# TAXATION AND GENDER EQUITY

A comparative analysis of direct and indirect taxes in developing and developed countries

Edited by Caren Grown and Imraan Valodia

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Routledge

# Taxation and Gender Equity

Researchers, activists and analysts concerned about gender equity have not paid sufficient attention to the taxation system and the manner in which taxes and tax policies may impact on the gendered nature of economic and social life. Similarly, tax analysts and policymakers have not paid attention to how tax policies and tax reforms may interact with gendered social norms. Yet, around the world, there are concerns that tax systems are biased against women, and that contemporary tax reforms may increase the incidence of taxation on the poorest women while failing to generate enough revenue to fund the programmes needed to improve these women's lives.

Drawing on a three-year eight-country study *Taxation and Gender Equity* outlines why gender equity advocates need to interrogate the revenue side of public finances, and why tax analysts and policymakers should carefully consider the gender impacts of tax policies and tax reforms. This book develops a conceptual framework and methodology for examining and evaluating the impacts of direct and indirect taxation on different types of households, based on sex composition and employment status; presents the results of the in-country and cross-country research; and suggests a set of principles and guidelines for gender-equity enhancing tax policies and tax reforms in developing and developed countries.

This is the first book to systematically examine gender and taxation within and across countries at different levels of development. It presents original research on the gender equity dimensions of personal income taxes, value-added taxes, excise taxes, and fuel taxes in Argentina, Ghana, India, Mexico, Morocco, South Africa, Uganda and the United Kingdom. This book will be of interest to tax analysts and policymakers, gender analysts and activists, and postgraduate students and researchers studying Public Finance, International Economics, Development Studies, Gender Studies, and International Relations, among other disciplines.

**Caren Grown** is Economist-In-Residence at American University, Washington DC, USA.

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'This book shows that taxation is often not neutral between the genders when it should be, and is sometimes neutral when it should not be. Taking the perspective of horizontal and vertical equity, its case studies illuminate how tax systems and tax reforms can be inequitable across genders, and much of the time because the gendered structure of economy and society is not an integral part of the tax design debate. The book represents an important contribution to that debate, and will be very useful to researchers and practitioners, particularly in developing countries.'

—*Ravi Kanbur, Cornell University, USA*

'As the pendulum swings once again towards greater state economic involvement and therefore an increased need for state resources, there is an urgent need to understand whether tax systems are biased against women and if they could be reinforcing gender inequalities. This groundbreaking volume examines the gender dimensions of tax systems in seven developing and one developed country and is the first systematic treatment of its kind. The conceptual framework that it poses should be part of the toolkit of policy professionals, donor staff, and gender specialists in years to come.'

—*Manuel F. Montes, Development Policy and Analysis Division, UNDESA, USA*

'Equity issues are again attracting attention from academics and policy analysts concerned with taxation. This book makes a substantial contribution to this new awareness by emphasizing the important role that gender, like other social stratifications such as race and income, often plays in determining the impact of taxation on well-being. The editors have done a fine job not only in setting out the questions considered in the volume clearly and in context but also by establishing a uniform methodological approach that has been followed in the country papers, thus allowing them to present the results in a comparable and comprehensible form. In turn, the case studies of mainly developing countries are rich in detail and make it clear that those concerned with the extent to which taxation perpetuates or alters distributional outcomes in any country need to pay close attention to how taxes on consumption are structured and administered as well as to such more traditional gender-related income tax issues as the treatment of household income. This book should be on the shelf of anyone concerned with either tax policy or gender issues in both developing and developed countries.'

—*Richard Bird, University of Toronto, Canada*

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# Contents

# Figures

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# Tables

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This book is the result of a two-and-a-half-year project which examined the gender dimensions of tax policies and tax reforms in eight countries: Argentina, Ghana, India, Mexico, Morocco, South Africa, Uganda and the United Kingdom. The project emerged from discussions at the workshops and international conferences of the Gender and Macroeconomics International Working Group (GEM-IWG), organized at the University of Utah, Salt Lake City, in 2004 and 2005, of which several authors are members. It grew to include individuals and institutions from several countries and policy and academic networks.

The project had three goals: (1) to advance understanding of the gender impacts of tax policies and tax reforms in countries at various levels of development; (2) to engender and improve current tools and techniques for analysing tax policies and reforms; and (3) to influence tax policy-makers in the focus countries and internationally. Undertaking the work involved multiple expertise and experiences; within each country, a project team was constituted, comprised of public finance or development economists, feminist economists, lawyers, and political scientists. The institutional partners in each country are:

| | |
|---|---|
| *Argentina* | Centro Interdisplinario para el Estudio de Políticas Publicas (CIEPP – Interdisciplinary Centre for the Study of Public Policies) |
| *Ghana* | Institute for Statistical, Social and Economic Research (ISSER), University of Ghana |
| *India* | National Institute for Public Finance Policy (NIPFP) |
| *Mexico* | Equidad de Género: Ciudadana, Trabajo y Familia A.C. (Equidad) |
| *Morocco* | Rawabit Association |
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| *United Kingdom* | Open University |

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# Abbreviations

| | |
|---|---|
| CASE | Community Agency for Social Enquiry (South Africa) |
| CEDAW | Convention on the Elimination of All Forms of Discrimination Against Women |
| CIT | corporate income tax |
| COICOP | Classification of Individual Consumption by Purpose |
| CONAPO | National Population Council (Mexico) |
| CTL | Commercial Transaction Levy |
| EFS | Expenditure and Food Survey |
| ENIGH | National Household Income and Expenditure Survey (Mexico) |
| ENOE | National Occupational Employment Survey (Mexico) |
| FISIM | Financial intermediation services indirectly measured |
| GDP | Gross Domestic Product |
| GEM-IWG | Gender and Macroeconomics International Working Group |
| GLSS 5 | Ghana Living Standards Survey 5 |
| GNP | Gross National Product |
| HH | Household |
| HUF | Hindu Undivided Family (India) |
| IAFFE | International Association for Feminist Economics |
| IDE | Tax on Cash Deposits (Mexico) |
| IETU | Corporate Flat Rate Tax (Mexico) |
| IMF | International Monetary Fund |
| INEGI | Instituto Nacional de Estadística y Geográfia (National Institute of Statistics) (Mexico) |
| INSEA | National Institute of Statistics and Applied Economics |
| ISSER | Institute of Statistical, Social and Economic Research (Ghana) |
| LST | Local Service Tax (Uganda) |
| MDGs | Millennium Development Goals |
| NHIL | National Health Insurance Levy (United Kingdom) |
| NICs | National Insurance Contributions (United Kingdom) |
| NIPFP | National Institute of Public Finance and Policy (India) |
| PEAP | Poverty Eradication Action Plan |
| PIT | Personal Income Tax |
| RPI | Retail Price Index (Uganda) |

| | |
|---|---|
| SARS | South African Revenue Services |
| SHCP | Secretaría de Hacienda y Crédito Público (Mexico) |
| SITE | Standard Income Tax on Employees (South Africa) |
| SSNIT | Social Security and National Insurance Trust |
| STPS | Secretaría del Trabajo Prévision Social (Mexico) |
| STPS | Special Tax on Production and Services (Mexico) |
| UNDP | United Nations Development Programme |
| UNRISD | United Nations Research Institute for Social Development |
| URA | Uganda Revenue Authority |
| VAT | Value-Added Tax |
| WFTC | Working Families Tax Credit (United Kingdom) |

# 1  Taxation and gender equality

## A conceptual framework

*Caren Grown*

## Introduction

Governments everywhere grapple with the problem of generating enough resources to reduce poverty and fund essential public services. Fiscal policy, including taxation, is at the heart of the debate on which services government should provide and who should pay for them, including the share paid by men and women as consumers, workers, and employers. The global financial crisis of 2008–09 has thrown millions of people into poverty worldwide, highlighting the need for stronger, more equitable and efficient tax systems that can ensure a stable flow of public services, even during periods of downturn.

Over the decades, many countries have embarked on extensive reforms of their tax systems, with some achieving lasting improvements and others managing only short-term or transitional improvements that are gradually undone. Since the 1990s, several trends have been seen worldwide. These include reforms to personal income tax systems to broaden their bases and reduce the highest marginal tax rates, reduction of the highest corporate income tax rates, increasing reliance on broad-based value-added taxes (VATs), and reduced reliance on trade taxes through a flattening of the tax structure and removal of discrimination against imported goods in both indirect and trade taxes (Bahl and Bird 2008). Countries have sought to make up revenue losses from declining trade taxes, in particular, through a shift to indirect taxes, especially the VAT. More than 125 countries now have some form of a VAT, and it is the mainstay of revenue systems in much of the world (Bird 2005).

One of the cornerstones of tax policy, and central to tax reform efforts, is the issue of equity, along with issues of efficiency and ease of administration. A key challenge facing developing countries is to be able to generate sufficient public resources in a way that does not place an undue burden on the poor and marginalized. Since women are particularly vulnerable to poverty, systematic and robust assessments of the manner in which developing countries are attempting to increase their revenue pool and the impact of this on poor women are urgently needed.

To date, however, neither the tax literature nor public debates have adequately addressed how gender-based differences in behaviour affect tax equity considerations and outcomes. For example, an assessment of the effect of consumption

taxes on patterns of regressivity, which ignore the fact that men and women have systematically different expenditure patterns, will fail to capture the differential effect of these reforms on different types of households – single parent versus dual-earner parent – across the income distribution.

