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Fiscal policy and gender income inequality: The role of taxes and social spending

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Report

Fiscal policy and gender income inequality

The role of taxes and social spending

Laura Abramovsky and Irene Selwaness

June 2023



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Acronyms

CIT	corporate income tax
EU	European Union
FLFP	female labour force participation
GDP	gross domestic product
HICs	high-income countries
IMF	International Monetary Fund
LICs	lower-income countries
LMICs	lower-middle income countries
MENA	Middle East and North Africa
OECD	Organisation for Economic Co-operation and Development
PFM	public financial management
PIT	personal income tax
PP	percentage point
SDG	Sustainable Development Goal
SSA	sub-Saharan Africa
UMICs	upper-middle income countries
UN	United Nations
VAT	value added tax

Executive summary

Persistent inequalities between women and men in income, unpaid work, paid work and other dimensions disadvantage women, undermine human rights and damage economic prosperity. Despite the challenges in measuring economic resources at the individual level in a consistent manner across countries, estimates suggest that women are often more likely to be poorer, to live in poorer households or to earn less than men. Systemic differences in unpaid and paid work and earned and unearned income are linked and substantial across countries and regions.

Fiscal policies may affect gender inequalities in income and opportunity. This report reviews the evidence on the impact of tax and spending policies on gender income gaps across countries, as well as on work incentives and labour market outcomes for women. The focus is on the role of tax (and social security contributions) and transfers in cash and some transfers in-kind (in the form of education and health services). Given their relevance for women's outcomes after having children, we also survey the evidence on the impact of childcare subsidies (both demand and supply) and paid parental leave.

The report concentrates on the impact of fiscal policy on income gaps between genders through redistributing via the tax and benefit system across and within households; and through changing the economic returns to female (formal) employment through tax, transfers and other policies that reduce women's unpaid work burden and hence the opportunity cost of doing paid work.

The evidence on the impact of tax and social spending on income gaps between men and women is limited across countries, though

especially from non-high-income countries (HICs). This is partly due to data and conceptual challenges, and partly for political reasons. More effort is needed to fill these gaps.

Evidence from (mostly European) HICs shows that, in general, the combined impact of (mostly progressive) systems of direct taxes and cash transfers (contributory and non-contributory) can reduce income inequality between genders.

Evidence suggests that (formal) work disincentives created by the system of direct tax and cash transfers are larger for women than for men, particularly women with a male partner and children.

There are important emerging lessons and implications for the design of each policy tool, even if studies are still few. Policies that focus on narrowing gender gaps in education, health and infrastructure can be particularly effective in alleviating income inequality and changing employment outcomes in lower-income countries (LICs). Improving the progressivity of the tax-benefit system and addressing disincentives to work for second earners, subsidising child/elderly care, mandating and subsidising paid parental leave and flexible work arrangements can be impactful across countries.

When looking at the impact of fiscal policies on gender income gaps, it is important to consider the system as a whole, and how to best target the most vulnerable including lower-income women. Measures such as introducing or broadening the base for value-added tax (VAT) or removing inefficient fuel subsidies can widen gender disparities or disadvantage lower-income

households and individuals. In those instances, as is the case when considering inequalities across the income distribution, it is important to assess the cost-benefit of alternative reform packages that recycle revenue from tax reforms to mitigate negative impacts on the most vulnerable sections of the population. It is essential to consider policies that can mitigate the undesired effects, for example targeted cash transfers and investment in education and health.

Although the focus here is on the role of fiscal policy in gender income inequality, it is important to position this discussion within the wider context of inequality across genders. Social and cultural norms and the type of jobs available matter for both women and men. Societies need to consider a multipronged approach that goes beyond tax and social spending in cash transfers, childcare, parental leave, education and health if they want to change gender differences in work or income.

1 Introduction

1.1 Background and motivation

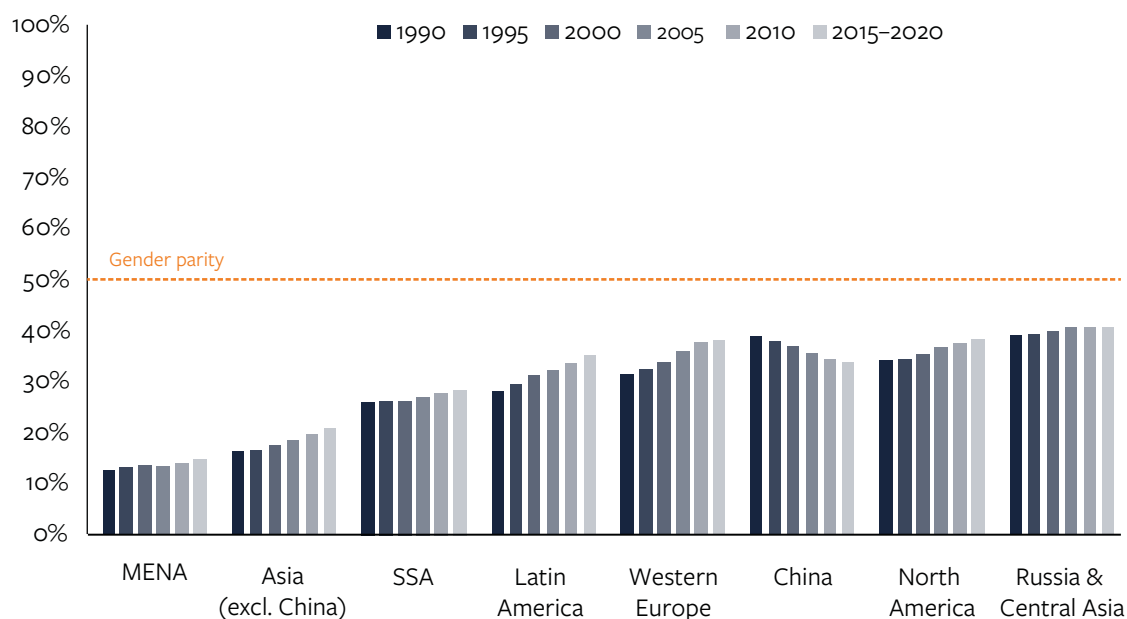
Gender equality and women’s empowerment are widely considered a human right, key to attaining social fairness and embedded in international human rights law.¹ In 1995, in the Beijing Declaration and Platform for Action, representatives of 189 countries committed to ‘advance goals of equality development and peace for all women everywhere in the interest of all humanity’ (UN, 1995). Inspired by this, Sustainable Development Goal (SDG) 5 aims to ‘Achieve gender equality and empower all women and girls’, including equal legal treatment and access to opportunities and economic resources.²

Achieving gender equality, including in education, health and labour force participation, has been identified as a key factor in fostering economic growth. Various studies have pointed to significant macroeconomic gains from reducing gender inequality (Hsieh et al., 2019; Kochhar et al., 2016; Ostry et al., 2018; Wodon et al., 2020). Increasing human capital, gender diversity and a better

allocation of talent across sectors result in higher productivity, better management practices, economic diversification and growth.³

However, numerous countries maintain legal barriers to women’s full economic participation and gender income gaps remain wide. According to the World Bank (2023), 2.4 billion working-age women do not have access to the same legal rights as men, and only 14 countries (all HICs) have achieved legal gender parity. This results in, for example, disadvantages in terms of freedom of movement and ability to work and a higher risk of sexual harassment in the workplace.⁴ Figure 1 shows that, in the last three decades, significantly less than 50% of labour income accrued to women, although there was some catch-up between 1990 and 2020 (Chancel et al., 2022). There is significant variation across regions. Inequality is highest in Asia and in the Middle East and North Africa (MENA). In the MENA region and in sub-Saharan Africa (SSA), women face the greatest legal barriers (World Bank, 2023). Section 2.1 provides further evidence on income and employment gaps.

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- 1 Universal Declaration of Human Rights, adopted by the UN General Assembly on 10 December 1948.
 - 2 United Nations (UN) Sustainable Development Goal 5 ‘Achieve gender equality and empower all women and girls’ and associated progress (www.un.org/sustainabledevelopment/gender-equality) and the UN statement of why gender equality is important (www.un.org/sustainabledevelopment/gender-equality).
 - 3 Hsieh et al. (2019) estimate that between 20% and 40% of growth in aggregate market output per person between 1960 and 2010 in the United States (US) can be attributed to the observed convergence in distributional occupation between white men and women and black men consistent with a better allocation of talent. Kochhar et al. (2016) estimate large losses in gross domestic product (GDP) due to gender inequalities in the labour market, around 15% of GDP in Member States of the Organisation for Economic Co-operation and Development (OECD) and 18% in a sample of non-OECD emerging economies. Ostry et al. (2018) suggest that men and women complement each other at work, bringing different perspectives and skills. They estimate that making women as likely as men to participate in the labour market could add 35% to GDP on average in countries where this difference is largest (Dabla-Norris and Kochhar, 2019). Wodon et al. (2020) estimate the gain in human capital wealth due to gender inequality in lifetime earnings to be around 22% globally.
 - 4 The eight indicators used by World Bank (2023) to measure legal differences between men and women at different life stages are: *Mobility, Workplace, Pay, Marriage, Parenthood, Entrepreneurship, Assets and Pensions*.

Figure 1 Female labour income shares, 1990–2020

Source: Reproduced from Chancel et al. (2022), Figure 5.2

Women are more likely to be poorer, to live in poorer households or to earn less than men. Estimates from 2021 show that 12.6% of women and 10.5% of men in the US live in poverty; women in European Union (EU) countries are at higher risk of poverty or social exclusion than men (22.7% compared to 20.7%); and relative poverty among women is higher than among men in OECD countries on average (12.3% against 10.9%).⁵ At ages 15–19, differences in poverty rates are biased against women except in SSA (Azcona et al., 2021). Muñoz Boudet et al. (2018), using data from 89 countries, estimate that girls

and women of reproductive age are more likely to live in poor households than boys and men.⁶ The UN estimated that more women would be living in extreme poverty than men by the end of 2022 (UN, 2022).

Awareness of the importance of understanding the gendered impact of fiscal policy has increased. Gender, like other social stratifications such as race, disability and income, plays an important role in mediating the impact of taxation and social spending on incomes and well-being more generally. Several countries began to mainstream

⁵ For the US, see Creamer et al. (2022). For the EU, see Eurostat (2023). In the EU, a person at risk of poverty or social exclusion (AROE) corresponds to the sum of persons who are either at risk of poverty, severely materially and socially deprived or living in a household with a very low work intensity. For OECD, see OECD (2019; chapter 6).

⁶ Using the international poverty line, the paper finds that 122 women between the ages of 25 and 34 live in poor households for every 100 men of the same group. The authors estimate that poverty rates are similar across genders globally. However, these are calculated using equal resource sharing among household members, which is a substantial limitation given intrahousehold inequalities.

gender into fiscal policy design, implementation and analysis (so-called gender budgeting) some decades ago, and these efforts have been encouraged by many international organisations (UN, International Monetary Fund (IMF), World Bank, OECD, G7, EU, among others).⁷ In addition, there has been increasing interest in understanding whether it is desirable and practical to design specific aspects of tax and spending policies to rectify biases against women (Alonso-Albarran et al., 2021; ATAF, 2022; Lahey, 2018). However, partly due to theoretical and empirical challenges as well as political ones, there is limited evidence and discussion on the gendered impact of fiscal policies.

1.2 Objectives

This report reviews the (limited) evidence on the impact of tax and spending policies on gender income gaps across countries, as well as on work incentives and gaps in labour market outcomes for women. The focus is on the role of tax (and social security contributions) and transfers in cash and in-kind (in the form of education and health services). Additionally, given their relevance for women after having children, we survey the evidence on the impact of childcare subsidies (both to demand and supply) and paid parental leave. The report concentrates on the impact of fiscal policy on income gaps between genders through redistributing via the tax and benefit system across and within households, and by changing the economic returns to female (formal) employment through tax, transfers and other policies that lower women's unpaid work burden and hence the opportunity cost of doing paid work.

The report assesses whether and to what extent fiscal policy can be used as a tool to reduce gender income gaps and how these may vary across country contexts. Combining analysis of the limited evidence on the impact of tax and transfers on gender income gaps and using economic principles, emerging policy lessons are drawn. The positive relationship between income inequality and gender income inequality has important implications for policy. Some of the features of fiscal systems that reduce income inequality, such as targeted cash transfers, may also reduce gender income gaps, and vice versa. As such, this report builds on Granger et al. (2022), who look at fiscal policy and its impact on vertical income inequality, and should be seen as a companion piece.

