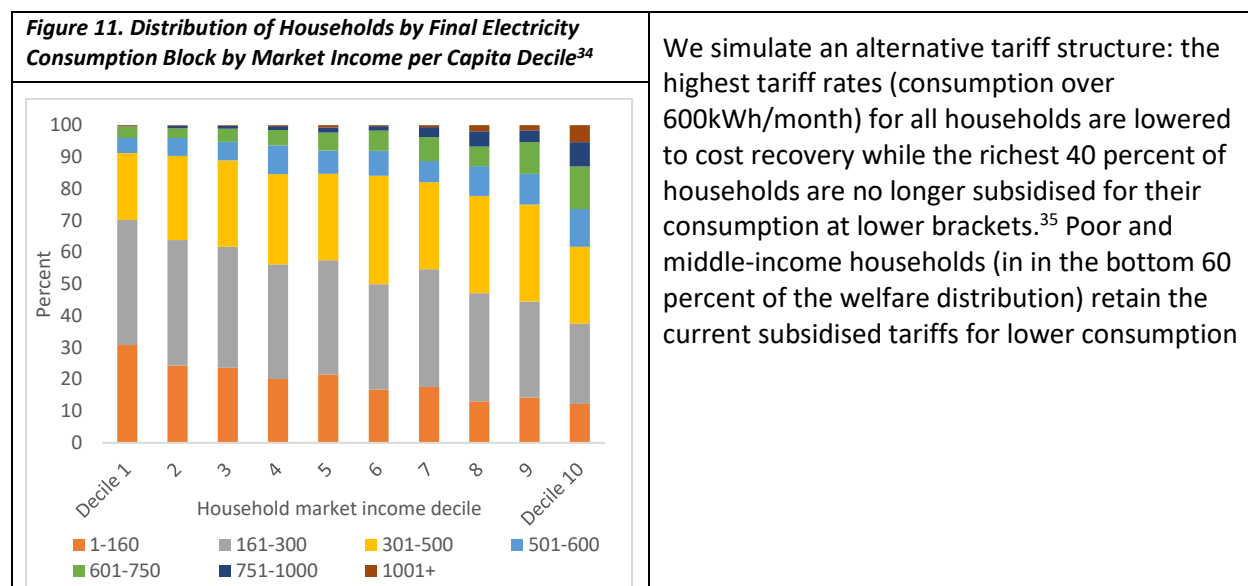
Building upon this paper, a microsimulation tool is being developed which will allow policy makers to run various fiscal reform scenarios and assess both the impact on the fiscal deficit as well as the impact

³³ Not all fiscal components are reported for all countries in the CEQ database, so the denominator varies by item.

on poverty and inequality. In this closing section, we do not attempt to examine all options or even the most ambitious but present three feasible reforms.

First, we look at residential electricity tariffs and examine the fiscal and distributional impacts if the richest 40 percent of households had a flat tariff which covered the cost of service delivery while tariffs for the rest of the population remained unchanged. Second, we look at the impact of removing all GST preferential rates and exemptions. Finally, we examine the current social protection strategy of expanding Takaful and recertifying NAF and assess its likely mitigation of any impacts on poverty and inequality from the GST reforms.

The current electricity tariff structure heavily subsidises initial consumption (the first 160 kwh) for all households regardless of their total consumption or place in the income distribution. This means that there are some, especially large, poorer households who are paying a ‘tax’ on their electricity consumption at the higher brackets, and richer households are being subsidised for the lower brackets of electricity consumption when they do not need it (Figure 11). The top two deciles receive almost a quarter of the electricity subsidies and the next two deciles an additional similar amount; that is up to a total of JOD 86 million.



³⁴ This analysis is based on self-reported consumption of electricity from HEIS. This does differ from administrative NEPCO data.

³⁵ This type of affluence testing is increasingly used internationally (see Grosh, Leite and Wai-Poi, forthcoming) and Jordan has experience with this approach. When the country removed the fuel subsidies in 2012 and food subsidies in 2018, it implemented cash schemes to compensate households for the increases in price. To allocate the benefits, instead of targeting at the bottom, they used a combination of criteria to exclude clearly rich and thus non-eligible households. In the first case, the richest 30 percent of households were trimmed using a combination of self-reported income and ownership of cars, property and financial assets. In the case of the bread compensation scheme, about 20 percent of richest households were excluded using similar information. This was achieved by using a combination of self-reported information matched with information from administrative databases available at the time. New administrative data sources and the National Unified Registry (NUR) mean that the capacity to better implement such affluence testing is even greater now. See Rodriguez and Wai-Poi (2020) for further details.