This book is the result of a two-and-a-half-year project which examined the gender dimensions of tax policies and tax reforms in eight countries: Argentina, Mexico, South Africa, Ghana, Uganda, Morocco, India and the United Kingdom. Like other studies, this volume is concerned with who contributes the greatest share of their income in taxes. But the work in this volume broadens the understanding of equity in taxation to include gender differences as a core element in defining notions of tax equity and outcomes. Because women are more likely than men to be poor, understanding where gender inequities are of greatest concern necessarily involves analysis by income and hence a specific focus on gender inequalities among the poor.

The book makes several unique contributions. To evaluate gender equality in taxation, we first develop a conceptual framework based on the Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW) and principles used in the economics literature on taxation. Second, we develop a consistent empirical methodology to analyse on which households – categorized by selected gender attributes – the incidence of selected indirect taxes is highest. We apply this methodology to recent household-level data from the eight countries. Third, the focus on developing countries (seven out of eight countries in our sample) is unique, as virtually nothing has been written on the gender impacts of taxation in these countries. Finally, based on our conceptual framework and our empirical findings, we develop a set of principles for evaluating the gender equity aspects of tax policy that we hope will influence real-world tax policy design and implementation.

## Tax concepts and issues: a brief summary

A frequently used summary measure of taxation, for purposes of international comparison, is the ratio of total tax revenue to Gross Domestic Product (GDP). A high tax/GDP ratio has also been used by feminist economists as an indicator of resources that are available for expenditure that promotes poverty reduction and gender equality. This ratio varies widely among both developed and developing countries. Overall, as countries develop, they tend to be able to generate greater revenue relative to GDP. Fox and Gurley (2005) use data from 165 countries and report that tax ratios range from well under 10 per cent in several countries, most of which are small and low-income (such as Myanmar, Nepal, Guatemala, Haiti, Niger, Chad and the Central African Republic), to well over 40 per cent in many countries, mostly in Western Europe (The Netherlands, Denmark, Italy, France and Sweden). But these patterns are not uniform, and even among countries at a similar level of income, there can be considerable variation in revenue yields. For instance, some lower-income countries, such as the Democratic Republic of Congo, Sudan, Ukraine, and Belarus, also had high tax ratios. Similarly, some higher-income countries, such as the United States, had notably lower tax ratios than others

in that group. A low tax/GDP ratio may reflect an inadequate tax system and/or weak tax administration, or there may be other substantial non-tax sources of income, such as petroleum in Nigeria. Alternatively, it may be the result of conscious policy such as in South Africa where a national tax/GDP target was set in 1996 at no more than 25 per cent, or the United States, where it reflects a conscious effort in recent decades to reduce taxes on high-income earners.

The countries in this volume also have widely varying tax revenue to GDP ratios, from 9–15 per cent in Mexico, Uganda and India, to 20 per cent in Ghana, and Morocco, to 27–28 per cent in Argentina and South Africa, and, finally, to 36 per cent in the United Kingdom.

All tax systems – in both developed and developing countries – include the same basic tax categories: direct taxes on income and wealth; indirect taxes on consumption; property taxes; and trade taxes. The most common direct taxes are the personal income tax, the corporate income tax, and wealth or inheritance taxes. The most common indirect taxes are the value-added tax (VAT) and selected sales and excise taxes (e.g., taxes on alcohol and cigarettes). Property taxes tend to be imposed on real estate such as land and housing, or on personal property such as cars and boats. Trade taxes often take the form of import or export duties. This volume, rather than focusing on all types of taxes, concentrates on personal income tax, the VAT, selected excises and fuel levies, which can together be considered the basic 'pillars' of taxation in most countries (Barreix and Roca 2007).

While all countries generate tax revenue from broadly the same sources, the tax system of each country reflects its specific history, legal tradition, political structure and economic base (Bahl and Bird 2008). The structure of tax revenue also varies with the level of national income. Across low-income countries, about two-thirds of tax revenue is raised through indirect taxes. In contrast, across high-income countries, indirect taxes account for only about one-third of tax revenue, with the remaining two-thirds coming from direct taxes. In low-income countries, personal income tax accounts for just over a quarter of tax revenue, while in high-income countries, it accounts for over a third of tax revenue.

The countries in this volume generally reflect this pattern but with some individual variation. In 2006–08, as a share of total tax revenue, personal income tax (PIT) represented between 14 and 21 per cent in Argentina, India, Morocco and Uganda. The percentage was substantially higher in the United Kingdom at 27 per cent, although Mexico and South Africa, much poorer countries, had a high share of PIT in total tax revenue, at 56.4 and 30 per cent, respectively, in 2007.[1] The share of VAT in total tax revenue varied from 15 to 18 per cent in Uganda, Ghana,[2] and the United Kingdom, and was about ten percentage points higher in Argentina, Morocco and South Africa, and 46 per cent for Mexico.[3]

## Gender differences that affect taxation

It is important to clarify upfront our use of the term 'gender' throughout this volume. Average differences between men and women observed in economic, social and

political life are not the result of sex (e.g., biology) but rather are the result of social relations that ascribe different roles, rights, responsibilities and obligations to males and females.[4] The structures that govern gendered social relations have basic commonalities across different societies, although how they are manifest in specific beliefs, norms, organizations, behaviours and practices can and do vary.

Gender analysis involves examining the inequalities between women and men that result from social power relations in households, markets, and organizations. Social power relations are based not only on gender but also arise from class, race, ethnicity, caste, and location (e.g., urban or rural), which again vary across societies. Gender is a social stratifier that interacts with these other powerful social stratifiers. When analyzing the distributional impact of tax systems, it is therefore important to go beyond a mere focus on women as a distinct group in relation to men as a distinct group and to incorporate all relevant social stratifiers. Several of the chapters in this volume therefore include income, race and location as stratifiers in the gender analysis of taxation.

Barnett and Grown (2004) note four 'stylized facts' about gender differences in economic activity that should be used to understand the impact of taxation on men and women. These are:

1 gender differences in paid employment – including formal/informal employment, wages and occupational segregation;
2 women's work in the unpaid care economy;
3 gender differences in consumption expenditure;
4 gender differences in property rights and asset ownership.

### Gender differences in employment

In all countries, women's labour force participation rates are lower than men's, although women contribute more time in total to paid and unpaid work (United Nations Development Programme 1995; United Nations Development Fund for Women 2000; United Nations 2009). Within paid employment, several gender differences are important to note in a gender analysis of taxation. First, women enter and exit the labour force more frequently than do men, which means their participation is more discontinuous than is men's, and they are more likely to be in part-time and seasonal jobs, while men are concentrated more than women in full-time positions (International Labour Organization 2009b). Second, women earn less than men, even after controlling for standard human capital variables (age, education, job experience), though the gap has narrowed in some countries, over the last decade (Tzannatos 1999; Artecona and Cunningham 2002; Oostendorp 2004; International Labour Organization 2009a). Third, in many countires, especially developing countries, women work predominately in informal employment which in many cases puts them outside the income tax net either because they earn too little to file returns or choose not to do so knowing that the tax system has few ways to track their income, which may not otherwise be reported. Informal employment includes market-oriented employment in small workshops, family businesses, contract or subcontract work often undertaken in the home, and domestic

work for others. Informal employment represents about 80 per cent of women's employment in Sub-Saharan Africa, Southern Asia and the Pacific, compared to about 74 per cent of men's, although for developing countries as a whole, it represents 67 per cent of women's employment and 60 per cent of men's employment (United Nations 2009).

The result of women's employment profile – their discontinuous employment, lower relative earnings and predominance in the poorly paid forms of informal employment – means that they are unlikely to bear a large share of the personal income or direct tax burden in many countries. However, their inferior employment status may also prevent them from accessing certain benefits afforded through the tax system to employees.

### Unpaid work and care

Taxes are generally assessed on income. But as the recent literature on poverty notes, there are different concepts of income, depending on what is included, e.g., market income, non-market income from household production, the value of leisure, or other factors (Martinez-Vazquez 2001). Most countries do not include non-market production in income that is liable to tax.

In every country around the world, women do most of the unpaid care work, that is, tasks such as housework, cooking and caring for children, the elderly, and sick people, where the person doing this work is not paid (Budlender 2002). Unpaid care work also includes volunteer work, where individuals assist other households or the community more generally. As Elson (1995) points out, these are all vital services that enable the paid economy to function. In many developing countries, unpaid work that goes beyond care includes subsistence production – production for home use of goods and services such as food, clothing, and other items – and unpaid work in family businesses.[5]

The issue of whether and how to value unpaid work is a subject of debate in the feminist economics and feminist legal communities. It affects the notion of income and consequently the interpretation of who bears the burden of taxes. This is discussed further below.

### Gender differences in expenditure

Not only do women allocate their time differently than do men – between paid work, unpaid work and leisure – but there is also evidence that gender relations and bargaining power among household members affect the types of expenditures households make, the amount and type of savings and other allocation decisions, which is especially important for understanding the incidence of consumption taxes, that is, value-added, excise and fuel taxes.

Across a wide range of cultures, empirical studies have revealed gender differentials in expenditure (Haddad *et al*. 1997; Lundberg *et al*. 1997; Browning and Bonke 2006; Doss 2006). Women, compared to men, tend to spend a higher proportion of income under their control on goods such as food, education and health care that enhance the well-being and capabilities of children (Thomas

1993; Haddad *et al.* 1997; Quisumbing and Maluccio 2000). Indeed, gender differences in expenditure emerge across all countries in this project, as will be discussed further below and in subsequent chapters. It is therefore important to analyse how changes in the relative prices of various commodities will affect women's and men's expenditure patterns and household welfare.