Substantial data challenges and evidence gaps are highlighted. Revisiting the literature, it is clear that major evidence gaps persist. One of the most significant data challenges is that we do not know who consumes after-tax incomes. Data gaps are more substantive in lower-income contexts where traditional income and consumption surveys are not systematically available, and their frequency is lower. Hence, efforts to improve data collection and analysis of the impact of tax and social spending policies on gender income and employment should be prioritised.

Although the focus is on the role of fiscal policy in gender income inequality, it is important to position this discussion within the wider context of inequality across genders and its drivers, and acknowledge the limitations of fiscal policy. First, there are dimensions beyond income that matter for economic and well-being

⁷ See IMF (2022) for a detailed discussion of IMF strategy towards mainstreaming gender; World Bank (2007) and (2015) for an update on their Gender Action Plan; UN Women (2021) on gender equality today for a sustainable tomorrow; and the Gunnarsson et al. (2017) study on gender equality and taxation in the EU.

inequalities across gender. Second, gender income inequalities are shaped by complex political, social and economic phenomena beyond tax and social spending, including social norms and legal rights.

The analysis is structured as follows:

- Section 2 outlines the analytical framework.
- Section 3 examines the evidence on the impact of fiscal policy on gender income gaps and labour market outcomes.
- Section 4 discusses emerging policy lessons and offers some concluding remarks.

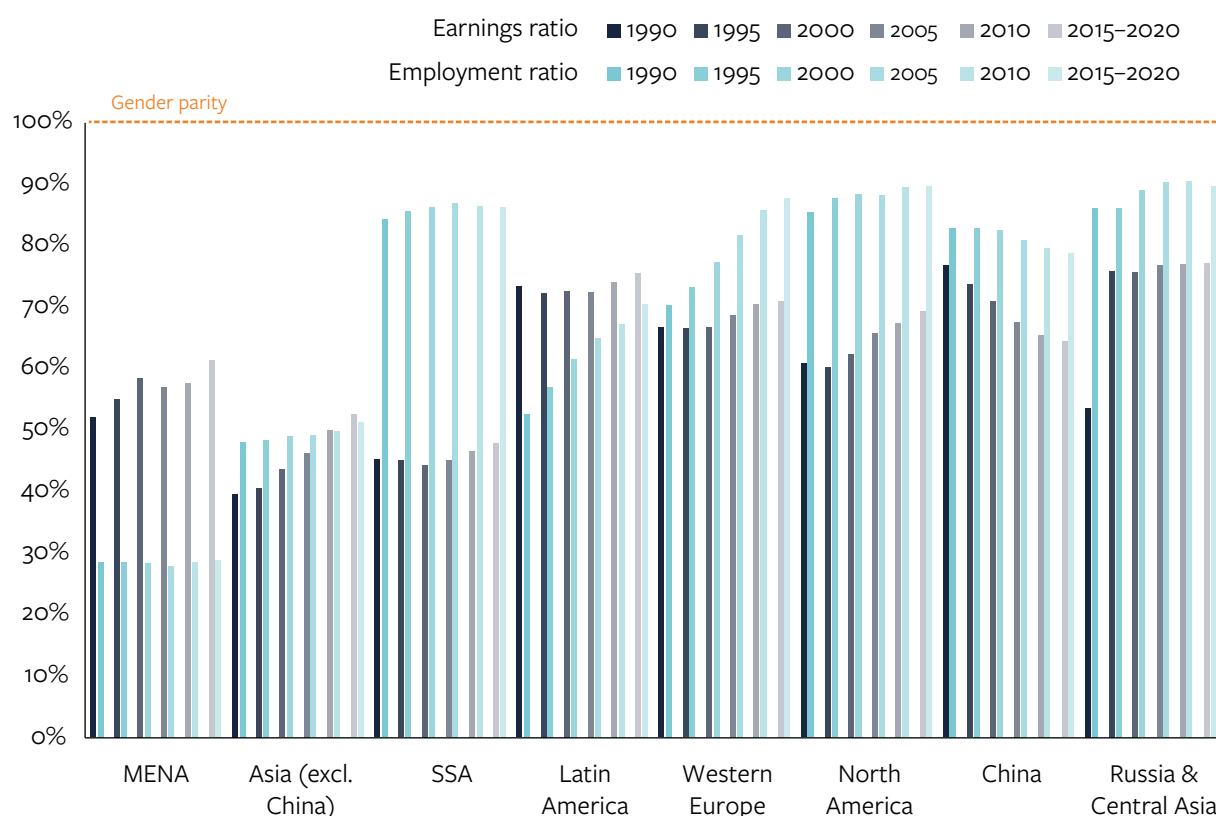
2 Analytical framework

2.1 Gender inequalities in income and employment

This report focuses on within-country gender gaps in income and labour market outcomes. The latter are a primary driver of gendered income inequality through both the extensive margin (fewer women work) and the intensive margin (the hours women work) and the male-female wage difference. It is important to consider gender inequalities in earned income

and employment since they are relevant to understanding how fiscal policy can affect gender income gaps. Figure 2 shows that, in the MENA region, on average women earned 61% of what men earned in 2020, while the ratio of employed women to employed men was only 29% (Chancel et al., 2022). Differences in earnings are driven by differences in hours worked, type of job⁸ and pay per hour, as well as within-job inequalities (Andrew et al., 2021; Goldin, 2014; Lo Bue et al., 2022; Penner et al., 2023).

Figure 2 Regional trends in earnings and employment ratios, 1990–2020



Source: Reproduced from Chancel et al. (2022), Figure 5.4

⁸ This is often referred to as job segregation across occupations or industries. For example, men dominate roles such as drivers and mobile plant operators, plumbers and IT professionals. Women are more likely to be personal care workers, health associate professionals and cleaners and helpers (ILO, 2020).

At a point in time, female labour force participation (FLFP) tends to fall with a country's level of income and then rise again. However, there is variation across countries of similar income levels and higher FLFP does not guarantee closing gender income

gaps (Goldin, 1995; Verick, 2014). The observed pattern is associated with economic structure, social norms affecting labour supply and demand, female access to education, and health and fertility rates. The latest data available from the World Bank shows that the FLFP gap is highest in lower-middle income countries (LMICs), followed by upper-middle income countries (UMICs), and lastly LICs and HICs. However, there are outliers.⁹ In South Asia and in the MENA region, FLFP rates are relatively low. Evans (2022a and 2022b) argues that this is due to patrilineal kinship promoting female seclusion combined with low economic returns to female employment. Klasen (2019) explores the drivers of uneven FLFP across developing countries.

Women in LICs work out of necessity in home-production or subsistence agriculture and as a response to a shock, which may explain why FLFP rates are higher. Obstacles to education and healthcare remain a large barrier to labour market outcomes in these countries. Women are more likely to be in vulnerable employment – own-account workers and contributing family workers, following the International Labour Organization

(ILO) definition – than men (Lo Bue et al., 2022).¹⁰ According to Gardner et al. (2022), conditional on being employed, in Africa women are more likely than men to have an informal job (90% vs 83%); in LICs the figure is 92% vs 88%.¹¹

In LMICs and UMICs, the returns of second earners (usually women) decline as countries industrialise and paid jobs move further away from home, making it more difficult to juggle household chores and responsibilities with a paid job in the market. As the tertiary sector expands, education and health access grows and fertility rates decline. FLFP increases particularly in the service sector.

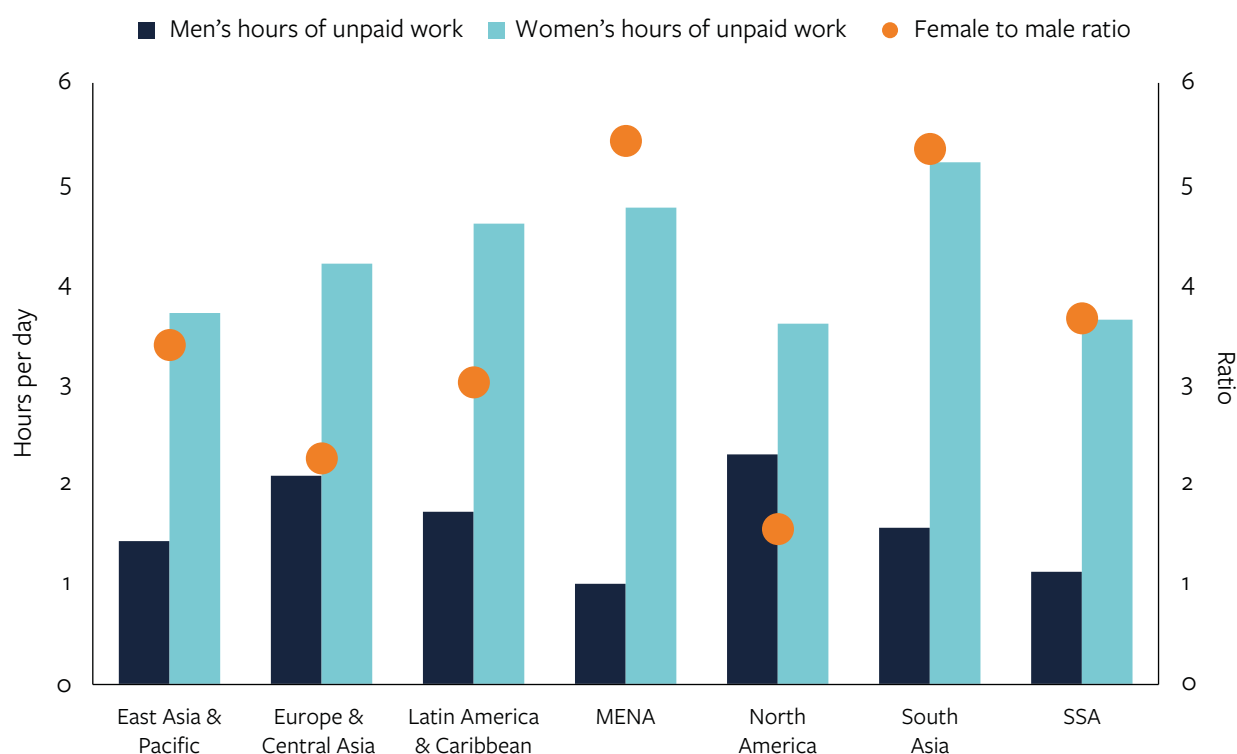
Gendered differences in labour market outcomes and unpaid care work are two sides of the same coin. Figure 3 shows that women bear the greatest burden of unpaid work across regions, with the gap being highest in the MENA region. This is also inversely related to country income levels (ILO, 2018). Long-standing social norms have meant that women do a higher share of unpaid work and hence have less time for education (particularly beyond primary) and paid work in the labour market. This undermines women's employment prospects and career progression, and hence their achieving equal pay (Andrew et al., 2021; Gimenez-Nadal and Molina, 2022; Sullivan, 2019). Furthermore, in HICs, where women have similar or higher levels of education

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- 9 The World Bank Gender Data Portal (<https://genderdata.worldbank.org/topics/employment-and-time-use>) shows that levels of labour force participation for men-to-women by income group in 2022 were estimated to be: 73.7% to 35.4% in LMICs; 72.7% to 56.3% in UMICs; 74.8% to 62% in LICs; and 68% to 54% in HICs.
- 10 According to ILO (2018), 'persons in vulnerable employment (own-account workers and contributing family workers) are more prone to have informal work arrangements and less likely to have social security coverage and to benefit from social dialogue'.
- 11 Section 3 of Gardner et al. (2022) expands on the definition of informal jobs and how it overlaps with the definition of vulnerable jobs. Section 3.1 states that 'The criteria to determine if employers and own-account workers are covered by formal arrangements (registration of their business or recordkeeping for taxation purposes) differ from the criteria used to classify employees as informal versus formal (employer contributions to social security, access to paid annual leave and access to paid leave).'

and access to health services than men and the employment gap has narrowed significantly, on average women still work fewer hours and earn

less per hour and overall, with the gap appearing often after having children (Bertrand et al., 2010; Kleven et al., 2019 and 2021).

Figure 3 Regional gender gaps in unpaid care work



Note: Unpaid work includes care and domestic work. Unweighted averages across countries with available data.

Source: Dataset: Gender, Institutions and Development Database (GID-DB) 2023

Even women in employment shoulder a higher share of unpaid work, a gap exacerbated during Covid-19, particularly for mothers (OECD, 2021a). Taking paid and unpaid work together, overall women on average work more hours than men across regions and country income groups (ILO, 2018: Figure 2). Acknowledgement that unpaid care work, largely carried out by women, contributes to the provision of goods and services and fosters human capital development has led to efforts to measure the contribution of unpaid work to GDP. ILO (2018) estimates that women perform 76.2% of all unpaid care work, over three

times more than men; when valuing unpaid care work at minimum wage per hour, it can represent around 10% of global GDP.