<p>Note: Deciles of market income. The share of households per final consumption block in HEIS has been adjusted to preliminary figures from administrative data. Source: HEIS 2017-18 and World Bank calculations.</p>	<p>brackets.³⁶ Even with poor and middle-income households receiving more subsidies than before and the highest tariff becoming cheaper, the proposed pricing structure would see significant savings, all coming from the richest 40 percent of households (JOD 95 million annually even assuming current levels of non-payment of bills, which, if addressed, could add another JOD 17-60 million³⁷). The richest 20 percent would contribute 65 percent to the total savings. Overall poverty would decrease by 0.2 points while inequality would be reduced by 0.3 points compared to the baseline marginal impact of electricity residential tariffs.³⁸</p>
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Although PIT is the most progressive form of revenue generation and collections are particularly low in Jordan by international standards, the recent history of PIT reform suggests that efforts directed to increased compliance are more politically feasible in the short-term; in the longer-term greater reliance on direct taxation will be needed to increase public revenues in a progressive manner. Indirect taxes, however, can be simplified and significant revenue raised by eliminating GST exemptions and lower rates and unifying the sales tax rates for all items. Under this scenario, we assess the potential impact of using a unified single GST rate of 16 percent for all items.³⁹ While this raises the tax rate for some items with reduced tax rates and thus the direct impact of taxes, it also eliminates the cascading effects caused by exemptions, which were accounted for around 10 percent of the total GST collections in the baseline. Overall, this reform has only small distributional effects, increasing inequality by only 0.1 points, as the increase in direct prices is offset by the decrease in prices when producers of previously GST-exempt goods and services can now claim GST on their inputs. This reform could raise an additional 5 percent of indirect taxes (about JOD 120 million), which can be used to compensate for the small increase in poverty (0.2 points) or to close the fiscal gap. In reality, purchases of goods at informal locations which do not charge GST mean that the impact on poverty and inequality would be even less, although so too may be the impact on revenues.⁴⁰

³⁶ See current and reform scenario tariff structure in Rodriguez and Wai-Poi (2021). We assume an inelastic demand, which means that the quantity of electricity purchased remains fixed as in the base scenario (no behavioural impacts).

³⁷ Potential savings are estimated by applying the percentage change in the 'survey'-budget, before and after the reform, to the administrative budget. Additional bill recovery from non-paying households in the top 40 percent of the distribution would yield extra revenues of approximately JOD 17 million. Full bill-recovery from all households would increase revenues by JOD 60 million in total. These estimates are based on self-reported zero-bill households in HEIS and may differ from administrative data.

³⁸ Some households with higher incomes nonetheless are large households and are thus relatively poor, so lowering the tariffs for the highest consumption blocks reduces poverty by a small amount.

³⁹ Leaving STT rates (for mobile phones, sodas, alcohol and tobacco) unchanged.

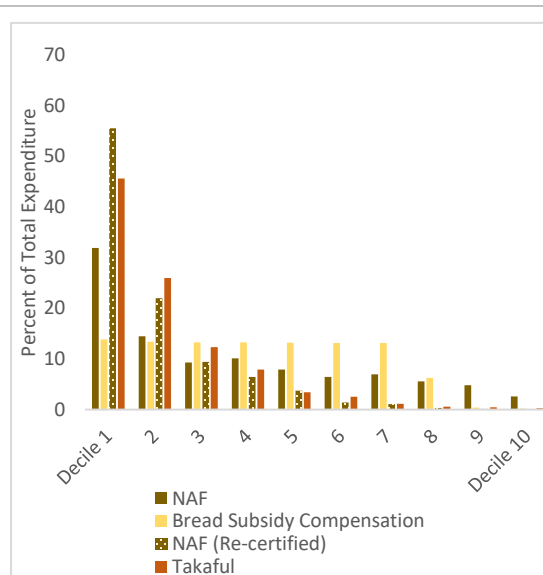
⁴⁰ This is because poor households tend to make more of their purchases in the informal non-tax paying sector than richer households (Bachas *et al.* 2020).