### Gender differences in property rights

In many developing countries, women are frequently denied the right to own and inherit property. In many regions of Africa and Asia, men hold formal land title when land is private. Social norms may dictate that businesses are owned by male family members although women may supply labour to them. In light of this situation, some countries (e.g., India, see Chapter 4) are using the tax system to provide incentives to increase female property ownership.

Nonetheless, in recent decades, women have made strides in some areas of property ownership, most notably in entrepreneurship and business development. Yet tax systems may not recognize female business ownership even when it exists. Stotsky (1997) found that family business income is attributed in many countries (e.g., Tanzania) to the husband regardless of the spouse's role in the business and that in some countries, limitations are placed on the allocation of income from a family business to an unpaid family member because when the spouses are taxed separately, shifting the income to the spouse who pays tax at a lower marginal tax rate is one form of tax avoidance. Gender differences in business and other forms of property ownership are becoming relatively more important but have not yet systematically been addressed in the tax literature.

## Gender equality and tax equity: conceptual framework

Although there are gender issues in all facets of tax policy, including efficiency and ease of administration, this volume concentrates on equity. Gender equality in tax policy can be examined from several perspectives. Our framework builds on the work of two scholars: Janet Stotsky and Diane Elson. Stotsky (1997) pioneered one of the first assessments of the gender implications of taxation systems in developing countries and her work provides a useful framework for assessing the notion of gender 'bias' in taxation systems.

Stotsky distinguishes between explicit and implicit bias. Explicit forms of gender bias refer to specific regulations or provisions in tax law that treat men and women differently. They are more common in personal income tax arrangements than in other forms of taxation in both developed and developing countries. Implicit forms of gender bias, on the other hand, relate to provisions in tax systems that, because of systematically gendered social and economic customs and arrangements, have different impacts on men and women. These may be found in personal income tax systems if they have joint filing requirements that tax secondary-earner income (primarily women's) at a higher marginal tax rate than primary-earner income, thus affecting women's labour supply and other decisions.

Implicit bias may also be found in consumption taxes as a result of gender differences in spending behaviour.

There is much that is useful in Stotsky's framework, but Elson (2006) points out that it has some limitations. She argues that the term 'bias' is a normative and pejorative term, implying an unjustified asymmetry that stems from treating men and women differently. By contrast, a non-biased system would treat them the same. Yet, Elson argues that a gender analysis of taxation must go beyond the principle of sameness to recognize that discrimination and bias take different forms, and that, in order to achieve substantive equality, different groups in society may require different treatment. Different treatment is, therefore, not necessarily biased treatment.

Elson (2006) develops the implications of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) for tax systems. Although there is no specific mention in CEDAW of taxation, CEDAW requires that families be based on 'principles of equity, justice and individual fulfilment for each member' (General Recommendation 21, para. 4). It implies that women be treated as equal to men in tax laws: as individual, autonomous citizens, rather than as dependants of men. Article 1, for instance, specifies that marital status is not an acceptable basis for any 'distinctions, exclusions or restrictions' which impair women's equality with men in the enjoyment of human rights.[6]

CEDAW also recognizes that to achieve substantive (as opposed to formal) equality, different treatment of males and females may be permissible when that treatment is aimed at overcoming discrimination. Article 5 'requires State parties to modify social and cultural patterns of men and women to eliminate practices based on the idea of sex role stereotyping or the inferiority or superiority of either of the sexes' (Inter-Parliamentary Union 2003). Thus, one could argue (as Elson does) that taxation systems should seek to help *transform* the traditional gendered roles in society that are inequitable. In other words, personal income tax systems (e.g., the structure of rates, exemptions, deductions, allowances, credits, etc.) should be designed to actively promote an equal sharing of both paid and unpaid work between women and men as well as eliminate incentives for the perpetuation of gender inequitable roles. This is quite a different interpretation from that provided by standard welfare economics, which takes individual utility as the basis of a social evaluation function to assess whether a policy reform improves social welfare and which adheres to the principle that reforms that make one group better off while making other groups worse off are undesirable.

### Re-interpreting horizontal and vertical equity from a CEDAW perspective

The ideas put forth by Elson and Stotsky can be used to re-examine the notion of equity in tax theory and policy. Public finance theory and practice have long distinguished 'equity' or fairness as one pillar of taxation (Musgrave and Musgrave 1989). Equity in taxation expresses the idea that taxes should be 'fair' and is a concept used in all tax policy analysis. However, it should be noted that

equity/fairness is a normative, value-based concept and its interpretation differs across individuals, countries, cultures and time, making it difficult to apply in any consistent and meaningful way to facilitate comparisons across countries.

Tax equity is commonly discussed according to two definitions of 'fairness'. These definitions are also normative, and sometimes conflict, so they too are difficult to apply in practice. However, they are a common reference point for discussion. Horizontal equity posits that taxpayers who are equally situated in economic terms should be treated equally for tax purposes. Vertical equity posits that taxpayers who are not identical from an economic standpoint, but are differently situated, should be treated appropriately differently for tax purposes.[7] In practice, it is difficult to come to any definite consensus as to what counts as equivalent and what counts as different. And, even if there is rough agreement on what count as equivalent and what counts as different, it can be very difficult to apply these concepts in tax policy. Many countries do achieve some degree of vertical equity, but horizontal equity is nearly impossible to achieve for reasons that are discussed below.

### Horizontal equity in personal income taxes

As noted above, horizontal equity is defined as the requirement that equals be treated equally. From a gender perspective, there are a number of problems with this concept. The first is that horizontal equity is equivalent to what CEDAW considers to be formal equality. Yet, as noted above, formal equality is not necessarily sufficient to change the underlying conditions that produce gender (and other forms of) inequality. As Claire Young (2000: 7) notes, a gender analysis must

> encompass the concept of substantive equality. An approach based on formal equality would treat all individuals the same regardless of the differences between them. This approach is inadequate to the task of creating real equality because it does not encompass or even acknowledge inequality of condition.

Julie Nelson (1996: 97) raises another problem with the traditional notion of horizontal equity:

> The conception of horizontal equity not only requires that one answer the question of what 'the same situation' means across units, but also, more fundamentally, that one determine a proper unit across which to make the comparison. The notion of horizontal equity requires a belief in a fundamental similarity among the units being compared, something that is much easier envisioned in the abstract, than in concrete cases.

She goes on to note that the translation of the ideal of horizontal equity into actual tax policy has been strongly influenced by 'patriarchal' interpretations of what constitutes

the same situation and what constitutes the appropriate unit of taxation, e.g., the individual, the family, or the household. This is taken up in the next section.

### The proper unit of taxation: individuals or households?

An important question for all countries is whether the proper unit of taxation is *the household* or *the individual*. Every country in this study has adopted individuals as the filing unit for personal income taxes.[8] Under an individual filing system, all persons are responsible for filing a tax return if they have taxable income. Married individuals file a separate return based on their own labour earnings, and non-labour earnings and exemptions or deductions for children and other purposes are allocated in some way determined by the tax law (Stotsky 1997). Systems that use joint filing assess tax liability on the combined income of both partners and the couple is the filing unit.

An individual filing structure is considered by many feminist economists to be more gender-equitable than joint or family taxation.[9] As Sue Himmelweit (2002: 16) states:

> [S]eparate taxation means men and women are taxed on and therefore face incentives based on their own income alone. This can be seen as a step towards gender equality in employment, since it favours a household with two earners over a single-earner household with the same income. Separate taxation also improves women's bargaining power within their households; as women usually earn less than their husbands, wives will generally gain from being taxed at an individual, rather than a joint, rate.

Because individual filing systems avoids incentives to have male-breadwinner families with female dependants, they are more gender-equitable.

Although individual filing systems are more gender-equitable than joint or family taxation systems, most analyses of horizontal tax equity take the household as the unit of analysis. Assessing equity on a household (as opposed to individual) basis shows that many individual filing systems are not horizontally equitable. First, individualization of personal income tax results in an overall system that is less well targeted on household income, and, therefore, for the same overall tax take, can be less progressive in terms of the distribution of after-tax income between households as compared to systems of joint taxation (ibid.).

Second, as the chapters on Argentina, Ghana, India, South Africa, Uganda and the United Kingdom illustrate, individual filing systems also introduce inequities between households with two earners and those with one earner and a financially dependent spouse, both of which have the same number of children and the same total household income.[10] Households with the single earner and financially dependent spouse generally pay higher tax on their income than dual-earner households. Some have argued that this constitutes horizontal inequity, although others counter that it may not because these households are not 'the same'.

If financially dependent spouses provide unpaid work in male-breadwinner households, this household 'production' creates in-kind income which should be factored into total household income (Pechman 1987). As Young (1999: 4) states:

> The issue is that the value of women's labour in the home is earned income in kind, a form of imputed income, and one that gives a personal benefit either to the person who performs it or to other members of the family. Ignoring its value for tax purposes is problematic.

Nelson (1996) echoes this view, arguing that horizontal equity requires that tax systems should take into account the value of the output of unpaid work done in the home, as well as the value of income earned outside the home. If this is not done, she concludes, there will be unfair treatment of households in which both husband and wife do paid work, as compared to those with a male breadwinner and a financially dependent female homemaker who provides a significant amount of unpaid work (see also Staudt 1996).