Gender inequalities in other sources of income and in wealth remain high. It is more difficult to measure individual-level capital income and assets partly due to conceptual issues (many assets are jointly owned) and lack of information more generally. Nonetheless, estimates from different sources suggest that gender gaps in capital income, property and land ownership and more general measures of

wealth may be even higher than gaps in earned income (Coehlo et al., 2022). Women are under-represented in the top part of the capital income distribution (ibid.). In LICs and LMICs, women represent a smaller share of landowners than men (FAO, 2018) and are less likely to own a home (IFC, 2019).¹² In terms of wealth, in the US, among singles (households with a single adult, unmarried, divorced or widowed) women's average wealth holdings were 82% of men's in 2019 (Chang et al., 2021); in Europe, there is a large gender gap at the top of the distribution (Schneebaum et al., 2018); and globally, women are a small minority among the richest individuals (Credit Suisse, 2019).¹³ Atkinson et al. (2018) look at the gender divide at the top of the total income distribution. Using tax record data for eight countries with individual taxation, they find that women are significantly under-represented, accounting for less than a third of taxpayers in the top 10% of the income distribution.

Gender income inequality is associated with income inequality, i.e. how income is distributed across households or individuals classified by income levels, in various ways.

Measures that capture income inequality between households often assume that all members get an equal (or equalised) share of resources, according to need. However, this assumption has been increasingly challenged by a body of empirical literature (Chiappori and Meguir, 2014). To the extent that resources are not equally shared across genders within a household, the traditional measures of income inequality will tend to be downward biased (Bargain, 2022). Gender gaps in employment outcomes are likely to lead to

gender income gaps and higher income inequality. Cross-country evidence shows that both are positively associated (Kochhar et al., 2016).

In addition to inequalities in income (and consumption) and labour outcomes, other dimensions also matter for economic and well-being inequalities across gender.

These include capabilities, livelihoods and individual agency (Bastagli et al., 2016). However, these are not the focus of this review.

2.2 How does fiscal policy affect gender income equality?

Few countries' laws governing tax and social spending systems differentiate directly based on gender. However, even systems that do not discriminate explicitly can affect women's income relative to men due to existing differences in work, earning, income and consumption. Gendered differences in work patterns at the extensive and intensive margins, in the type of occupation and sector, in earned income and in the informality of labour result in total pre-fiscal (taxable) income gaps across genders, with implications for direct tax liabilities. Gendered differences in the level and composition of consumption goods and services affect how the burden of indirect taxes and subsidies is distributed between men and women. Moreover, gender differences in social security contributions and work histories, as well as in access to education and health services, have implications for who benefits from contributory and non-contributory cash and in-kind transfers and spending. This means that tax and transfers

¹² The World Bank Gender Data Portal (<https://genderdata.worldbank.org/topics/assets>) shows that men are more likely to own land and property in several non-HICs, based on Demographic and Health Surveys.

¹³ Coehlo et al. (2022) discuss various studies exploring the mechanisms mediating inequalities in asset holdings.

will impact gender income gaps in an implicit way, even if there is no explicit discrimination in law against women.¹⁴

Many countries have eliminated explicit bias against women in their laws and regulations governing tax policies, although exceptions remain, particularly in LICs and regions such as MENA and Asia regarding direct income taxation. Explicit bias is more common in direct taxes, rather than sales-based taxes (indirect taxes) since the former are individual-based. Countries including France, Ireland, Malaysia, the Netherlands and South Africa removed gender bias from personal income tax (PIT) in the 1980s and 1990s (Stotsky, 1997). Among the 16 countries surveyed by ATAF (2022), only Morocco still allows explicit discrimination against women by defining them as dependent of men, who are considered the head of the household and by default benefit from tax exemptions and allowances encompassed in PITs. For households that are female-led, the woman must provide evidence that her husband is her dependent in order to benefit from the same allowances.¹⁵

Some countries have introduced features in the design and implementation of their tax and social spending systems to actively benefit women. For example, conditional cash transfer programmes are often targeted to women, often the main carer of children – with the aim of alleviating poverty among women and children

and improving outcomes for children (discussed in more detail in Section 3.2.2). Many countries have reduced VAT rates to below the standard rate or even to zero for sanitary products exclusively consumed by women (see Section 3.2.3).

The size, composition and quality of tax revenues and spending matter for gender income equality. Social preferences over the role of the state, its size in terms of revenue and spending, and how this revenue is raised and spent can affect who pays taxes and who benefits from transfers and other social spending. Governments with low tax-to-GDP revenues raised mainly through general sales taxes, often the case in LICs, are frequently associated with less progressive tax systems and lower spending on public services and transfers (Granger et al., 2022). This affects gender income gaps in many ways. To the extent that women are over-represented among the poor, a smaller PIT base and lower spending in means-tested cash transfers will likely affect women more than men. Access to quality public health and education services remains more restricted for women than men in many LICs (Wodon et al., 2020). The provision of other quality public services, such as water and sanitation and care services for the elderly and children, has also been identified as critical for gender equality (IMF, 2022; Kochhar et al., 2016; Wodon et al., 2020), since, as previously discussed, women shoulder a higher burden of unpaid care and household work.

14 In her seminal work on gender bias in tax systems, Stotsky (1996, 1997) coined the term implicit gender bias in tax systems in the context of gender income gaps. This bias arises due to differences in consumption, income and employment outcomes, rather than through explicit gender differentiation in the law governing tax and spending – what Stotsky referred to as explicit gender bias in tax systems.

15 The countries surveyed are Angola, Cameroon, Côte d'Ivoire, Egypt, Ghana, Kenya, Morocco, Mozambique, Nigeria, Uganda, Sierra Leone, Seychelles, South Africa, Tanzania, and Zambia. See ATAF (2022) for a more detailed discussion of this case and other historical cases worldwide that have now been eliminated. Gunnarsson et al. (2017) discuss this issue in relation to European countries, concluding that explicit biases against women in tax policy have been eliminated.

Tax and transfers can also affect gender income gaps in the future through affecting employment outcomes and access to education and health today.

Direct taxes (their progressivity, the unit of taxation and the definition of the tax base, including child allowances or credits) and transfers tend to affect family and labour supply decisions in an interrelated fashion, determining whether disposable income is sufficient to cover the fixed costs of entering employment (extensive margin), and conditional on employment and how many hours to work (intensive margin) of the second earner, usually women. To the extent that spending on education and health benefits women, investment in their human capital will likely affect job opportunities in the future.

Most countries have individual-based PIT with some elements that are family-based, such as tax reliefs or cash transfers designed in complex ways to trade-off equality and work incentives objectives (Christl et al., 2021; Coehlo et al., 2022; Deloitte, 2017; Thomas and O'Reilly, 2016). Individual-based refers to systems where each individual files their own tax return on their earned and unearned income regardless of their marital or cohabiting status; family-based refers to joint filing in couples. In family-based taxation (or joint filing systems) the same tax rates apply to singles and households with multiple adults, but the way thresholds are set to account for the fact that income covers two or more people varies across countries and can affect incentives to work by changing the net returns to employment. This is because the second earner pays tax rates at the higher brackets of the income tax schedule.¹⁶

Deductions from taxable income or tax credits or cash transfers based on household composition and income are common. In SSA, 16 out of 54 countries allow deductions for children, and sometimes dependants more generally, including the elderly or spouses (McNabb and Granger, 2022), and this can affect work incentives of adult household members. When the system is combined with means-tested tax credits based on family income, effective marginal tax rates on second earners' income can become very high (Brewer et al., 2010). The choice over how to design a progressive system of tax and benefits for couples or families that minimises distortions, from a normative point of view, will depend on a range of assumptions and parameters, including household decisions over work (paid and unpaid) of the primary and secondary earner, intrahousehold income sharing rules and social prioritisation of family welfare relative to individual welfare (Bargain, 2008; Kleven et al., 2009).

Family-friendly fiscal policies, such as subsidies to childcare services and statutory paid parental leave, may also affect gender gaps in income and labour market outcomes.

The arrival of children affects women's economic welfare and time use more than men's, and childcare support and paid parental leave can help women combine paid work and motherhood better. Subsidies to childcare services can take many forms, from direct public provision of services to subsidies provided to households (demand-side) or providers (supply-side). Parental leave fiscal policies include the cost to the government of a cash transfer programme for parents (more often mothers) of new-born or adopted children for a certain period so they can

¹⁶ Coehlo et al. (2022) review these key features and the mechanisms through which they affect work incentives.

take time off work and look after their family.¹⁷ These subsidies can redistribute income, but can also affect employment outcomes for women more so than for men. To some degree, they are thought to encourage the redistribution of unpaid care work from mothers to the state and men (UNICEF, 2019). They are likely to influence women's employment more than men's not only because they are sometimes targeted specially to mothers – like subsidies to paid maternity leave – but also because female labour supply is more responsive to changes to taxes and benefits (Fabrizio et al., 2020; IMF, 2012).

Considering the net effects of taxes and social spending jointly on gender income gaps is key, since individual instruments may serve a multitude of objectives, one of which may (or may not) be redistribution, including across genders. The primary function of tax systems is typically to mobilise revenue to finance public spending. How revenue is raised matters, however, not just for horizontal and vertical income distribution, but also for other policy objectives, including ensuring a conducive environment for business and investment through stable and transparent policy and fair and efficient administration of taxes. Through adjustments to relative prices, taxes can also provide incentives or disincentives for consumption or production that have wider costs or benefits to society (usually addressed through excise taxes). Broad-based consumption taxes are thought to be less progressive but better able to raise public funds efficiently, which can be used to finance social spending that benefits women, including

progressive programmes. Social protection systems may also have multiple objectives, including smoothing consumption over a lifetime and reducing poverty. Choices over how to balance social insurance and poverty alleviation will vary across countries, with some having a smaller focus on poverty alleviation, and this will mediate the gendered impact of systems. The fact that women live longer than men on average can perhaps provide some legitimate grounds for differentiation in social security contributions and income from pensions and annuities in a more actuarial-based system, including providing different annual benefits for similar contribution histories (Stotsky, 1997).

Several tax and spending instruments are covered in the analysis. On the tax side, the focus of this report is on the following: i) direct taxes (the evidence covers mainly PIT on earned income and some studies on property and land taxes, but some discussion on corporate income tax (CIT) and other wealth taxes is provided); and ii) indirect taxes. Simplified tax schemes for small businesses and other non-tax public fees are also included in the discussion since this issue has been at the centre of debates in LICs. On the spending side, the following categories are covered: i) cash (or direct) transfers, both contributory and non-contributory; ii) indirect subsidies; iii) subsidies to childcare and parental leave; and iv) in-kind transfers on education and health (often the two largest and easiest to allocate in-kind transfers). Investment in infrastructure, including roads,

17 Many countries have laws that entitle women to maternity leave, but this is not always paid leave, and if it is, it is not necessarily paid by the government. For example, OECD countries except for the US have paid statutory maternity leave, which includes income support for employed mothers around the time of childbirth (or in some countries, adoption) to cover some of their wage whilst looking after their new children (OECD Family Database, last updated in December 2022; see www.oecd.org/els/family/database.htm).

water and sanitation, despite its importance for women's outcomes and gender inequalities, is beyond the scope of this report.

Tax administration practices, including differences between male and female tax officials, may have gendered impacts on effective tax burdens. In the context of tax, this area is capturing more attention from policy-makers and researchers (ATAF, 2022; Joshi et al., 2020). An emerging body of descriptive evidence suggests that there are likely gendered impacts of tax enforcement because of gendered differences in tax officials' behaviour and because different types of activities are subject to varying degrees of monitoring and harassment by tax officials. This is not covered in this report, but it is a fruitful area for further research on the gendered impact of fiscal policies. The issue of how benefit administration may have gendered impacts on the incidence of benefits could also be explored further.

Finally, it is important to note that the sources of gender income inequality are complex and are affected not only by tax and social spending, but also by social norms and other legal rights, and are in turn shaped by other policies. Of course, gender income inequalities and labour market outcomes are affected by other factors, including social norms and legal rights, beyond tax and social spending, which vary significantly across contexts (Hyland et al., 2020). This is important to consider when contemplating the potential role of tax and spending in addressing gender income and employment gaps. There might be alternative policy tools

that may be better suited for addressing economic inequalities or policies that may be complementary to fiscal ones.

2.3 Outcomes, measurement and the evidence base

Examining gender inequalities in income or consumption expenditure requires quantifying these outcomes at the individual level, but this is challenging due to problems of measurement and conceptual issues. Most income and consumption data sets measure unearned income sources and expenditure at the household level; often only work-related income, such as wages or pensions, is reported at the individual level. There are many reasons why this is the case. Many assets are jointly owned by adult members (particularly relevant for couples). It is very difficult to attribute specific expenditures related to public goods, such as housing-related consumption, to each adult member or children, except for some attributable spending like school fees or sanitary products for women (Bargain, 2022). Furthermore, unobserved, complex and dynamic bargaining processes within the household, driven by a range of factors including differences in information, preferences and outside options, vary across genders, often resulting in uneven resource allocation (Bargain, 2022; Chiappori and Mazzocco, 2017). This potential inequality within households matters for redistribution across genders and across income strata and individual poverty.