Finally, we assess reforms to social assistance which are currently being implemented. The current Takaful expansion is not included in the baseline of this study as it began after 2018. We simulate this expansion until 2021 based on Takaful targeting and benefits in HEIS.⁴¹ Figure 12. shows that the distribution of benefits under Takaful is highly progressive, with nearly half of the benefits received by the bottom decile and over 70 percent by the bottom two deciles. This is significantly better than that achieved by NAF or the bread subsidy compensation. The overall impact of the Takaful expansion is to reduce poverty and inequality by 1.3 and 0.7 points respectively. Moreover, existing NAF beneficiaries are planned to be recertified using the Takaful targeting once the current Takaful expansion is complete. As Figure 12 indicates, this could potentially lead to further reductions in poverty and inequality without additional expenditures. The marginal contribution to poverty and inequality of the recertified NAF is 1.2 and 0.8 points respectively. Compared to the current contributions of NAF (0.9 and 0.4 points for poverty and inequality, respectively) the better targeting of NAF would reduce poverty by an additional 0.4 points and inequality by a similar amount. We estimate the combined impact of these social protection reforms as additional 1.7 and 1.3 points reductions in poverty and inequality. Finally, although not modelled here, the budget allocated to the bread compensation scheme, while broad in coverage by design, could be used in a targeted fashion—such as extending subsidised health insurance coverage for the poor—or as fiscal savings.

The overall impact of these three reforms: reducing electricity subsidies for higher consuming households, imposing a flat GST tax rate without exemptions and redirecting and expanding existing and planned social assistance spending would mean increased fiscal space of JOD 106 million while reducing poverty by 1.5 points and reducing inequality by 1.3 points in comparison to the current fiscal system. An additional JOD 110 million of the 2020 bread subsidy compensation budget could either be redirected to poverty-targeted programs, further reducing inequality and poverty at no additional cost to the budget, or used to close the fiscal gap. This would come at some cost to poverty and inequality, although it would be less than the reductions estimated under the three reform scenarios.

⁴¹ Conducted by the World Bank Social Protection team.

Figure 12. Incidence of Main Direct Transfers by Household Market Income Decile



Notes: Deciles of per capita market income. Takaful includes full expansion to 2021.
Source: HEIS 2017-18 and World Bank calculations.

Table 4. Fiscal and Distributional Impacts of Potential Reforms

	Change in marginal contribution*		Estimated budget savings
	Poverty	Inequality	JOD m
GST reform	-0.2	-0.1	120
Electricity residential tariff reform	0.2	0.3	95
Takaful expansion	1.4	0.7	-100
NAF re-certification	0.4	0.4	0
All reforms	1.7	1.3	115
With bread savings**	-0.1	0.5	225

*Marginal contribution is the points which the Gini Index/ poverty headcount is reduced between market income and consumable income; a positive contribution is a reduction in Gini/poverty, negative contribution is an increase in Gini/poverty. The change is the difference with respect to the marginal contribution before the reform.
The budget change in JOD is estimated by applying the percentage change in the 'survey-budget' to the actual administrative budget.
**Approximate bread subsidy compensation budget for 2020.
Source: HEIS 2017-18 and World Bank calculations.

Conclusion

In the middle of 2020, Jordan faces extraordinary challenges. While swift action by the government has avoided the health crisis, the pandemic is wreaking global economic havoc and Jordan is no different. Moreover, Jordan like many other countries, was under significant fiscal pressure before the crisis. The crisis is in turn exacerbating that pressure, particularly through a lack of fiscal space to run countercyclical fiscal policy as is needed. At the same time, poverty rates in Jordan have been stagnant over the last decade and current fiscal policies have not done as much to reduce poverty or inequality compared to many other countries.

The COVID-19 crisis represents both a need for fiscal reform and an opportunity to “build back better”, with more revenue collected in a neutral or even progressive manner, less spending on subsidies for richer households and redirecting of existing social spending to reduce poverty and inequality at no fiscal cost.

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