The idea that unpaid domestic work should be quantified and included in total household income for tax purposes is, however, controversial. Some are concerned that the tax burden of low-income households would increase more than the tax burden of high-income households. Phillips (2002: 65) notes that many tax analysts agree that it is appropriate for one-earner couples with a breadwinner and stay-at-home spouse to pay somewhat more tax on their market income in order to offset the substantial tax-free economic benefits (goods and services) generated by the stay-at-home spouse's unpaid work. Moreover, as Elson (2006: 82) points out, taxes have to be paid in money, and cannot be paid through unpaid domestic work (one cannot bake a cake and take it to the tax office as part of the payment of the tax bill). She suggests that the value of unpaid work can be addressed in other ways, for instance, through the provision of tax allowances to women who participate in paid employment in order to offset some of the costs of buying substitutes for the unpaid domestic work they would otherwise do, or through the expenditure side of the budget in the provision of subsidized dependent care and other services.

Households with one earner, a stay-at-home spouse and children should also be compared to households with one earner, no stay-at-home spouse and children. In Argentina, Ghana and Morocco, the availability of a deduction for a dependent spouse causes single-parent households to bear a larger burden than male-breadwinner households with financially dependent spouses.

If household services are counted as income, the ability to pay of a household with one earner and a stay-at-home spouse will be higher than a household with two earners and the same money income because the two-earner couple needs more income to purchase market goods to replace home production. The ability to pay of a household with one earner and a stay-at-home spouse will also be higher in single-parent households. Although older children in both households are likely to provide some household production, the level will probably not approach that provided by a full-time adult homemaker. Young children are

likely to provide even fewer services and may in fact require more attention from the adult earner. As Nelson (1996: 104) asks, why, with less household production, should the single parent have to often pay more in taxes than the dual-earner couple with the same money income? This is clearly a relevant issue for several countries in this study. In Ghana, for instance, a substantial minority, and in South Africa, a majority of single-earner households with children are headed by women, and they bear a heavier burden of income tax than other types of households.

These arguments suggest that the discussion of horizontal equity is not simple and can only be implemented in practice if adjustments are made to account for differences in household composition/earning structure and to incorporate unpaid work in the definition of taxable 'income'. The tax analyst would have to determine whether there are non-earning adults in single-earner households who provide child care, cooking, cleaning and other services that a dual-earner couple would have to purchase from their own earnings or supply themselves and then calculate the value of that in the income that is liable to tax. Issues of valuation raise other problems, including the lack of consensus in the literature on the appropriate method.

### Vertical equity in personal income taxes

These issues can also be examined from the perspective of vertical equity, which posits that taxpayers who are *not* identical from an economic standpoint, but are differently situated, should be treated appropriately differently for tax purposes. Personal income taxes can achieve vertical equity if they have *progressive* rates; in other words, those with lower incomes should pay lower average tax rates than those with higher incomes. Evaluating vertical equity typically involves comparing households at different levels of income.

The example discussed above of the differential taxes paid by single- and dual-earner households can be reexamined from the principle of vertical equity. According to this principle, the incidence of single-earner and dual-earner households should be different because these households are different in relevant ways, as explained above. CEDAW principles can add greater weight to the argument that single-breadwinner/stay-at-home spouse households should bear a heavier tax burden than dual-earner households. As Diane Elson (2006) has suggested:

> What is at stake is not equality in terms of incidence of PIT on household income but equality in terms of implications of PIT for the set of gender relations. Many gender equality advocates would argue that the PIT *should not* result in a lower tax burden for families with breadwinner husbands and financially dependent housewives who do not engage in paid employment but *should* result in a lower tax burden for families in which both husbands and wives undertake unpaid domestic work and are in paid employment. The grounds for doing this are that dual-earner-dual-carer families constitute a more equal gender regime than male breadwinner – female carer families.

This volume also adopts this point of view.

## Explicit and implicit gender biases in personal income tax

Even though individual filing systems may be generally more gender-equitable than joint filing in the respects suggested above, they still often contain explicit and implicit gender biases noted by Stotsky (1997). Table 1.1 illustrates the type

*Table 1.1* Types of explicit and implicit bias in PIT

|  | *Explicit bias* | *Implicit bias* |
|---|---|---|
| Allocation of non-labour income/ family business income | Joint property filed in husband's tax returns. However, women could face a lower tax burden because income earned from property is filed by the husband (Argentina) |  |
| Allocation of tax preferences, exemptions and deductions | Reduction of tax for dependants benefit men (Morocco) Exemption limits higher for women (India) | Professional exemptions and deductions benefit professionals and formal employment – men more likely to be in this category (Argentina, Ghana, Mexico, Morocco, South Africa, the UK, Uganda) Exemptions for interest or dividend payments – men more likely to own stocks and equities (Argentina, Ghana, South Africa) Household-based means testing of income for tax credit system in effect causes secondary earner to face a higher marginal tax rate. Inheritance tax exemption – paternal inheritance benefit (Uganda) |
| Rate structure or tax burden |  | Hypothetical household example shows single-headed households face higher tax burden – female single heads (Argentina, Ghana, Morocco, South Africa) Fiscal drag (Ghana, Uganda the UK) |
| Collection of income tax |  | Collection of taxes at source and does not adjust for income at the end of the year – women's incomes is more irregular (South Africa) |

of explicit and implicit gender biases in the personal income tax systems of the countries studied in this volume.

Explicit gender biases exist in three countries in our study, but implicit gender biases arise in all countries. One manifestation of explicit gender bias is the allocation of deductions, exemptions and other tax preferences on the basis of sex. This is the case in Morocco where married men are entitled to take deductions for dependent spouses and up to six children but married women can do so only if they can prove legally that they are the heads of their households. Another occurrence of explicit gender bias in tax codes is the allocation of all non-labour income to the husband regardless of the circumstances. Argentina is an example of this type of gender bias. In Argentina, all non-labour income from a jointly-owned business or financial investment is allocated to the husband to report on his tax form. Although this may result in a lower tax burden on women, this provision in the tax code constitutes discrimination. A third type of explicit bias is in India, which provides the rare example of explicit bias in favour of women. Women can receive a higher exemption for income tax than men can receive irrespective of the circumstances they live in. The rationale for providing such exemptions is to encourage women's workforce participation

Stotsky (1997) observes that it is much more difficult to identify implicit gender bias, since this depends in large part on value judgements regarding desirable social and economic behaviour. Nonetheless, implicit gender biases are also present in all countries studied in this project. For instance, in Argentina, Ghana, Mexico, Morocco, South Africa, the United Kingdom and Uganda, it takes the form of professional exemptions and deductions that benefit professionals and those in formal employment, for which men are more likely to be eligible, or in Argentina, Ghana and South Africa, exemptions for interest or dividend payments on stocks and equities, two types of financial assets that men more than women are likely to own.

Another type of bias was found in the Working Families Tax Credit (WFTC) in the United Kingdom which contained a disincentive to men taking on more of the unpaid work of child care that has traditionally been seen as women's role. Introduced in 1999, the WFTC was intended to provide an income supplement to families of low-paid earners with children. It included a supplement if one parent was employed for more than 30 hours per week, but this supplement could not be claimed if the parents were employed for 30 hours between them, so that each did some paid work and some unpaid child-care work. It therefore created an incentive to maintain the traditional division of labour and a disincentive to share paid and unpaid work more equally within families. This is an interesting case in which feminist intervention on tax policy was successful; as a direct result of representations by the UK Women's Budget Group, this bias was removed from the new Tax Credits introduced in 2003, and the supplement for 30 hours employment now applies however these hours are divided between a couple.

Finally, the way tax is collected could also cause implicit gender biases. In South Africa, tax is collected by an automatic deduction of earnings at source called the Standard Income Tax on Employees (SITE). Budlender, Casale and

Valodia (Chapter 10) raise the possibility that the system disadvantages those who do not work consistently over the year because the tax is deducted as if the worker derives consistent earnings, although many, especially women, work irregularly.

## Vertical and horizontal equity in indirect taxes[11]

Indirect taxes are perceived to be horizontally equitable but vertically inequitable. They are seen to be horizontally equitable because equally wealthy (poor) people tend to consume relatively equal amounts of goods and services. They are seen to be vertically inequitable, as poor people tend to spend a larger proportion of their income on consumption than do the wealthy, so they pay relatively more tax as a percentage of income. Analytical studies find mixed support for the proposition that VAT and other indirect taxes are regressive.[12] Three studies in Sub-Saharan Africa (Ghana, Madagascar and Uganda) that use data from the 1990s find that the VAT is progressive or mildly progressive, although excise taxes on kerosene and export duties on traditional agricultural exports are regressive (Younger 1996; Younger *et al*. 1999). Some studies from Latin America and the Caribbean find similar results (Edmiston and Bird 2007).[13]

No study has yet examined the horizontal and vertical equity dimensions of indirect taxes from a gender perspective. This is due largely to a fundamental conceptual and empirical challenge, namely that expenditure (and often income) data are collected at the household level. The conventional approach to 'gender' at the household level is to disaggregate households by the sex of the household head; this is the method used by Bird and Miller (1989) that is discussed in Chapter 2, which is the only other known study of the incidence of indirect taxation with a gender dimension. Yet, there are many problems with classifying households on the basis of headship.

One issue is that the definition of the household head is often conceptually fuzzy and empirically messy. The definition used by the Morocco Statistical Institute illustrates this well: 'Any person who is considered by the members of the household as such, and generally contributes for a great part in the household expenses (breadwinner) and generally has the responsibility for the management of the household expenditures.' What is particularly problematic about this definition is that it conflates two concepts: the person who contributes the greatest part of household income may not be the same person who is responsible for management of household expenditure. Moreover, in countries such as South Africa, if a head is said to be absent, an 'acting head' is designated instead; this is often done in households with migrant members working abroad. Data coding does not distinguish between a 'real' head and an 'acting' head, so the categorization combines some very different situations. A more pragmatic challenge is that different countries use different definitions of headship, which makes it impossible to make valid comparisons across countries. The comparative analysis in Chapter 2, therefore uses the category of household headship as a baseline to compare to other work but then develops an alternative approach.