The literature has traditionally assumed equal intrahousehold resource allocation, or sometimes the other extreme of no income pooling. The traditional approach, used in most fiscal policy incidence and simulation studies, is to assume that all household members pool all their incomes and economic resources and share

them equally.¹⁸ Some authors have used this and compared the incidence of tax and transfers on households with different gender characteristics: female- or male-headed, or proportion of female members (Astudillo et al., 2022; Greenspun, 2019; Grown and Vadiola, 2010). However, this approach, based on the so-called unitary model of household decision-making, has long been considered unrealistic and problematic (Alderman et al., 1995). It can lead to biases in assessing inequality and poverty at individual level, including between women and men, often underestimating female and child poverty and gender gaps in income and consumption (Avram and Popova, 2022; Bargain, 2022; Findlay and Wright, 1996; Karagiannaki and Burchardt, 2020). Other studies assume minimum or no income pooling and compare only individually perceived earnings and benefits, before and after direct tax and cash transfers, between men and women (Avram and Popova, 2021).

There have been efforts to estimate more realistic and context-specific intrahousehold allocation rules to estimate individual-level income and resources. Bargain (2022) has developed a practical method to estimate bargaining power, allocation rules and resulting individual-level incomes and expenditures. This finds that the source and recipient of income matters for intrahousehold bargaining power

and resource allocation.¹⁹ We refer to the type of methodology used when discussing the evidence in the next section.

Once incomes and expenditures are quantified using a given methodology, there are many ways in which income inequality between genders, and how fiscal instruments affect it, can be computed, and this report considers a range of measures.²⁰ Many of the studies reviewed in this report look at ratios of average female-to-male market incomes (that is, before tax and benefits) and compare this with incomes after tax and transfers (e.g. disposable incomes when personal income taxes, social security contributions and cash transfers are considered).²¹ A larger gender gap is associated with a lower income ratio and vice-versa; if the gap in disposable income is smaller than the gap in market income, then the tax-benefit system has an equalising effect between genders (Avram and Popova, 2021; Doorley and Keane, 2020). Other studies look at within-household inequality, in particular the share of women's income in total household income. Some studies look solely at the incidence of in-kind transfers in education and health by gender.

Labour market outcomes include work incentives measured by tax rates and other employment outcomes. Tax rates include

18 In practice, many studies use equivalised income, that is equalisation scales that consider household size and composition and varying needs when comparing income across households. A household of two adults in a couple will have different needs to a household with one adult and one child, in terms of housing and other consumption items.

19 Bargain (2022) finds that, in South Africa and Argentina, the net income (from earnings and benefits) received by the wife commands a higher share of the resources allocated to her and her children. This paper is part of the Commitment to Equity institute's effort to develop systematic and practical approaches to calculate the incidence of tax and transfers across the income distribution and between genders applicable across countries at different levels of development.

20 See Avram and Popova (2022) and Figari et al. (2011) for a more detailed discussion of the different ways to look at income inequality between genders.

21 See Appendix 1 in Granger et al. (2022) for a detailed explanation of how different income measures are calculated.

average tax rates (ATRs), effective marginal tax rates (EMTRs) and participation tax rates (PTRs) at the individual level. PTR is a synthetic measure that quantifies the combined impact of the taxation of (formal) earned income and the loss of out-of-work benefits on the monetary returns in entering (formal) employment from different out-of-employment states, including inactivity and short-term and long-term unemployment. Employment outcomes consider being employed in formal or informal work, hours worked and pay and differences between women and men.

The report provides a review of the available (and limited) evidence on the combined impact of taxes and social spending on income and poverty gender gaps, as well as studies of the impact of individual fiscal instruments on income (or living standards) and labour market outcomes in countries with different income levels. Gendered fiscal incidence studies have become more common in the last decade, particularly from HICs, but evidence is still scarce, partly due to data and measurement challenges. In contrast with the evidence on the vertical distributional impact of tax and social spending reviewed in Granger et al. (2022), which includes studies examining the combined impact of a comprehensive set of fiscal instruments, when considering gendered impacts, most existing gendered incidence studies have looked at sub-groups of taxes or transfers – the few exceptions include Greenspun (2019) and Ambel et al. (2022).

Most of the evidence examined in this report is based on fiscal incidence or microsimulation country-level studies looking at the impact of tax and spending policies on living standards (income or consumption levels) at a point in time and work incentives and outcomes, by gender or type of earner. These studies combine a range of methodologies including

microeconomic simulation using several economic assumptions with microlevel data, usually household surveys covering income and expenditure, augmented with administrative data. These are static models, at a point in time, based on household income and expenditure survey data, administrative and national account information, fiscal policy details, incidence assumptions and allocation rules. They do not consider the lifetime of individuals, and hence do not consider intertemporal effects; they do not consider general equilibrium effects and how individuals may change their behaviour in response to policy changes. The direct impact on living standards is referred to as first order impact in the context of microsimulation and fiscal incidence analysis. The impact on work incentives is considered indirect or a second order outcome. Lustig (2018) and Granger et al. (2022) provide useful explanations of this methodology.

Given the paucity of evidence, when relevant, economic principles combined with evidence of the impact of fiscal policies on vertical income inequality are used to shed light on the potential impact on women and gender gaps.

For example, we draw on Granger et al.'s (2022) review of the evidence on fiscal policy and income inequality. We also include studies that look at the impact of tax and spending on work patterns and income using other methodologies, such as regression analysis and structural models.

2.4 Policy challenges and opportunities

Since the 1980s there have been increasing efforts by several countries at different stages of development to apply a gender lens throughout fiscal policy-making, including the budget process and implementation, evaluation and monitoring. The term gender budgeting

was first introduced in Australia in the 1980s, and is a loose expression to refer to governments' efforts to integrate gender considerations in tax and spending policy-making, including how to practically use fiscal policy to close gender gaps (Stotsky, 1996; Welham et al., 2018). In the United Kingdom (UK), efforts have been pioneered by the Women's Budget Group, including their work for the Commission on a Gender-Equal Economy.²² As noted in Section 1.1, several multilateral organisations have emphasised the importance of using gender-sensitive tools in their budget cycles to reverse or mitigate gender inequalities.

The scope and nature of what countries do in terms of gender budgeting vary from context to context. In most cases, enacting gender-responsive fiscal frameworks and individual policies is not systematically mirrored by aligned public finance management (PFM) systems. Kolovich and Martinez-Leyva (2019) report that more than 80 countries have adopted gender budgeting practices with varying levels of complexity and design. A recent OECD survey on approaches to tax policy and gender equality in 43 countries found that gender equality is an important consideration for most, and about half have introduced reforms to their PIT with the aim of improving gender equality (OECD, 2022). However, Alonso-Albarran et al. (2021), from the IMF, find that, while gender budgeting processes have become more widespread, and spending and taxation have been structured in G20 countries in ways that advance gender equality, 'the budgetary tools to operationalise, evaluate, monitor and audit these policies remain more limited'.

Although countries have sought to link objectives and indicators to gender in a range of budgetary activities, few conduct ex-ante assessments of proposed policies on gender equality, still less ensure that gender impact assessments of existing policies are carried out and used strategically to improve policy design and implementation. Government financial reports seldom include gender-disaggregated figures.²³

Global surveys find that political support for gender equality, legal requirements that sustain effort over time, the involvement of ministries of finance, the participation of other key government and civil society players as catalysts and alignment with national gender equality goals all matter (Alonso-Albarran et al., 2021; Kolovich, 2018; OECD, 2022). Embedding gender budgeting in law ensures continuity when political actors change. Austria, Bolivia and Rwanda mandate using a gender lens in the budget cycle in their constitutions, and other countries include provisions for gender budgeting in finance laws. The role of the ministry of finance is central, and can guide other ministries such as education and health or social protection to adopt gender-related goals and align budget allocations to these goals. In this regard, Uganda is often held up as an example of the effective application of gender-responsive approaches to the budget process (Stotsky, 2016; Welham et al., 2018). However, as argued in Welham et al. (2018), ministries of finance in low-capability contexts operate within weak PFM frameworks and have low levels of resources to coordinate across other departments.

22 See Women's Budget Group (2020).

23 Stotsky (2020) reviews the rationale for using fiscal policy and PFM to promote gender equality and different international perspectives from several developing countries, highlighting the key role that government leadership plays in setting a legal framework and implementing policies and programmes to foster gender equality.

Even when political support is strong, key gaps in gender-differentiated data and expertise in gender analysis remain, limiting governments' ability to track progress and inform joined-up policies.

OECD (2022) found that most of 43 countries studied have access to sex-disaggregated data on earned incomes and labour market outcomes, but few have information on detailed consumption expenditures, land, property and other assets. Many LICs lack the gender-differentiated data to conduct timely gendered analysis of the impact of actual and potential fiscal policies (IMF, 2022). Administrative data is still not available in many countries, and few countries that collect administrative data and share it with researchers record the sex of the taxpayer. Alonso-Albarran et al. (2021) highlight that, even when gender-disaggregated data is available, analytical expertise is low, efforts are disjointed between government departments and there is little systematic guidance to facilitate gendered analysis.

Many experts and advocates are working with countries to improve data infrastructure and analytical capacity to evaluate ex-ante and ex-post fiscal policies through a gender lens.

The World Bank and the UN publish gender aggregate statistics on a range of indicators relevant for gender equality and women's empowerment.²⁴ The IMF is launching an internal 'Gender Data Hub' giving Fund staff access to standardised and comparable cross-country gender-related indicators (IMF, 2022), as well as supporting national efforts and collaborating with international partners including the World Bank. The African Tax Administration Forum (ATAF) is helping to strengthen the efforts of

African revenue administrations to collect gender-disaggregated tax record data to inform gender-sensitive tax policies (ATAF, 2022).

24 The UN Minimum Set of Gender Indicators can be accessed at <https://gender-data-hub-2-undesa.hub.arcgis.com>. The World Bank's Gender Data Portal can be accessed at <https://genderdata.worldbank.org>.

3 The impact of fiscal policy on gender income inequality

3.1 Combined tax and spending

Emerging evidence from HICs shows that, across most countries studied, direct taxes and cash transfers combined reduce the gender gap in pre-fiscal income, although it does not eliminate it. Most studies examine European countries and consider either samples of heterosexual two-earner couples (Figari et al., 2011) or the whole population (Avram and Popova, 2022; Aziz et al., 2016; Doorley and Keane, 2020; Doorley et al., 2022). They all show that direct taxes and cash transfers combined (including social security benefits) reduce gender income gaps.

The magnitude of the gender pre-fiscal income gap and the effect of direct tax and cash transfers in reducing it varies by type of instrument and instrument design and context.

Doorley and Keane (2020) find that, of six European countries examined at a point in time,²⁵ the gap between men's and women's income goes down the most in the Netherlands (14 percentage points (pp)) and the least in Romania and Greece (5pp). In terms of relative contribution, cash transfers play a similar role to taxes in Denmark, Ireland and the UK, a more important role in

Romania and Greece (where FLFP is low), and a less prominent role in the Netherlands (where FLFP is high, and the direct tax system is highly progressive). Avram and Popova (2022) examine eight European countries²⁶ and show that tax and cash transfers combined reduce gaps in income by around 20pp in the UK, Romania and the Czech Republic (countries with the highest initial gap in earnings and transfers strongly targeted to women), 10pp in Germany, Belgium and France, and by less than 5pp in Finland and Spain. They conclude that, generally, cash transfers reduce gender income gaps to a greater extent than taxes except for old-age pensions, which have a contributory component based on labour market histories. Figari et al. (2011) argue that the tax-benefit system is more equalising in countries with more gender equal norms in terms of division of labour in the household.

The magnitude of the equalising effect of tax and cash transfers varies across household and individual characteristics, such as having children or being elderly. Avram and Popova (2022) estimate that the equalising effect is higher for couples with children. However, despite the larger impact of the tax and transfer system, earning gaps for couples with children are higher

²⁵ The countries studied are Denmark, Greece, Ireland, Netherlands, Romania and the UK, using micro-level data from 2017 and EUROMOD or similar country-specific microsimulation models. These countries have largely individualised systems of direct income taxation and hence direct taxes, and cash transfers, can be split between spouses in a more straightforward manner to estimate an individual's market income, tax liability and benefit entitlements.