Ideally, to do a gender-aware incidence analysis, data are needed on expenditure by individuals, even though that expenditure may purchase goods and

services that are for individual use, for household use, and for others outside the household. Data are also be needed to understand the gender relations that produce male and female expenditure patterns, including the assignment of expenditure to specific individuals, control over expenditure, and the rules that govern the allocation of purchased goods across household and non-household members. Unfortunately, individual level expenditure data do not exist in most countries, especially developing countries, and the data that do exist do not have sufficient information to do a gender analysis.

Given the lack of intra-household information, there was considerable discussion in the project of how to do a gender analysis using household expenditure data. It was decided to exploit several demographic variables in the country-level data sets that are used in the incidence analysis in the chapters that follow, specifically, household sex composition and adult employment. Sex composition is used as a proxy for the gender relations in each country that produce observable male and female expenditure patterns. The analysis distinguishes between households with a greater number of adult females, households with a greater number of adult males, and households with an equal number of adult males and females. A lack of information within each country on the gender relations that underlie expenditure patterns makes it difficult to develop a priori hypotheses about which households will bear the incidence of different taxes (e.g., the VAT, excises or fuel).

Second, employment is used as a proxy for bargaining power; the analysis distinguishes between female-breadwinner households (with no employed males), male-breadwinner households (with no employed females), dual-earner households, and households with no employed adults. In light of empirical information from several studies, we hypothesize that employment and the income from that employment will allow women to exert greater control over household expenditure, resulting again in different expenditure patterns and tax incidence than in male-breadwinner and dual-earner households (Thomas 1993; Doss 2006).

## Explicit and implicit bias in indirect taxes

Stotsky (1997) notes that taxes on goods and services, such as VAT, the retail sales tax, and the excise tax, tend not to show explicit gender bias in that the tax liability is established based on the purchase or production of a commodity. However, she does argue that implicit biases can be present in indirect taxes, manifested, for instance, through the choice of coverage of the tax (some goods may be exempt or zero rated), or through tax preferences given to certain purchasers or producers. Implicit biases may also result from differential expenditure patterns by men and women of various goods. Indeed, Stotsky (ibid.: 11) argues that: (1) high rates of excise tax (as compared to the standard VAT) on alcohol and tobacco are implicitly biased against men, who disproportionately consume these goods; and (2) lower rates of VAT (than the standard rate) on medical care are implicitly biased against men, who consume less of these goods than do women.

A problem with this interpretation is that it implies that governments shouldn't take account of whether alcohol, tobacco, and medical care are equally socially valuable consumption goods. Yet there are grounds from both a public finance and a gender equality perspective to distinguish different types of goods and services. For instance, in the public finance literature, 'merit goods', which are socially valuable and have positive externalities are distinguished from 'demerit goods', which are goods that may have adverse effects both on those who consume them and on others. Tobacco fits the description of a demerit good, while health care is a merit good. The public finance literature also distinguishes basic necessities, which are essential for a decent standard of living, from luxuries, which are optional extras. Health care is also a necessity, while alcohol consumption can be considered an optional extra.

Many tax economists accept these distinctions and consider it justifiable to tax merit goods and basic necessities at a lower rate than demerit goods and luxuries. Once this distinction is accepted, inequality in tax incidence between those who consume demerit or luxury goods that attract higher tax rates and those who consume merit goods or basic necessities that attract less tax would *not* in itself constitute an implicit gender bias. Recall also the discussion earlier in the chapter whether the meaning of the word 'bias' implies an unjustified asymmetry. It may be that women have different health needs (e.g., reproductive health) that require them to make more use of medical facilities than men. Reproductive health is both essential for economic development and a basic human right. From a CEDAW perspective, then, this would be an additional argument for differential tax treatment of those goods/services that promote substantive gender equality and higher overall social welfare.

## Approach to the country studies

A gender analysis of taxation would examine the content of tax laws and tax rules, the burden or incidence of taxes, and the behavioural responses to tax changes. Chapters 3–10 undertake the first two types of analysis for personal income tax and selected indirect taxes (the VAT, excises, and fuel levies). In six of the eight countries represented in these chapters, this is the first gender analysis of tax laws and rules and the burden of direct taxes. In most countries, this is the first gender analysis of the incidence of indirect taxes.[14] Although we were unable to examine behavioural responses to tax changes in the current project, this is an important issue that will be a subject of future research.

Each of the country chapters follows the same overall approach. They begin with an analysis of the gender differences in economic activity, discussed above, that are relevant to the analysis of the impact of the country's tax system on women and men.

Next, the studies examine, from a gender equality perspective, the various dimensions of the personal income tax system, including rate structure, definition of income subject to tax, exemptions, tax preferences and whether the system adjusts for inflation. They also analyse the tax burden of different types of households,

according to selected gender characteristics, at the median income, one-half the median income, and twice the median income.

Following the analysis of PIT, each country team undertook an incidence analysis of indirect taxes using national-level household income and expenditure surveys. The goal of tax incidence analysis is to determine the share of taxes paid by different groups in society, in this case for different gendered household types at different levels of income. The incidence analysis was conducted for the total of value-added taxes, excise taxes, and fuel levies; for each specific tax; and for specific commodities, such as food, children's clothing, and alcohol, items that were chosen because they highlight the gendered nature of expenditure. To do the analysis, the research teams developed a consistent empirical methodology for both direct taxes and indirect taxes that can be used across countries. In several countries in this project, the gender analysis is also disaggregated by race and ethnicity. The methodology is described in detail in Chapter 2.

Third, each chapter simulated a number of context-relevant tax policy reforms and examined how such reforms would change tax incidence. One common simulation across countries was to either exempt or zero-rate commodities that are both important for the poor and that can advance at least one dimension of gender equality, for instance, by reducing women's unpaid work burdens or by making it easier for women to engage in paid employment.[15] In order to compensate for possible revenue losses as a result of these reductions, country teams also simulated raising taxes, for instance, on luxury items, fuel for private transport, tobacco or alcohol, and other items. Finally, each chapter made a series of recommendations for reform of the national tax system.

Chapter 2 describes the above approach in greater detail and brings together the findings from each country in a comparative perspective. Chapter 11 discusses the implications of the findings of the comparative analysis and the country chapters for international and national tax policy. While some countries (the United Kingdom and South Africa) have undertaken reforms to remove explicit gender biases in their personal income tax laws, no personal income tax system can yet be classified as transforming unequal gender relations. For instance, in South Africa, reforms in 1995 eliminated separate schedules for taxpayers based on their marital status but introduced new inequities against non-nuclear families into the system (see Chapter 8). Similarly, the United Kingdom has a progressive individual filing system but tax credits that are means-tested at the family level are based on two problematic concepts, that of 'main carer' and 'main earner' which go against the equal sharing of paid and unpaid household roles. The tax systems of a few countries (Morocco and India) actually reinforce certain gender inequalities, while others are at best gender-neutral. As a result, in most countries there is an urgent need for reform of some aspects of the personal income tax systems to eliminate explicit and implicit gender biases.

The analysis of indirect taxes found that in some countries indirect taxes are both pro-poor and gender-aware in relation to expenditure. This depends, though, on the structure of zero-rated and exempt goods.[16] In other countries the findings are not so clear-cut. The policy simulations, however, show that there are steps

that governments can take to increase the degree of gender equality through the tax system while maintaining revenue neutrality. At the same time, major transformations should happen outside the tax system through government expenditure on public services for poor households.

## Conclusion

This volume seeks to make the case that gender equality in taxation is worthy of academic and policy attention. The project on which it is based developed a useful methodological approach that was successfully applied in countries at very different levels of development and with different tax systems. This methodology could be extended to other countries that have the requisite consumption expenditure and taxation data. The project has also generated a set of very detailed country studies that provide important information for tax policy-makers, as well as some specific recommendations for steps that could be taken to promote gender equality in ongoing country tax reforms.

However, the research discussed herein is only a first step in opening up a new area of research, and much more analysis needs to be undertaken. Chapter 11 discusses several areas for future research. Three of these are highlighted here as a high priority for next steps.

First, the tax incidence analyses in this volume explore only one dimension of fiscal policy. Yet, most analysts would point out that the effects of tax policy should be seen in conjunction with government expenditure. As Bird and Gendron (2007: 18) note, what matters most fundamentally are the overall effects of the fiscal system on income and well-being of different people. And, because many social policy instruments are designed to 'work' on both the revenue and expenditure sides of the budget, it is important to devise a methodology for research that combines gender-aware tax incidence with gender-aware benefit incidence.

Second, this volume has focused only on first-order approximations of tax incidence and has not considered the behavioural impacts of tax changes. A second line of research could fruitfully examine behavioural responses to changes in the PIT, such as in female and male labour supply in developing countries (which has not yet been done) or to changes in indirect taxes and excises, such as intra-household income shifting and changes in time allocation in both paid and unpaid work. Examining some of these behavioural responses would have to go beyond traditional economic approaches. It will require delving into issues of intra-household power and distribution, drawing on techniques and information from other disciplines such as anthropology and sociology.

Finally, it would be useful to broaden the gender analysis of taxation to the two other cornerstones of tax policy, namely, efficiency and administration, which are wide open areas for study. With solid research on these issues, and appropriate policy attention, it may be possible to develop systems of revenue and expenditure that both are gender-equitable and generate sufficient revenue to fund government services aimed at reducing poverty and improving social welfare.

# Notes

1  It is difficult to distinguish income tax from corporate tax revenue in Mexico, so this figure includes both. Moreover, the total tax revenue figure in Mexico is high between the years 2006–08 because the fuel tax was actually a subsidy in those years. Although the fuel tax is classified as a Special Tax on Production and Services, its rate varies according to international prices. It is calculated as the difference between Mexican and international prices divided by the international price. Thus, when Mexican fuel prices are higher than international fuel prices, the tax rate is positive, when Mexican fuel prices are lower than international fuel prices, the rate applied is negative and the tax effectively becomes a subsidy.

2  The share of VAT is a percentage of total revenue; the latter including non-tax revenue (fees, income and foreign assistance) for Ghana.

3  Mexico is not strictly comparable to the other countries because of the inclusion of fuel taxes in the denominator, which, as explained above, was effectively a subsidy in 2007.

4  In much of the mainstream economics literature, gender is often conflated with biological sex and interpreted to mean a focus on the needs of men equally with women. For feminist economists, the concept of gender is much richer, implying the social relations of power that govern hierarchies among people based on biological sex, age, life-cycle position, and family status (Ferber and Nelson 1993).

5  The System of National Accounts, a set of internationally accepted rules for calculating Gross National Product (GNP), distinguishes between 'production' and 'non-production activity,' with the former activities being included and the latter excluded in the calculation. Production is defined as any activity that one could, at least in theory, pay someone else to do. Unpaid domestic services are considered non-production activities and are therefore not counted as part of the GNP. By contrast, some kinds of unpaid subsistence production, such as collecting fuel and water and growing subsistence crops, are now regarded as being production and should therefore be counted in the GNP.

6  Elson (2006) noted that in one instance the CEDAW committee expressed concerns about taxation systems that perpetuate stereotypical expectations for married women (Germany, CEDAW, A/55/38 part I (2000) 29 at para. 314).

7  Underpinning these criteria is the principle of ability to pay, which recognizes that some individuals are more easily able to contribute than others. The hallmark of this principle is the progressivity of the tax system.

8  Nelson (1996) notes that many governments, especially in OECD countries, which have adopted independent filing have also incorporated some consideration of family and household relationships, through manipulation of exemptions, deductions, credits and rate schedules. So, while individuals may be the filers, the tax paid is usually not based on the individual's earnings alone, but also takes into account whether they are single or married, have children or are childless, and whether they are or are not the single earners in their household.

9  Joint taxation has been shown to have a number of implicit gender biases (Stotsky 1997). In the presence of a progressive rate schedule, the gross income earned by the secondary worker is taxed at the (high) marginal rate that applies to the last dollar earned by the principal earner (OECD 2005). In this way, joint taxation creates disincentives for the second earner (generally the woman) to enter the labour market.

10  In the United Kingdom, the existence of the Child Tax Credit and Working Tax Credit reduces the total tax burden on both single-earner and dual-earner households, more so for the latter.

11  The discussion in this section draws extensively on two memoranda prepared by Debbie Budlender and Diane Elson for a project meeting in Durban, South Africa, February 2007. We are grateful for their insights on this topic.

12  A tax is progressive if the proportion of income paid in tax increases as income increases, regressive if the proportion of income paid in tax decreases as income increases, and proportional if the proportion of income paid in tax is constant as income increases.

13 These studies use expenditure as the base to calculate incidence (see Chapter 2 for an explanation of how incidence is calculated). Using expenditure as the base gives different results than using income as the base because the marginal propensity to save increases as income increases. It is possible that if these studies had used income data, the incidence of consumption taxes would be less progressive and even mildly regressive (Bird and Gendron 2007).

14 As part of the South Africa Women's Budget Initiative, James and Simmonds (1997) and Smith (2000) undertook analyses of indirect taxes, but not at the same level of coverage or quantitative detail.

15 Zero rating is when the rate of tax applied to sales is zero although a credit is still given for taxes paid on inputs. Exemptions are similar to zero rating in that taxes are not charged on outputs but are different in that tax paid on inputs cannot be reclaimed. This is explained more fully in Chapter 2.

16 Some countries also conducted the incidence on the basis of income instead of expenditure. By the measure of income, the incidence of indirect taxation becomes regressive. See Mexico (Chapter 5).

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# 2    Methodology and comparative analysis

*Caren Grown and Hitomi Komatsu*

## Introduction

This chapter explains the methodology that each country team used to investigate gender bias in personal and indirect taxes. It also synthesizes the findings across countries and puts them into perspective against other literature on tax incidence, especially in developing country economies.

## Personal income tax (PIT) analysis

The analysis of the personal income tax system examined several features of each national tax system, including whether the system is schedular or global; the rules for filing tax returns; the definition of taxable income and exemptions in each system; the rate structure applied to taxable income; the various tax preferences that reduce the tax base and lower taxable income; and how tax rates are adjusted for inflation.

### Schedular versus global tax systems

Under a schedular income tax, each source of income, such as from wage employment or self-employment or capital gains faces a different schedule of tax rates. Under a global income tax system, income from various sources is aggregated and typically one schedule of tax rates is applied. Global income taxes often have schedular elements applying to income from certain sources, such as capital gains. Global income taxes may be subdivided into two main types based on whether taxpayers file joint returns or individual returns. Of the countries in this study, Argentina, Mexico, Morocco, South Africa and the United Kingdom have global tax systems (with schedular elements), while India, Ghana and Uganda have schedular systems. The filing unit in all countries is the individual taxpayer.

Stotsky (1997) has examined the presence of explicit and implicit gender biases in both systems. She notes that global income taxes have typically been the source of explicit gender bias through rules governing the allocation of shared non-labour or business income, the allocation of exemptions, deductions and other tax preferences, the setting of tax rates and the responsibility

for filing tax returns, and hence have been the focus of efforts to eliminate such bias, particularly in industrialized nations. Explicit gender discrimination in a pure schedular income tax is rare because tax liability is established with respect to a particular source of income rather than a particular taxpayer. In other words, income from wages might be withheld from workers according to a specific rate schedule, income from interest income under another rate schedule, and so on.

However, implicit gender bias can be present in a schedular system, as evidenced by the case in Argentina, where the PIT system provides for three distinct employment categories, each with its own rules: employees, self-employed taxpayers (high- and medium-income independent workers) and *monotributistas* (individuals registered under the simplified tax regime for small and medium-sized taxpayers, who are mostly low-income independent workers). As seen in Chapter 3, the taxes paid by the self-employed and *monotributistas* are well above those of paid employees at the same level of income; since women predominate among the self-employed and *monotributistas*, this can constitute an implicit bias against women.

## Rate structure

Within most personal income tax systems, income is sliced into brackets. The income in these brackets is taxed at increasing marginal rates, which is the basic model of a progressive tax system. The degree of progressivity depends on the width of the brackets and the steepness of the increase in the marginal rate applied to income in each bracket, on the one hand, and on the tax threshold – the level of earnings at which income tax is first paid, on the other. Most countries in this study have between five and seven income brackets, although the United Kingdom has fewer.

In most countries discussed in this volume – Argentina, Ghana, India, Mexico, South Africa and Uganda – a large percentage of the working population falls outside the income tax net. Women are less likely to be inside the tax net in these countries because they earn less income and are more likely to work in the informal economy, often as self-employed or unpaid family workers, where their earnings are not otherwise reported and therefore more likely to escape tax. In India, the average income is less than the income tax threshold and hence only 2.7 per cent of the population (and less than 0.3 per cent of working-age women) are inside the income tax net, and in Uganda, 82 per cent of the labour force (and 89 per cent of employed women) have income that is below the income tax threshold. In South Africa, 73 per cent of employed women and 65 per cent of employed men have earnings below the income tax threshold, while in Mexico, 64 per cent of the labour force and 72 per cent of women workers fall outside of the income tax net. In Ghana, 40 per cent of working women and 27 per cent of working men earn less than the income tax threshold. In Morocco, 26 per cent and 35 per cent of men and women, respectively, in the private sector fall outside of the income tax net in contrast to nearly all public sector employees who are within it. Finally, and not surprisingly, the United Kingdom has the largest coverage in

income tax for the population. Most adults pay personal income tax, including many of those who receive tax credits.

## Definition of income and exemptions

It is important to delineate what each country's tax code considers as taxable income and what it exempts from taxes. Provisions that define taxable income and exemption from income tax can create implicit gender biases. In Argentina and Ghana, exempt income includes dividend payments and interest paid to individuals by financial institutions and interest paid on government bonds. These exemptions not only predominantly benefit higher-income groups but also tend to benefit men more than women because men are more likely to own financial assets, creating an implicit bias. In Uganda, property gained by gift, bequest or inheritance is exempt from personal income tax. Since men are more likely to inherit property due to the patrilineal inheritance system dominant in most communities, this tax provision favours men. Further, income earned from certain professions is exempt from tax in Uganda. For example, wage earnings of members of the Defence Force, the armed forces, the police and the prison services are exempt from income tax. This disproportionately favours men since they make up 95 per cent of the Defence Force and 75 per cent of the police force.

### Tax preferences

In most countries, taxpayers may claim various forms of tax relief – deductions or allowances – which can be structured differently (e.g., as flat amounts or as a percentage of income or according to a particular formula), and credits against tax on personal income.[1] Table 2.1 lists key deductions/allowances and credits by country, excluding those for financially dependent spouses and children which are discussed separately below.