²⁶ Belgium, the Czech Republic, Germany, Finland, France, Romania, Spain and the UK. The authors use micro-level data from 2014 and EUROMOD models. Their country choice aims to provide variety in terms of welfare states, including defamilisation policies (see Avram and Popova, 2022: Section 2.3.2) and tax transfer systems, and resulting work and income differences between genders (see *ibid*: 8). They include direct taxes and social security contributions, means-tested, family and other categorical cash transfers, including parental leave.

to begin with, and hence they end up with higher gaps in disposable incomes. Avram and Popova (2022) also show that old-age pensions are not equalising, particularly in countries where there is a strong link between work-related contributions and pension income.

The observed reduction in gender income gaps arises mainly because most of the studied countries have progressive systems and women are more likely to be poor than men. That is, taxes and transfers reduce pre-fiscal income gaps, mostly due to existing gender differences in paid (working patterns and wage differentials) and unpaid work, particularly after having children, rather than from explicit discrimination against women in the laws governing these systems and their implementation. For example, according to Doorley and Keane (2020) most of the gap in pre-fiscal income is due to work gaps in countries such as Ireland and the UK. Avram and Popova (2022) also highlight the important role that gaps in earnings play in determining income gaps between genders, and Aziz et al. (2016) and Andrew et al. (2021) emphasise that inequalities in earnings increase significantly with parenthood.

A small number of studies look at the combined impact on gender income gaps of direct taxes, indirect taxes and subsidies, and cash and in-kind transfers in the form of free education and health services. They

show that these instruments combined also result in a reduction in the income gap.

Ambel et al. (2022), looking at Ethiopia, consider the income distribution of women and men separately before and after fiscal intervention. They show that the Ethiopian system has an equalising impact on income distribution for both genders. Their estimates suggest that most of the overall inequality in (pre- and post-fiscal) income distribution is accounted for by within-gender inequality rather than inequality between genders. They also find that the overall system reduces the gap in absolute poverty rates between genders. Furthermore, taxes and transfers can affect each gender differently. Cash and in-kind transfers promote gender equality better than indirect subsidies. Aziz et al. (2016) consider the same policy instruments, except indirect subsidies, and use other intra-household allocation rules in the context of New Zealand. They find that the fiscal system reduces income disparities between genders.²⁷

The combined impact of direct tax and cash transfers on gender income gaps during the Covid-19 pandemic is likely to be mediated by complex interactions between pre-existing patterns and changes in labour market outcomes of both men and women and design details of the tax-transfer system and discretionary measures. Emerging evidence from European cross-country studies shows this is the case across the income distribution. Given

27 Greenspun (2019) examined five LMICs (Brazil, Colombia, the Dominican Republic, Mexico and Uruguay) using Commitment to Equity harmonised data. Greenspun considers household-level income by type of household according to the gender of the main breadwinner or the head. She finds that fiscal policy reduces income inequality and poverty within all household groups, and the most for female-headed households which are nonetheless the most disadvantaged. This group in turn benefits more from government subsidies and transfers than male-headed households, in most countries. Greenspun highlights the need for further research to establish a method to collect individual-level consumption and household allocation rules in household surveys, as well as to allocate household-level income and consumption expenditure across members of a household to look at individual-level fiscal incidence (as in Ambel et al., 2022 and Bargain, 2022).

that women are likely to be over-represented in the lower part of the income distribution, gender income gaps will likely be mediated by similar factors (Canto et al., 2021). The role of fiscal policies in LICs is much smaller and, despite substantial efforts to provide protection against the Covid-19 shock, the impact was limited across the income distribution (Granger et al., 2022). However, while there is emerging evidence of the larger negative impact of Covid-19 on women's earnings relative to men's (e.g. Dang and Nguyen, 2021), there is no systematic cross-country evidence on the impact of fiscal policy on the gender income gap in the context of Covid-19. One recent study, from Ireland, shows that Covid-19 affected men's employment negatively while women were more protected due to pre-existing occupational and industry segregation – they were more likely to be essential workers than to hold locked-down jobs, and hence were more protected from shocks than men (Doorley et al., 2022).

Evidence on (formal) work disincentives created by direct tax and cash transfers suggests that these are larger for women than for men, particularly women with a male partner and children. Thomas and O'Reilly (2016) find that the fiscal penalty faced by second earners (usually women) when moving into formal employment from short-term unemployment or from inactivity in 31 OECD countries is high, and higher in countries with family-based (elements of) taxation and benefits, and higher still for second earners with lower incomes. This is likely disincentivising women's part-time work. Borella et al. (2023) argue that in the US, where both

taxes and old-age pensions depend on marital status, removing these marriage-related features could increase the labour supply of married women significantly over their lifetime. Kitao and Mikoshiba (2022) provide similar evidence for Japan. Jara et al. (2022) show that formalisation tax rates are higher for women than for men in the five Latin American countries under study, mainly due to women's over-representation in the lower part of the income and skill distributions, and their greater likelihood of being self-employed.²⁸ These studies ignore other fiscal policies that can affect women's work incentives, such as childcare subsidies or parental leave.

3.2 Individual instruments

3.2.1 Direct taxes

Evidence from cross-country studies shows that gender income gaps are smaller in countries with personal and earned income taxes that are more progressive and broadly individual-based, rather than family-based. In a range of HICs with more progressive PIT systems, men were found to pay higher taxes than women mainly because they earn more, not through a specific pro-women provision in law. Less progressive (earned) income tax implies that men pay similar tax rates to women, and hence is less equalising or sometimes unequalising (Avram and Popova, 2021; Doorley and Keane, 2020). Coehlo et al. (2022) present new evidence on the effect of PIT and social security contributions for a number of HICs and UMICs. PIT reduces the gap between women's and men's income in most countries

28 Their measure of formalisation tax rate (FTR) captures the percentage of earnings in informality that would be lost due to increased social insurance contributions and income tax payments or benefit withdrawal upon entry to formal employment.

except the US, and its effect is smallest in UMICs.²⁹ Social security contributions widen the gap in most countries, though the impact is small. Some country-specific studies show similar results. Evidence from Argentina on the incidence of (progressive and individual-based) direct taxes on households separately by the gender of the head is consistent with this, with male-headed households paying more taxes than female-headed ones (Rossignolo, 2018). There is a paucity of cross-country studies showing evidence for LICs.

PIT that are more progressive and based on individual taxation often achieve higher levels of gender equality not only because of their redistributive effect, but also because second earners (usually women) are likely to have better incentives to engage in (formal) work, and work longer hours.³⁰ Drawing on evidence for nine European countries, Figari et al. (2011) show that lower earners within a couple often face higher marginal tax rates in countries with joint taxation systems, such as France and Germany. This reduces the hours second earners work, resulting in lower market income. Evidence shows that married women's labour supply, particularly married or lone parents, is highly responsive to net-returns; compounded with higher marginal tax rates faced by second earners (usually women) from joint taxation systems, this translates into lower employment rates and fewer hours worked

(Evers et al., 2008; Blundell et al., 2016; Bick and Fuchs-Schündeln, 2017). Coehlo et al. (2022) show that there is a positive cross-country correlation between the progressivity of the PIT and the probability of working (extensive margin) and hours worked (intensive margin) of women in lower parts of the income distribution. They also argue that household taxation decreases incentives to work for second earners while encouraging primary earners to work more hours.³¹ These authors and Thomas and O'Reilly (2016) provide a discussion of how tax features may disincentivise to a higher or lower extent female (formal) labour supply, and that these effects can vary across states, e.g. transitioning from short-term unemployment or from inactivity to employment.

In LICs, the absence or lower levels of income thresholds, sometimes below poverty lines, above which individuals are liable for PIT are likely to disadvantage women more since they are over-represented among the poor. ATAF (2022), surveying 16 African countries, argues that this is a key source of implicit bias against women in tax systems. Policy-makers, researchers and other stakeholders in Africa and elsewhere are embarking on efforts to improve gender-disaggregated data and analysis to better understand the impact on gender income inequality.³²

29 The other countries in their analysis are the UK, Australia, Austria, Italy and Panama, and UMICs Brazil, Colombia and South Africa. See Coehlo et al. (2022: Figure 2).

30 There is an extensive literature looking at the impact of PIT and social security contributions on incentives to work for women and on female labour supply of single women, in dual-earner couples and with or without children, using programme evaluation and behavioural models (static, dynamic). These are not systematically synthesised in this paper. Most of the evidence comes from HICs. Borella et al. (2023) provide a review of the literature looking at married couples.

31 Coehlo et al. (2022) also argue that optional individual taxation (in the context of household taxation) does not provide a solution to the negative effects from household taxation since it is not in the interest of the household to file individually if they are to maximise net income.

32 See, for instance, ATAF (2022) and the website of the World Bank Global Tax Program on Gender Equality and Tax Reform (www.worldbank.org/en/programs/the-global-tax-program/gender#1).

Tax reliefs that reduce progressivity of PIT can significantly impact gender income gaps by benefiting higher earners (men) more than lower earners (women).³³ Many of these tax reliefs are employment-related (travel expenses, overtime payments, employer-provided pensions) and benefit those with enough income to be tax-registered. As a result, they benefit men more than women due to differences in formal earnings and income (Grown and Vadiola (2010) show evidence of this in a range of non-HICs). In addition, the value of these reliefs or other deductions (expenses that are deducted from the tax base) is larger for higher earners in upper income brackets in progressive tax systems, who tend to be men. Redonda and Axelson (2021) show evidence of this for pensions relief in South Africa. Gunnarsson et al. (2017) discuss the different reliefs and their gendered impact in European countries.

Tax credits, which reduce tax liabilities rather than the amount of taxable income, in particular refundable tax credits, are more equitable and better targeted to lower-income families since their value does not depend on the marginal rate. Nhamo and Mudimu (2020) show that the progressivity of the PIT in South Africa improved when reliefs for medical expenses

transitioned from deductions to tax credits, and argue that it would be even better targeted to lower-income households with low tax liabilities if refundable. Bastian (2023) shows that the introduction of refundable tax credits in the US in 2021 was equalising.³⁴ Some countries still have provisions that are explicitly targeted to men and against women.³⁵

Tax reliefs can affect working patterns of main and second earners in couples and single parents differently. For example, tax reliefs for overtime may encourage the main earner to work longer days and hence do less unpaid domestic and care work, shifting the burden to the second earner. Tax reliefs for childcare costs may have the reverse effect. In-work tax credits based on household income may encourage lone mothers into work while disincentivising married or cohabitating women (see Blundell et al., 2016 for the UK).³⁶ Bastian and Lochner (2022) show that earned tax credits increased FLFP at the expense of leisure, housework and time spent with children, though not time spent on active learning or enrichment activities. Kitao and Mikoshiba (2022) show that the removal of dependent spouse and pension tax rules in Japan would increase FLFP.

33 These include reductions in the base (i.e. taxable income) through tax-free allowances or deductions such as contributions to specific savings (like pension contributions), expenditures (such as work-related transport or private health or childcare) or dependent family members (e.g. children or spouses), as well as rebates and tax credits (such as working tax credits or child tax credits).

34 Goldin and Micheltore (2022) provide evidence of the incidence of the tax credit before becoming refundable and show it was not well targeted to the poor.

35 According to Lahey (2018), based on World Bank Group (2015: 16–17), these are Benin, Brunei Darussalam, Burkina Faso, Cambodia, Republic of Congo, Fiji, Guinea, Indonesia, Iraq, Laos, Malaysia, Morocco, Niger, the Philippines, Togo and Tunisia.

36 Interestingly, Blundell et al. show that, for the UK, the conditionality of working at least 16 hours a week encourages lone mothers of young children, who often have lower levels of education, to take up part-time jobs only for the duration of the subsidy, having no impact on their wages or their employment in the long term. This is partly explained by the fact that part-time jobs are less effective in accumulating experience according to their estimates, and because the return to experience is low for low-skilled workers (Blundell et al.). Despite this, moving from a joint income to individual income to assess eligibility for tax credits would be welfare-reducing overall.

The global tendency towards less progressive PIT systems, and the prevalence of dual income tax models that tax capital income or capital gains at a lower rate, is likely to have disadvantaged women relative to men because they are more likely to be poor, own less capital and earn less capital income. This is again because women are over-represented in the lower part of the earning, capital income and asset distribution spectrum. Gunnarsson et al. (2017) discuss this issue in detail in the context of the EU. Stewart (2017) presents similar evidence from Australia, suggesting that less progressive systems undermine efforts to achieve gender income equality. Granger et al. (2022) discuss global trends towards less progressive PIT systems and the common unequalising impact of lower tax rates on capital income and capital gains across countries. Coehlo et al. (2022) discuss this in the context of gender inequality.