Deductions and allowances that reduce total taxable income disproportionately benefit those with higher incomes who pay higher marginal tax rates. Further, in most countries discussed in this volume, individuals with higher incomes are the heaviest users of deductions and allowances, largely deductions for professional expenses, interest on loans or insurance premiums. This tends to undermine the progressivity of income tax. Since men predominate in the higher-income categories and women predominate in the lower-income categories, the structure of deductions can also contain implicit gender biases, given the gendered nature of employment and care-giving roles.

In Morocco and the United Kingdom, there are also specific deductions and allowances available to taxpayers which favour high-income earners who are disproportionately male. For example, in Morocco, certain groups of employees – casino workers, night workers and selected other professions – can claim deductions of up to 28,000 dirham per year. Men predominate in these professions. More broadly, deductions for certain types of expenses that may enable women to participate in paid employment – such as child care – are not available. In the United Kingdom, deductions also show a pattern that somewhat favours men.

*Table 2.1* Key deductions and exemptions in PIT (excluding those for non-earning spouses and dependant children)

|  | Deductions | Exemptions |
|---|---|---|
| Argentina | Deductions only available to self-employed (high-income) workers and workers in formal employment for: contributions to pension and health care schemes, life insurance premiums, funeral expenses, retirement insurance, medical coverage costs of taxpayers and family members, interest on mortgage-backed loans, expenses on domestic workers | Minimum threshold annual income of less than AR$9,000 (for self-employed and wage earners)<br>Incomes from labour-related awards and seniority compensation, but excludes damages to women dismissed for pregnancy<br>Interest payment or dividends from financial institutions or governments |
| Ghana | Interest on loans, rent on land or building occupied by the business, repair and maintenance costs of equipment and utensils, bad debts, research and development expenditure, capital allowances, foreign exchange losses incurred with respect to the conduct of the business and carry over losses<br>Life insurance premiums, contributions to pension funds | Tax-free threshold of GH¢240. Interest payment or dividend or any other income of an approved financial institution<br>Capital sums paid to a person as compensation or for personal injuries or the death of another person<br>Scholarship, bursary or similar endowment<br>Pension incomes<br>Salary, allowances, pension and gratuity of the President |
| India | Entertainment allowance and business expenses | Men's exemption threshold is 150,000 Rs while women's exemption threshold is higher at 180,000 Rs<br>Allowance for research |
| Mexico | Professional expenses, goods and raw materials for businesses. Medical and funeral costs, charitable donations, mortgage interest payments. Inherited wealth, revenues from jointly owned goods of married couples | Monthly exemption threshold of $4,380.30 Mexican pesos. Overtime pay, reimbursements for medical and funeral expenses, social security payments, insurance indemnities or compensation, work-related travel expenses |
| Morocco | Donations to charity, interest payment on borrowing, mortgage payments, insurance premiums and contributions to social security | Exemption threshold is 28,000 dirhams. Pension incomes, life insurance payments, alimony, student tuition, lay-off work indemnities, employers' contribution to social security |

*Table 2.1* (Continued)

|  | Deductions | Exemptions |
|---|---|---|
|  | Pension incomes<br>Deductions for professional expenses for certain employee (e.g., journalists, pilots, life insurance agents, casino employees) |  |
| South Africa | Contributions to medical insurance, contributions to retirement funds, subsistence and entertainment allowances, travel expenses, donations to certain charities (subject to limits)<br>Normal expenditures and losses incurred in the production of income | Exemption threshold is R40,000 for those under age 65 and R65,000 for the elderly<br>Investment income up to R19,000 for those under age 65 and R27,500 for the elderly |
| Uganda | Expenditures and losses incurred in the production of income and disposal of assets | Minimum income exempt from PAYE is Shs 130,000 per month. Educational grants, property inheritance, pension income, life insurance payments. Earners of agriculture, plantation or horticulture income. Wage incomes of employees of the armed forces, Defence Force, police and prison services |
| United Kingdom | Professional expenses for employees (business mileage and fuel, professional fees and subscriptions, tools and specialist clothing, capital allowances, household expenses for working at home, travel and subsistence costs.)<br>Child-care expenses provided or funded by employer, up to £55 a week<br>Non-refundable tax credits for donation to charities<br>Non-refundable tax credit on dividends | Exemption threshold of £6,035 (higher for older people)<br>Incomes from most means-tested social security benefits and some non-means-tested such as child benefits; income from certain savings products, such as National Savings Certificates, Personal Equity Plans and Individual Savings Accounts |

Deductions are more often available to higher earners, mostly men, and tend to recognize expenses that are directly incurred during employment better than they do the costs for those with care-giving responsibilities in getting to employment. For instance, deductions for child-care expenses are limited and available only to those whose employers participate in a national scheme.

Although tax allowances or deductions erode the tax *base*, tax credits reduce the tax due, and may explicitly benefit lower-income groups, which increases the progressivity of the income tax. In the United Kingdom, for example, Child and Working Tax Credits are means-tested payments to families. The inclusion of these tax credits in the UK tax system makes it highly redistributive towards both poorer households and women within both poor- and median-income households (see Chapter 10). However, the family-based means testing of income undermines the individual filing system and results in secondary earners facing a higher marginal tax rate. The Working Tax Credit is paid to families with at least one member in paid employment and is not increased when there is a second earner. It therefore provides an incentive for only one earner in a family or household to take employment. Since women are more likely to be seen as secondary earners, this has the effect of reinforcing existing gender roles and inequalities.

### Deductions for dependent children and non-earning spouses or other adults

Many countries with individual filing systems take account of family and household relationships through exemptions, deductions, credits and rate schedules. While 'individuals' may be the filers, the tax paid can also take into account whether they are single or married, have children or are childless and whether or not they are the sole earners in their household (Nelson 1996).

Table 2.2 shows the tax relief given in each system for financially dependent spouses and children. Argentina, Ghana and Morocco make provisions for dependent children and also include relief for financially dependent spouses. The United Kingdom provides tax credits for children but not spouses. India, Mexico, South Africa and Uganda make no provisions for non-earning spouses or dependent children. The system of deductions for a financially dependent spouse in Argentina, Ghana and Morocco can create a bias against single parent households as will be discussed in the vertical and horizontal equity section below.

### Inflation

Finally, the analysis in each country study considers the effects of inflation, and specifically whether personal income tax brackets are indexed to inflation and the frequency of rate adjustments. The fiscal drag caused by infrequent inflation adjustments in Ghana and Uganda resulted in an implicit gender bias. In Ghana, since income tax brackets are not indexed, it has resulted in an increase in the real value of taxes paid by households. Low-income earners – who are likely to be women – have seen an increasing proportion of their nominal income move into a higher tax bracket. In Uganda, if the minimum monthly tax exemption threshold had stayed at the same real value, the threshold of Shs 130,000 in 1997 should have been raised to Shs 197,271 in 2007. But since the threshold was held constant for over a decade, wage earners whose monthly incomes in 1997 were exempted from income tax had to pay tax in 2007. This group includes a higher

*Table 2.2* Tax relief for non-earning spouses and dependant children

|  | Non-earning spouse | Dependent children |
|---|---|---|
| Argentina | Deductions for financially dependent spouse provided they do not earn individual income over a certain threshold Maximum deductions, AR$ 10,000 per year | Family deductions for dependent children or parents, provided they do not have individual income of over AR$9,000 Maximum deductions: AR$ 5,000 per year per child |
| Ghana | Tax relief for financially dependent spouse whose income is less than GH¢35 in a year. No restriction on the sex of spouse | Tax relief for those who have at least two dependent children. An education allowance of GH¢30 can also be claimed for up to three children or wards in registered educational institutions |
| India | None | None |
| Mexico | None | None |
| Morocco | Reduction in PIT for a financially dependent spouse. Women are considered the dependant of male taxpayers. Women can benefit from these tax reductions if she can prove legally that her husband and children are dependent on them | Reduction in PIT for own children and children under his legal responsibility if they meet the following conditions: (1) They must not have an income above a threshold; and (2) They are not older than 21 (or 25 years if studying). 200 dirhams for each of the first three children and 30 dirhams for each of the next three |
| South Africa | None | None |
| Uganda | None | None |
| United Kingdom | None | Refundable Child Tax Credit for low- to middle-income families according to the number of children under the age of 16 (or 18 if in full-time education). CTC is means-tested at family level (low threshold for maximum amount, then tapered)[1] |

*Note*: 1 Refundable Child Tax Credit is much more generous for low-income families than non-means-tested Child Benefit.

proportion of women than men, suggesting that a tax system that fails to adjust for fiscal drag can burden women disproportionately.

### Vertical and horizontal equity

Each of the country chapters illustrates – with either real data or hypothetical examples – the impacts of the PIT on different household types according to

vertical and horizontal equity. Each country's PIT rates were applied to individual income, which was then summed for the following household types:

- One male earner with two dependent children and a financially dependent wife. We refer to this household as the *male-breadwinner household*.
- A single parent (either male or female) who is employed with two dependent children. We refer to this household as the *single-parent household*.
- A *dual-earner* married couple with two dependent children, where male earnings are higher than female earnings. We refer to this as the *dual earner* household.

Note that we do not consider single-person households in this analysis.

To explore vertical equity, we examined households at half the median income, the median income, and twice the median income. Most countries have achieved a modest degree of progressivity in their personal income tax systems. In other words, richer households pay a higher proportion of their income in tax than do poorer households.

We explored horizontal equity by examining differences across each type of household at each of the three income levels described above. It is somewhat treacherous to make comparisons across countries. First, as noted, in many countries, the majority of the population falls outside the personal income tax net. Second, although we tried to develop uniform household categories, there remain variations across countries in the distribution of households of different types, and in the proportion of households that do not fit into these categories. Nonetheless, some interesting findings do emerge.