Similarly, the global trend towards lower rates of CIT and the prevalence of investment incentives is likely to benefit men disproportionately. There is no evidence of the static fiscal incidence of CIT on households or individuals by gender. As discussed in Granger et al. (2022), a few recent studies provide estimates of how incidence may be distributed across different types of workers or capital owners. In any case, lower rates of CIT and investment incentives are likely to benefit men more than women. This is because women are less likely to own companies.

Simplified (presumptive) tax regimes for micro and small businesses and other fees for small traders may negatively affect women to a greater extent, but more evidence is needed to ascertain how it may affect gender income gaps across countries. Many countries, particularly LICs, operate simplified (presumptive tax) regimes for enterprises with turnovers below a certain threshold, instead of CIT or PIT.³⁷ The rationales for their use include fairness and revenue considerations, whilst minimising compliance and administration costs.³⁸ Some countries operate schemes that combine a large number of taxes and contributions and entitle taxpayers to access social protection (such as Monotax in Uruguay and Argentina or Simples in Brazil (Gonzalez, 2022; ILO, 2019)). These benefit vulnerable groups, including women, who have low contributory capacity and hence may be excluded from the tax and transfer system in the absence of this type of simplified scheme. In African countries, presumptive taxes are prevalent though not directly linked to social protection access. In addition, local public services are funded through user fees, which are set out in a less transparent way than regular income taxes (Joshi et al., 2020). Joshi et al. (2020), based on a small emerging body of descriptive evidence, argue that fees for market access can result in a high tax burden for small traders with low or non-positive profit, resulting in regressive and horizontally inequitable taxes and fees to the detriment of small market traders, often women.³⁹

37 Presumptive taxation uses indirect means to ascertain tax liability, where the base of taxation (direct or indirect) is not itself measured but inferred from some more easily measured indicators. These regimes take many forms, including applying a fixed or scaled rate on turnover or levying fixed amounts based on other means to ascertain taxable income and tax liability (like seating capacity of transport vehicles for small transport operators) for micro traders, often self-employed. See Wei and Wen (2019) for a discussion of optimal turnover thresholds and tax rates for small and medium-sized enterprises (SMEs) and a list of some of the countries that operate such a system.

38 Thuronyi (1996) has a helpful discussion of the rationales for using presumptive taxation.

39 Evidence summarised in Joshi et al. (2020) includes Carroll (2011), for women in Ghana; Dube and Casale (2017) for Zimbabwe; Akpan and Sempere (2019) for women traders in Nigeria; and Jalipa and Othim (2020) for Kenya.

Regressive property or land taxes can affect women more than men. The evidence is scarce, however. Komatsu et al. (2022), using administrative data on land ownership by gender and area-based land tax payments, show that female-headed and female adult-only households bear a larger tax burden than male-headed and dual-adult households. In Ethiopia, the fact that these taxes are area-based and do not consider income or ability to pay, combined with small landholdings and subsistence agriculture for own consumption, makes them regressive. More generally, when this type of tax and property taxes are regressive (Granger et al., 2022; Komatsu et al., 2022), this can exacerbate gender income gaps given that women, including property owners, are more likely to be poor. Furthermore, in contexts where owners of large areas of land are poor, it is difficult for such taxes to be progressive more generally. Nonetheless, there are ways to design general property taxes that are more progressive, accounting for property values and considering liquidity constraints (Granger et al., 2022).

Regarding broader asset taxes, men are likely to pay more in these taxes than women. This is due to the fact that men are more likely than women to own an asset, to own a higher share of assets and to hold any wealth, making this form of tax income-equalising between genders (Coehlo et al., 2022). However, broader wealth taxes are uncommon and there is as yet no quantitative evidence on the incidence of wealth taxes across genders.

There are instances of countries with laws that explicitly discriminate against women in the context of direct taxes, which may have a differential impact on gender gaps. For example, in Argentina ‘income in common’ is still attributed to the husband for tax purposes, even if the asset was acquired and managed by the wife, so in principle tax liabilities will be higher for the

men for whom this is relevant (Grown and Vadiola, 2010). Until 2018, Greece required the husband to file their spouse’s tax return, and husbands were the recipient of any refund corresponding to the spouse (Coehlo et al., 2022, who also provide other examples).

A recent study shows that introducing explicit bias in labour taxes favouring women could increase women’s employment rates in the long run without displacing men’s employment. Rubolino (2022) shows that such a policy in Italy improved women’s employment in the long run, reduced the time spent on welfare and did not displace men’s employment. The net wage did not increase, showing that the cut was borne by firms. Labour demand for women was higher in sectors where women are traditionally less likely to work to begin with. However, the policy did not address the pay gap between genders. In Argentina, director’s fees have a higher threshold for taxation if the recipient is a woman, and even higher if transgender, possibly to encourage non-male board members. Another example is the extra tax allowances for single mothers in Ukraine and Uzbekistan and tax exemptions for single women with at least three underage dependents (Coehlo et al., 2022).

3.2.2 Cash transfers

Evidence from HICs shows that cash transfers reduce gender income gaps, particularly those targeted to lower-income individuals and households. As discussed in Section 3.1, there is a small evidence base showing that cash transfers play an important role in reducing income gaps in several European countries, although to varying degrees (Avram and Popova, 2022; Doorley and Keane, 2020). Doorley et al. (2018) show that the reduction in child benefits and carers’ allowances implemented in Ireland

between 2008 and 2018 affected working-age women in couples with children the most if no income share within couples was assumed, but the gap in income dissipated if the assumption of perfect income sharing within the household was used. There is almost no evidence from non-HICs. Ambel et al. (2022) show that cash transfers in Ethiopia are progressive, pro-poor and help to reduce poverty for both men and women. However, from the emerging evidence from these contexts on the distributional impact of cash transfers, we know that transfers do reduce inequality and poverty (Granger et al., 2022). Hence, they are also likely to reduce gender income gaps given that women are poorer on average than men across countries.

The impact of cash transfers on gender income gaps can differ according to whether transfers are contributory or non-contributory and across demographic groups.

Contributory transfers are usually closely linked to labour history, such as old-age pensions or unemployment benefits. Because women are less likely to be in continuous paid formal work – and if they are, they earn less – they either lack access to these benefits or the benefits are lower than for men on average (Bastagli and Hunt, 2020; Lo Bue et al., 2022). Avram and Popova (2022) find that women benefit more from non-contributory transfers such as child benefits than from contributory ones, though even some of the contributory ones such as sickness and unemployment reduce the gender income gap. Old-age pensions are the only cash transfer that amplifies the gender market income gap in eight European countries among those aged 65

or over, though the effects vary in magnitude, resulting in higher income gaps than for the working-age population. To mitigate this effect, many OECD countries provide special pension credits to carers of children under a certain age to make up for years spent outside the (formal) labour market (OECD, 2021b).⁴⁰

In HICs, cash transfers may impact women’s work incentives in complex ways, depending on their design and beneficiaries’ demographic characteristics, with mixed evidence on how they affect labour market outcomes.

There is evidence showing that child and means-tested benefits that are too generous may discourage main carers, usually women, from returning to (formal) paid work in HICs (Christiansen et al., 2016). Magda et al. (2020) show that the introduction of a large universal child benefit decreased labour market participation of mothers relative to childless women in Poland. However, recent evidence from Canada shows that the introduction of a means-tested child benefit did not affect maternal labour supply (Baker et al., forthcoming). Many countries, including the UK, provide income top-up for lower-earning households or impose job-search conditions to encourage people on out-of-work benefits into paid work. In the UK there is evidence that this has pushed lone parents into part-time low-paid jobs with poor career and wage progression (Hoynes et al., 2023).⁴¹ Pensions and other benefits based on contributions made when in work may enhance work incentives by increasing the return to (formal) work.

⁴⁰ For example, since 2011–2012 in the UK adults who care for a child under 12 can apply for national insurance contribution credits. See UK government’s website here.

⁴¹ These authors argue that there is little evidence on the effects of in-work cash transfers on wage levels, and hence on the intended beneficiaries, making the use of these type of transfers questionable.

The evidence on LMICs tends to show no consistent negative impact of cash transfers on female labour market outcomes. A review of the small body of literature, including some women-only programmes and gendered analysis, suggests that there does not seem to be salient (formal) labour-leisure trade-offs with cash transfers in LMICs, except for older individuals, and transfers can have positive effects if they are designed specifically to aid with job search (Baird et al., 2018). The authors highlight that cash transfers are still often temporary and not as reliable as those in HICs. Some studies show that cash transfers can positively impact female labour market outcomes (Hagen-Zanker et al., 2017; Salehi-Isfahani and Mostafavi-Dehzooei, 2018).⁴²

Explicitly targeting cash transfers to women in heterosexual couples may result in a greater reduction in resource inequality and poverty differences across genders. Targeting cash transfers to women in the household is increasingly common practice in LMICs not only because of gender equality objectives but also due to its potential impact on resources allocated towards children (Hagen-Zanker et al., 2017). Bargain (2022), using a new method to allocate income and consumption to individual members within a household combined with fiscal incidence analysis, finds that increasing benefits received by women expands the resources in the hands of women and children in lower-income households in Argentina and

South Africa. Armand et al. (2020) show that cash transfers conditional on children attending school that were targeted to women instead of men increased food expenditure, and Almås et al. (2018) show how women receiving the transfers enjoyed a better bargaining position in the household in North Macedonia.

Imposing conditionalities on women-targeted cash transfers may reinforce traditional gender roles, disempowering women. Hagen-Zanker et al. (2017) discuss some evidence that shows that imposing conditionalities on women-targeted cash transfers can also reinforce traditional gender roles if these are dependent on children's school attendance or health checks that demand time from carers, often women. These unintended effects may be stronger in contexts with poor supply of quality public services (education and health) and infrastructure (transport) (UN Women, 2019).

3.2.3 Indirect taxes and subsidies

The evidence base on the incidence of general consumption taxes (sales taxes or VAT) across genders is scarce. As discussed in Section 2.1, it is difficult to measure individual-level consumption. The few studies that have looked at the impact of VAT on gender gaps in consumption or resources have compared female-headed and male-headed households. Grown and Vadiola (2010) find that male-headed households bear a higher burden

42 Salehi-Isfahani and Mostafavi-Dehzooei (2018) find that universal cash transfers in Iran implemented in the early 2010s increased female labour supply. Hagen-Zanker et al. (2017) review the literature on the impact of cash transfers on women and girls. They find no marked difference between men and women in terms of labour participation and intensity, whilst there are differences in the way men and women allocate their time to paid work, self-employment and domestic work. See Granger et al. (2022) for a gender-blind discussion of how cash transfers affect work incentives and a survey of the recent literature.

of VAT in seven out of the eight countries they studied.⁴³ There are implicit biases in the incidence of VAT on expenditure for some necessities, such as food or children's clothing and health expenditure, in that female-headed households bear the highest proportional burden, although there is no consistent pattern across studied countries. Aziz et al. (2016) estimate that, in New Zealand, men and women pay a similar amount of indirect taxes per capita before the age of 25, but men pay a higher share of VAT and excises than women from age 25–64, partly because a higher share of income and consumption within the household is allocated to the main earner, frequently men. Ambel et al. (2022) find that average consumption expenditure is lower for women than for men in Ethiopia, and hence they pay a smaller amount of indirect taxes, but a similar amount as a share of expenditure. VAT and excises increase inequality and poverty for both genders. However, VAT is more unequalising for men, suggesting they bear a higher VAT burden, possibly due to higher consumption of VAT-able goods with higher rates, such as tobacco and alcohol. The poverty-increasing effect of VAT is higher for women.

The evidence base on the general incidence of VAT across countries shows that this tax is poverty-increasing. Impacts on inequality depend on the context and the rate structure.

For example, OECD (2014) finds that both VAT and excise taxes (alcohol, tobacco and transport fuel) are regressive and unequalising for most

of the 20 OECD countries in the study when considered as a share of income at a point in time.⁴⁴ Cubero and Hollar (2010) find similar in Central America. Evidence also shows that indirect taxes are poverty-increasing in LMICs (Granger et al. (2022) provide a summary of recent evidence across countries on the incidence of VAT on households along the income distribution). A forthcoming study by Bachas et al. shows that consumption taxes can be progressive once informal consumption, prevalent among lower-income households, is considered. This is particularly relevant for LICs.

VAT exemptions or reduced rates can mitigate the poverty and regressive impact of VAT, but more cost-effective policy instruments may be available to achieve this goal.

Analysis synthesised in Granger et al. (2022) shows that the benefits of these favourable tax treatments accrue usually to households and individuals that are better-off, since they spend more in absolute terms. This pattern is exacerbated in contexts, often LMICs, where lower-income households purchase most of their products from VAT non-registered vendors (Bachas et al., forthcoming). Removing these reduced rates and exemptions could fund more targeted cash transfers to help lower-income individuals and households, including women, more cost-effectively. But if there are no means to implement cash transfers, or cash transfers are not effective at reaching women due to intrahousehold allocation issues, then these exemptions or reduced rates could be merited. Furthermore, generally applying

43 Of the eight, the countries for which male-headed households bear the highest burden are Argentina, Ghana, Mexico, South Africa, Uganda and the UK. In India and Morocco the burden falls most heavily on female-headed households.

44 The incidence of taxes on consumption should be calculated as a share of consumption expenditure, rather than income; this is used in LICs and LMICs as a measure of income given data limitations. Using this measure, VAT is often proportional if the base is broad and the rate uniform, or given the structure of reduced rates and exemptions, progressive and inequality reducing. But because lower-income households spend a higher proportion of their income at a point in time, it is usually regressive and increases inequality along the income distribution.

reduced rates to a group of goods and services opens the door for lobbying for other arguably similar products to be included on horizontal equity grounds, fostering the proliferation of reduced rates (Abramovsky et al., 2018; De la Feria and Walpole, 2020).

Applying reduced rates or exemptions to menstrual hygiene products may decrease the tax burden faced by women in certain contexts, but still may not be the most cost-effective policy to help lower-income women. Many HICs and LMICs have introduced exemptions, zero or reduced rates for menstrual hygiene products (Coehlo et al., 2022), and this policy continues to be at the centre of public debate (see Higgins, 2017; Lahey, 2018). Evidence from Germany shows that reductions in VAT rates for menstrual hygiene products result in an equivalent reduction in consumer prices (Frey and Haucap, 2022). In LICs – where market access to these products can be patchy, where cultural norms may shape preferences for products other than sanitary pads and tampons, and where access to menstrual hygiene management safe spaces may be lacking for many women and girls from lower-income households – VAT reduced rates would likely benefit better-off women and those purchasing expensive brands, including imported brands (Coehlo et al., 2022; Rossow and Ross, 2021). Ensuring access to safe spaces to manage menstruation or providing free sanitary pads or tampons in lower-income areas and schools may be a more cost-effective way to provide support to girls and women who cannot access or afford these items (this policy has been implemented in Kenya). If reduced rates or exemptions are used for necessities, then menstrual hygiene products should be included.

Reduced VAT rates on childcare services used to facilitate access to employment after having children may be considered optimal

if no lenient treatment is granted through PIT deductions or credits or through directly subsidised services at the point of use.

Childcare services help individuals, particularly women given they are the main carers, to go back to work, and as such it can be efficient to tax them at lower or zero rates. But it is not clear that the best option is to do so via consumption taxes, which are more difficult to target to lower-income parents for whom childcare costs may be a constraint when deciding to enter or increase time in work, and for whom distributional motivations are stronger. In LICs and LMICs, providing quality subsidised childcare may be more effective given fewer children have access to affordable formal childcare services (Devercelli and Beaton-Day, 2020). Grown and Vadiola (2010) argue that targeting childcare provision directly from the expenditure side is likely to be more cost-effective. We discuss childcare services in more detail in Section 3.2.4.

Finally, most economists agree that a broad-based VAT with minimal exemptions or alternative rates and a sufficiently high threshold is the best way to raise revenues and fund better-targeted spending policies to reduce inequality and poverty, including gender inequality. Even where consumption taxes are regressive, and hence women shoulder a higher burden on average, the net distributional impact, as part of a broader fiscal system and the social spending these taxes fund, is a more important factor. A consumption tax that is regressive and implicitly biased against women can be efficient in collecting revenue and can form an important part of a more equalising and poverty-reducing fiscal system that addresses gender income gaps, if it finances a well-targeted transfer system that more than compensates the poor and women (see, for example, Lustig, 2018; Warwick et al., 2022). At the same time, there is

broad consensus that VAT systems that are full of exemptions and differential rates, lacking a clear policy rationale, generate inefficiencies and administrative challenges.⁴⁵

Empirical evidence on the impact of excises on gender income gaps is scant – they are often poverty-increasing and can be equalising between genders if most goods on which excise duties are levied represent a higher share of men’s consumption expenditure.

For example, men are on average more likely to consume more tobacco (Crawford and Le Nestour, 2019) and alcohol (Nelson, 2014) than women; hence the incidence of this tax would be higher for men, narrowing gender income gaps. Coehlo et al. (2022) argue that the reverse may be true, i.e. men are receiving a higher value of subsidies if the value of the duties does not account fully for the internalities/externalities generated, and this value would be highest in countries with lowest relative female smoking rates. They calculate that many countries set tobacco taxes at a lower level than the World Health Organization (WHO) recommends (at least 75% of the tobacco retail price) and that the implicit subsidy seems to be higher in countries where the smoking rate among women is lowest. Ambel et al. (2022) find that, in Ethiopia, excise taxes have a small negative impact on income inequality for both men and women, but the analysis does not show the impact on the average gender income or consumption gap. Grown and Vadiola (2010) find that male-headed households bear the highest burden of excise and fuel tax in seven out of the eight countries they study.

A small emerging evidence base suggests that tariffs may magnify gender income gaps.

Recent studies find that the rate structure in the US presents explicit biases against women, particularly for apparel, and this, combined with households’ higher budget share spent on imported women’s apparel on average, results in women bearing a higher share of the total tariff burden relative to men (Gailles et al., 2018; Hatch, 2015). Artuc et al. (2021), using data from 54 LICs and LMICs and econometric methods, find that tariffs reduce real income of female-headed households slightly more relative to male-headed households. They argue that protectionism magnifies gender inequality because female-headed households spend a larger share of their budget on, but derive a smaller share of their income from, agriculture products.

Indirect subsidies in the form of price reductions for goods such as cooking fuel or oil or food can reduce poverty, but there is no evidence on their impact on the gender income gap, which will depend on consumption patterns and also be context-specific. Ambel et al. (2022) find that wheat subsidies in Ethiopia reduce poverty but are unequalising for both men and women due to their high level of regressivity. Kerosene subsidies have no impact on poverty and a minor positive impact on inequality for both genders.

3.2.4 Subsidies for childcare and paid parental leave

Most HICs offer some form of paid parental leave and some support for childcare in cash or in-kind. Aims include improving mother and

⁴⁵ See, for instance, Abramovsky et al. (2018) and Acosta-Ormaechea and Morozumi (2021). The latter found that, in OECD countries, an increase in VAT revenues through removing exemptions and reduced rates is better for economic growth than achieving the same revenue through increasing the standard VAT rate.

child well-being and women's employment outcomes. However, there is a gap in the evidence on the first-order impact of these policies on gender income inequality. Förster and Verbist (2012) looked at the incidence of cash versus in-kind family transfers in the form of childcare services, valued at the public cost of provision, on child poverty and income redistribution. They find that both instruments are redistributive, and that cash transfers reduce child poverty by more than in-kind transfers on average, but they did not examine the differential impact by the gender of adults in the household. Dahl et al. (2016) show that, in Norway, increasing the duration of paid parental leave from 18 to 35 months benefited better-off mothers, and hence results in a negative redistributive effect. Avram and Popova (2022) find that, overall, family benefits, which include paid parental leave, reduce gender income gaps.

There is a considerable body of evidence on the impact of these policies on women's employment outcomes, mainly from HICs, but estimating the causal impact of these policies is challenging and findings are mixed and dependent on a range of factors. Olivetti and Petrongolo (2017) provide a detailed discussion of how family policies have evolved in HICs and their economic consequences, including for women's employment outcomes (whether they work or not, how many hours they work and how much they earn) and, in turn, their income in relation to men. On the one hand, childcare policies and parental leave may help with gender equality and child development outcomes; on the other, they could hinder women's career progress. Isolating the causal impact of these policies on outcomes for women is challenging; these policies are complex, vary considerably across countries and interact with each other. Initial levels of women's employment as well as cultural and social norms

may also mediate these impacts. Subsidies to childcare and pre-school education vary in their design, generosity, quality and coverage across countries; subsidised childcare may simply crowd out informal or paid formal childcare leading to no change in employment outcomes. Parental leave policies vary in length, income support and job protection, and whether this is available to either or both parent.

Evidence from HICs shows that there is a strong cross-country negative correlation between what countries spend in formal childcare subsidies as a share of GDP and the number of weeks of paid leave available to mothers and gender employment gaps. Using a sample of 30 OECD countries, Olivetti and Petrongolo (2017) argue that spending on early childhood care as a percentage of GDP is the only family policy that shows significant and positive correlation with women's probability of being in employment. They also found that countries with higher spending on early childhood care, maximum weeks of leave available to mothers, and total paid leave available to mothers tend to have lower gender gaps in employment rates. However, the analysis did not find any family policy that is significantly correlated with reducing the gender gap in earnings.

Evidence from country-specific studies in HICs shows mixed findings on the impact of increases in access to formal childcare on maternal employment rates (and other employment outcomes), depending on the design of the policies, service quality, the sample and context considered and the methodology used. This variation is likely attributable to: i) differences in the design and implementation of childcare policies, such as whether the reform led from no access to part-time or to full-time access and whether

childcare is free or partly subsidised; ii) the methodology used; iii) the demographics considered, e.g. cohabiting versus single mothers, characteristics of the children (age, number and childcare setting), whether women were working before the reform and accessing childcare services already, and whether they were working part-time or not, and their skills and wages; and iv) the institutional, economic and social contexts in which changes to access through policy reforms took place (Cascio et al., 2015; Morrissey, 2017; Olivetti and Petrongolo, 2017).⁴⁶ According to a meta-analysis of country-specific studies by Akgunduz and Plantenga (2018), as methodologies have improved over time and labour market characteristics have evolved, the impact of childcare subsidies on employment rates of mothers has declined. Evidence from Germany shows that removing private contributions to an already highly subsidised service increased hours worked but not employment rates (Huebener et al., 2019).

Emerging evidence from LICs and MICs suggests that access to subsidised childcare may increase mothers' employment rates, depending on the design and implementation of these services. The evidence on hours worked is mixed. A recent summary of evidence (J-PAL, 2023) reviewing nine randomised evaluations of childcare interventions found that increased access can boost women's employment outcomes (five studies).⁴⁷ When this

is not observed, it is likely due to the presence of other barriers to women's employment, such as restrictive gender norms or lack of employment opportunities, or low perceived or actual quality of childcare. Halim et al. (2021) reviews 22 studies, three of them experimental and the rest quasi-experimental, and found that greater access to subsidised childcare increased employment rates among women in all studies except one. While some studies find positive impacts on earned income, sometimes by increasing business productivity, and evidence of switching to more productive jobs, others suggest that increased labour market engagement is driven by low-productivity work, such as unpaid family work, and find no evidence of significant increases in maternal income. Unsurprisingly, the design and implementation of these interventions, including the hours childcare centres operate and the age of the children who can access them, and whether all young children or just one are covered by the intervention, will affect the impact of these interventions.

The evidence from HICs on the impact of paid maternity and paternity leave on mothers' employment outcomes suggests that short paid leave may improve mothers' employment outcomes on average, though extending it beyond six months may have no or detrimental effects. Earmarking leave for fathers with high wage replacement rates may lead them to take up leave and increase home production

46 The policy reforms varied from increasing government subsidies to childcare to increased supply of childcare facilities (e.g. reforms in 2002 in Norway and Luxembourg), expanding access to highly subsidised childcare (e.g. in Italy from the mid-2000s), reducing the cost of childcare (e.g. in Germany and the US), introducing free day care (distinguishing between half-time or full-time such as in the UK), changing the cut-off age of preschool or school start (as in Spain and in France), reducing fees and providing full-day care (Canada) or increasing government subsidies and spending on childcare with earned income tax credit (EITC) for parents (the Netherlands).

47 The countries covered in the studies are Brazil, Burkina Faso, Chile, Egypt, India, Kenya, Mozambique, Nicaragua and Uganda.

including childcare, though the evidence on gender employment gaps is still mixed (Canaan et al., 2022). Paid leave for both mothers and fathers can help women maintain a connection to the labour market and facilitate the return to paid employment.⁴⁸ However, the longer the leave and the higher the income replacement rate, the greater the incentives to stay at home and the higher the costs in terms of women's career progression, through reduced work experience and increased costs to employers of hiring women of childbearing age. Re-entry generally can be more difficult (Mandel and Semyonov, 2006; Olivetti and Petrongolo, 2017). Christiansen et al. (2016) find that parental leave longer than 140 weeks can reduce female labour force participation. Bergemann and Riphahn (2023) show that reducing periods of parental paid leave for mothers in Germany, transforming the scheme from means-tested to universal and linking the replacement rate to previous earnings led to a quicker return to work after benefits elapsed. Gangl and Ziefle (2015) found consistent evidence from Germany showing that expansions to maternity leave led to a decline in mothers' work commitment. Evidence from Norway shows that extending paid maternity leave from 18 to over 30 weeks did not improve FLFP or women's earning, but was costly and had negative redistributive effects (Dahl et al., 2016). Combined with a quota for fathers and other reforms, the policy had no effect on mothers' probability of reaching top-paying jobs and executive positions (Corekcioglu et al., 2022). In their comprehensive review, Canaan et al. (2022) highlight that heterogeneous impacts across types of workers (e.g. wage level

and skills) and couples (the extent of egalitarian views and preferences for job specialisation) are significant and relevant in accounting for different results across countries.⁴⁹

3.2.5 In-kind education and health transfers

Gaps in education access have reduced over time across countries, and attainment levels and years of education enjoyed by women on average are higher than for men. There is no disadvantage in health benefit access for women in HICs. The demand for health services is u-shaped over a lifetime, often highest at birth and infancy and then in final years. This means that gendered differences in demand can arise from both birth and longer life expectancy. Kochhar et al. (2016) report that spending on health and education was already equalised across genders in HICs. In fact, women benefited from tertiary education more than men, and from health provision because women live longer on average. Aziz et al. (2016) show that, in New Zealand, women benefit from in-kind expenditure to a greater extent than men up to their mid-40s, potentially linked to maternity health services and retraining during their child-rearing years. As with most other incidence studies, benefits are assigned to individuals using the cost of provision, which does not take into account service quality or differential valuation across individuals.

Gender inequalities in health access and enrolment across education levels beyond primary and educational attainment persist

48 These authors report that, in OECD countries, publicly financed paid maternity leave is available in all countries except the US; the average duration of paid leave (in terms of the full-time-equivalent salary) is 27 weeks.

49 There is scarce evidence looking at the combined impact of paid parental leave and childcare subsidies on women's labour market outcomes in the long run. Recent work by Kleven et al. (2021) suggests that it may not reduce the so-called child penalty, and that there is no positive effect on women's work outcomes after having children.

in LICs and in the MENA region. Inequalities are more pronounced at higher levels of education, for poorer families and in poorer countries. Empirical studies from non-HICs on who benefits from in-kind education and health transfers show that girls tend to benefit less than boys from the former, though the results for health are mixed depending on the type of health service and position in the income distribution. Kochhar et al. (2016) provide a good survey of the evidence. Demery et al. (1995), using econometric techniques combined with household-level survey data from Ghana, look at the incidence of health and education in-kind transfers. They find that girls benefit less than boys from education; women benefit similarly from outpatient services, but inpatient services benefit proportionally more women in higher-income deciles, while women in lower deciles have relatively poor access. Austen et al. (2013) find that in Timor-Leste boys benefit more from public spending on education, and that educating girls is likely to influence the enrolment of their children in education once they become mothers. Filmer (1999) finds that girls have lower school enrolment rates than boys, with the gap higher for girls in poorer households, using data from 41 countries. Glick et al. (2004), using data from the Middle East, North Africa and SSA, Latin America and Southeast Asia, find that the distribution of education expenditure favours boys. Medical visits tend to favour women during childbearing years but appear to be gender neutral outside this period, as do vaccination services.

Studies on the impact of increased access to education on women's employment outcomes suggest that this is positive. Kochhar et al. (2016), Fabrizio et al. (2020) and other sources focusing on the macroeconomic returns to investing in education and health to close the gender gap in employment outcomes in non-HICs highlight high returns, as described in

the introduction to this report. Evidence from HICs suggests that progress in reducing gender employment gaps has been brought about through improvements in women's educational outcomes (Andrew et al., 2021).

4 Emerging policy lessons and conclusions

Although a larger and more context-specific body of evidence is needed to inform policy design, from the discussion in this report it is clear that certain fiscal policies may affect gender inequalities in income and opportunities in different directions. Policies

to narrow gender gaps, such as investment in education, health and infrastructure, can be particularly effective in LICs. In-kind transfers in education and health can alleviate income inequality by redistributing resources and changing employment outcomes, and spending on infrastructure can increase women's well-being and the opportunity costs of studying and employment. Improving the progressivity of the tax-benefit system, addressing disincentives for second earners, child/elderly care, parental leave and flexible work arrangements can all be impactful across countries with different levels of income or development.

The evidence base on the impact of tax and transfers on gender income inequality and poverty gaps in LMICs is extremely limited. More context-specific evidence on the cost-benefit assessment of alternative policy options will be needed to better design fiscal policies that foster gender economic equality.

There is an urgent need for further analysis using sex-disaggregated data to understand better the gendered impact of tax and transfers policies in LMICs. Policy choices should be based on cost-benefit analysis of alternatives. Should governments provide targeted cash transfers or subsidised childcare to help mothers balance care

and paid work responsibilities and achieve gender income equality in LICs? Should these policies be targeted, and if so how?

There is some evidence from (mostly European) HICs that combined direct taxes and cash transfers (contributory and non-contributory) can reduce inequality between genders. Contributory cash transfers linked to labour market histories (e.g. pensions) are usually less redistributive between genders (and can magnify gaps) given that women contribute for shorter periods due to their lower participation in the labour market after having children, and higher probability of having informal jobs.

Eliminating explicit biases against women in tax systems is recommended, but the case for favouring women explicitly in tax systems is debatable. Other ways of addressing implicit biases seem more promising. The case for a gender-based tax system that provides lower marginal tax rates for married women has been discussed in Alessina et al. (2011). As discussed by Coehlo et al. (2022), the conceptual case could be made on several rationales, including the (perceived) higher cost of hiring women or higher elasticity of women's labour supply. However, even if rationalised from an economic point of view, it may only generate a nominal shift of income towards the lower rate spouse within a household, without changing the actual employment outcomes of women (Grown and Vadiola, 2010). Berg (2023) argues that horizontal equity considerations (that is, horizontal discrimination) may deter governments from using the tax system to reduce gender gaps,

even if women's and men's income distribution is different, including women earning less on average than men.

When looking at the impact of fiscal policies on gender income or employment gaps, it is important to consider the system as a whole, and how to best target the most vulnerable including lower-income women. Some measures, such as introducing or broadening the base for VAT or removing fuel subsidies, with the objective of raising revenue in an efficient way and minimising environmentally damaging behaviour, can widen gender disparities or disadvantage lower-income households and individuals. As is the case when considering inequalities across the income distribution, it is important to assess the cost-benefit of alternatives that recycle revenue from tax reforms to mitigate negative impacts on the most vulnerable sections of the population. It is essential to consider policy packages that can mitigate undesired effects, for example through targeted cash transfers and investment in education and health. Indonesia, Ghana, Iran and France provide helpful examples of countries that have introduced such packages when reducing subsidies to fossil fuels (UNDP, 2021).

Evidence shows that, in many HICs, women are more likely to be poor than men, and in other contexts household-level data shows that women of reproductive age live in poorer households. This has policy implications in terms of addressing implicit biases. It is likely that the policy implications from studies looking at the combined impact of tax and transfers (cash and in-kind) on vertical income inequality (Granger et al., 2022) could be similar, to some extent, to the lessons from the impact of the tax-transfer system on gender income gaps. That is, direct taxes and cash transfers and in-kind transfers (education and health spending)

have the greatest equalising effect. In terms of the policy implications, this means that having progressive direct taxes, with progressive tax-benefit systems overall, will likely reduce income inequality between genders, given current differences in the patterns of paid and unpaid work and income levels of women and men.

There are important emerging lessons and implications for the design of each policy tool, even if studies are still few. These must be considered within the system as a whole:

Direct taxes

- Remove any remaining explicit biases against women.
- Improve progressivity of the system
 - Ensure that the PIT rate structure, thresholds, and definition of the tax base is progressive.
 - Consider taxing different income sources at the same rates, including capital income.
 - Consider aligning CIT rates more closely to PIT rates.
 - Property taxes should take account of the value of property to determine the base and liquidity constraints to ensure they are progressive.
- Reassess the design of tax expenditures that affect the tax base for PIT and their impact on gender income and employment inequalities. In LICs, where most workers, and women more so, have informal and low productivity jobs, tax reliefs through the PIT will not be well targeted towards gender equality or the most vulnerable (Bastian et al., 2022).

- Improve work incentives of second earners within the PIT. Remove elements of joint taxation, including some tax credit elements, so that second earners (usually women) do not face such high tax rates when returning to (formal) work.

Cash transfers

- Given current income and work patterns, non-contributory transfers seem best suited to reducing gender income gaps.
- Considering inclusivity and incentives combined suggests that it is best to use a combination of contributory and non-contributory transfers, targeted at individuals (rather than family-based).
- Consider pension credits for adults caring for children, the disabled or the elderly.
- Some countries aim to mitigate potential negative effects of child/family-based cash transfers on second earners' work incentives by rebalancing benefits between pre-school and school-age children and linking them to labour market participation.

Indirect taxes

- Use VAT to raise revenue to fund equivalising spending. Avoid exemptions and reduced rates, including on menstrual hygiene products and childcare services. Use cash transfers targeted to lower-income households or subsidised products in lower-income areas, schools and hospitals.
- Consider imposing excises on socially harmful goods and compensate poorer households, including poor women, if necessary.
- For tariffs: remove remaining explicit bias and consider the gendered impact of tariff structure.

Indirect subsidies

- Consider reforming or directly removing inefficient and pro-rich pro-men indirect subsidies (e.g. on fossil fuels that are proportionally consumed more by men than women) and use measures such as cash transfers to compensate vulnerable losers from such reforms.

Family-based policies

- Subsidies to childcare and paid parental leave can help encourage women with young children to return to work. However, there is no evidence as to impacts on gender income gaps and evidence on the impact on employment outcomes is inconclusive.
- Countries with relatively long periods of (paid) parental leave could consider shortening this to promote better career progression for main carers and more equal lifetime earnings profiles. Other policies that can help facilitate re-entry to the labour market include providing greater parity in maternity and paternity leave, including earmarking leave for fathers.
- Subsidies to (quality) childcare services during working hours seem to be a powerful tool to lower the cost of returning to work, particularly for women in lower-income households. If resources are constrained, perhaps ensure that subsidies are not being provided to higher-income mothers already accessing quality childcare and working.

In-kind transfers in education and health

- Focus should be placed on education and health care for girls, especially in lower-income households, in LICs. Ensure girls have equal access to quality education throughout the different levels and achieve similar levels of

attainment to boys, and minimise the risk of girls dropping out of school. To achieve this, complementary policies aimed at lowering the opportunity costs of girls' schooling (safety risks, early marriage, child labour) may be necessary.

It is important to promote assessment of the indirect benefits of closing gender gaps in income and economic opportunities on economic growth. Closing gaps between men and women and boys and girls is likely to yield external benefits that go beyond the direct beneficiaries in terms of economic growth in the medium term. Developing more data sources would facilitate this analysis.

Efforts to improve the collection and sharing of survey and income data at the individual level with gender identifiers across countries is crucial. This would help advance understanding of the impact of fiscal policies on gender income and employment gaps and how best to address them. The long-standing lack of gender-disaggregated data to analyse the impact of fiscal policies is one reason why evidence is limited. Renewed public and policy interest in the topic combined with progress in data and methodology have galvanised researchers' efforts to look at these issues. Several new initiatives are being launched globally (the African Tax Administration Forum, World Bank, IMF).

Generating systematic evidence from different countries using consistent data and methodologies to compare how the impact between genders varies across countries is crucial. Improvements in this area could replicate efforts to produce cross-country evidence on the impact of fiscal policy across the income distribution (see Granger et al., 2022).

Similar to Granger et al. (2022), we conclude that not all fiscal instruments have to address gender income or employment gaps. However, there is a need to understand the main drivers of income inequality in order to design context-specific solutions, while considering reforms to fiscal policy as one of several levers. Approaches that consider reform of complementary policies are often needed. The sources of gender income inequality are complex and are affected not only by tax and social spending, but also by social norms and other legal rights. For example, family-friendly labour market policies that lead to higher labour force attachment and salaries for women will increase the returns to women's investment in education – so women in future generations will be more likely to invest in education, which will also help narrow gender gaps in labour market outcomes. Social and cultural norms remain at the heart of family choices and the gender distribution of labour. Achieving equality of opportunity requires ensuring that the norms and stereotypes that limit the choices available both to men and to women change. It is difficult, but the evidence shows that social norms, too, can be changed (Andrew et al., 2021; Field et al., 2021). Fostering a work culture that promotes and values flexible work schedules across occupations and sectors can increase opportunities for workers with caring responsibilities (Goldin, 2021).

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