In all countries, male-breadwinner households with a single earner, a financially dependent spouse and two dependent children by and large pay a higher share of their income in tax than dual-earner households with two dependent children (see Table 2.3). This is a characteristic result of individual filing systems. But important differences show up on closer examination of these categories.

For instance, in Morocco, dual-earner households where the woman's income is higher than the man's pay more tax than those households where the man earns the higher income. The difference arises because tax reductions for dependants are available only to men. A woman can benefit from tax reductions only if she can prove legally that her spouse and children are financially dependent on her. Hence, women in dual-income couples in Morocco cannot claim dependants even when they earn more than their husbands.

In India, tax incidence is also lower for dual-earner than for male-breadwinner or single-parent households, but within the latter two categories, incidence is higher when the single breadwinner or single parent is male.[2] This is because the income tax threshold for male and female taxpayers differs: for male taxpayers it is Rs. 150,000, while for female taxpayers, it is Rs. 180,000. Dual-earner households with earnings totalling Rs. 300,000 do not attract tax if both spouses earn below their respective exemption limits. Male-breadwinner or male single-parent households with the same earnings pay Rs. 15,000 in tax, while female-breadwinner or female single-parent households pay Rs.12,000. This is an example of a rare explicit bias against men in a schedular system.

*Table 2.3* On which type of household does the PIT incidence fall at each income level?

|  | Single parent with children and no other adult | Female breadwinner: a female earner, one dependent man and children | Male breadwinner: a male earner, one dependent woman and children | Couple with children: dual earners |
|---|---|---|---|---|
| 2 x median household income | Argentina,[1] Ghana,[2] India,[3] Morocco, South Africa, Uganda, United Kingdom | South Africa, Uganda, United Kingdom | India, South Africa, Uganda, United Kingdom | |
| Median household income | Ghana,[2] India,[3] Morocco, Uganda, United Kingdom | Uganda, United Kingdom | India, Uganda, United Kingdom | |
| ½ median household income | Morocco, United Kingdom | United Kingdom | United Kingdom | |

*Notes*: When a country is listed more than once in a row, this means that the incidence of PIT falls most heavily on the household category indicated in the column.

1 Incidence varies by type of employment in Argentina. Self-employed single-parent households with children bear the largest burden.

2 Single-parent households with children bear the highest incidence in Ghana, although this category was not analysed in the country chapter.

3 Single-parent households bear more tax than female-breadwinner or dual-earner households in India only if the single parent is a man.

Other horizontal inequities exist in some countries. In Ghana, single-parent households bear a heavier burden of tax than do both dual-earner and male-breadwinner households. A household with two earners and three children, with a combined yearly income of GH¢650, in which one worker earns GH¢450 and the second earns GH¢200 per annum, pays GH¢3 in tax. This contrasts with a household with the same yearly income but only one earner and a financially dependent spouse who pays tax of GH¢13.50. Nevertheless, the largest burden is borne by single-parent households with the same number of children but no dependent spouse because they cannot claim tax relief for a financially dependent spouse. As Chapter 6 notes, about 34 per cent of single-earner households do not have an adult male and about 44 per cent of single-headed households are headed by women.

In Argentina, the income tax paid depends both on household composition and on whether taxpayers are employees, self-employed or *monotributistas* (small or medium-sized taxpayers).[3] At twice median income (median income falls below the tax threshold), a self-employed single-parent household with two children pays an income tax of 7,420 AR$, whereas a wage-employed male-breadwinner

household with two children and a dependent spouse pays no income tax.[4] Since men are more likely to be employees and less likely to be a single parent than woman are, men are more likely to be in households facing a lower PIT incidence. This constitutes an implicit bias against women, who predominate among self-employed single-parent households. It is also the case that two wage earners in a dual-earner household pay more income tax (2132 AR$) than a wage employee in a male-breadwinner household with a financially dependent spouse (0 AR$). Therefore, even though Argentina follows an individual filing system, the system of spousal deductions undermines it if the taxpayers are employees. The system of deductions also makes it more similar to a joint taxation system, which might create a disincentive for financially dependent spouses, usually women, to join the labour force. Note that dual-earner households pay less income tax than do single-parent households or male-breadwinner households if the earners are self-employed or *monotributistas*.

In all countries in this study, with the exception of Argentina, dual-earner households face the lowest PIT incidence. This could be viewed as transformative since it does not create a disincentive for women to join the labour market, nor does it reinforce existing gender roles. However, in some countries, namely Argentina, Morocco and Ghana, single-parent households with children bear a larger PIT burden than do male-breadwinner households with children and a dependent spouse. Single parents have to play the dual roles of breadwinner and caregiver and doing so has costs, not least for care of children, which is a cause for alarm. It also has gender implications since single parents across the world are more likely to be women.

## Indirect tax incidence

Three main indirect taxes are considered in this analysis: value-added tax (VAT), excise taxes and fuel levies. A value-added tax is a tax on consumption. More formally, VAT can be defined as 'a broad-based tax levied on commodity sales up to and including, at least, the manufacturing stage, with systematic offsetting of tax charged on commodities purchased as inputs – except perhaps on capital goods – against that due on outputs' (Ebrill *et al*. 2001: 2). Value-added taxes are favoured by economists because they constitute a tax on consumption rather than on intermediate transactions between firms. Different countries have different rate structures, but generally all countries have some goods that are either zero-rated or exempt. Zero rates are when sales have a tax rate of zero although a credit is still given to firms for taxes paid on inputs. In many countries, including those in this study, exports are zero-rated, meaning they leave the country free of VAT.[5] Exemptions are similar to zero-rating in that taxes are not charged on outputs but are different in that tax paid on inputs cannot be reclaimed.

Excise taxes are selective taxes on consumption items such as alcoholic beverages, tobacco products, motor vehicles and fuels – items with sufficiently low price elasticity of demand and high potential revenue yields to warrant special attention. In addition to being administratively feasible and politically acceptable,

these taxes are also justified on the grounds that they reduce negative externalities associated with drinking, smoking and polluting.

### Indirect tax incidence analysis

The goal of indirect tax incidence analysis is to determine the proportion of before-tax income paid by different groups.[6] Usually, the groups are defined by some measure of welfare, either income or consumption expenditure. Using one of these measures, the groups are ordered from rich to poor by quintiles of the population on the basis of a number of assumptions about who bears the final burden. For each tax, a portion of the revenues collected is imputed as tax paid by each income group, based on a number of assumptions about who bears the final burden (see below). For example, as Martinez-Vazquez (2001: 16) explains:

> Revenues from excise taxes on tobacco products are allocated to different income groups in proportion to their relative share in the consumption of tobacco products … The incidence for each tax is calculated separately for each income or expenditure group and the results are added up across all taxes to arrive at the total tax incidence for each group.

There is some debate in the literature about the best welfare measure to use in incidence analysis. The two most common measures are income and consumption expenditures. Some argue that income is a preferred base for equity comparisons because income provides well-being whether it is spent immediately or saved for the future (Bird and Gendron 2007). However, studies of developing economies more often use consumption expenditure (Bird and Miller 1989; Casperson and Metcalf 1994; Younger *et al*. 1999; Edmiston and Bird 2007). Income data are frequently less reliable than expenditure data because households tend to 'misreport' or hide income. Second, expenditures may be a better measure of well-being if households smooth their consumption, especially in countries where current income is subject to large fluctuations. Finally, a practical reason for using consumption expenditure rather than income in anticipation of future shocks was that not all countries in this project had income data.

The indirect tax incidence analysis in the country chapters used the same methodology.[7] Information on total income, sources of income, and expenditure patterns is typically obtained from national consumption expenditure surveys.[8] Data on taxes collected are obtained from the tax administration authorities. Most countries' national consumption expenditure surveys are based on the Classification of Individual Consumption by Purpose (COICOP), agreed by the United Nations Statistical Commission. But the ways that countries adapt this classification vary considerably so it was necessary to standardize classifications (insofar as the country data allowed) in order to make comparisons across countries. We focused on 33 categories of expenditures, detailed in the Annex and grouped into the main categories below:

- Food, divided into basic non-processed food, basic processed food and non-basic food
- Meals out
- Non-alcoholic beverages
- Alcoholic beverages, divided into beer and cider, spirits and wine
- Tobacco
- Clothing and footwear, divided into adult and children's clothing
- Housing expenditure, divided into housing excluding utilities, water, electricity, gas, and other utilities such as sewerage
- Household fuel
- Household equipment
- Domestic and household services
- Health
- Transport, divided into collective transport, flights and private transport
- School transport
- Fuels and lubricants (transport use)
- Communications
- Recreation, culture and holiday
- Education
- Personal care, divided into necessities, baby products and other personal care items
- Gambling
- Miscellaneous.

Home-produced goods are a substantial component of household consumption in low-income countries, but they become less substantial as countries move up the income ladder. Given the diversity of countries in the project and the focus on expenditure as the base for the incidence analysis, we omitted home-produced goods. We also omitted remittances, donations, direct taxes, investments, pension contributions, savings, repayments, dowries and net losses of self-employment.

After deriving the classification system for expenditure items across countries, the next step involved deriving a distribution of comparable standard expenditure units for the analysis. Expenditure data are produced at the household level. Individuals, however, live in different size households. Deriving a distribution requires taking household size into account, which is done by dividing expenditure either by the number of household members or by some adult equivalent for each particular household composition. A number of adult equivalence scales have been devised, each giving different emphasis to family size, the age of household members and economies of scale in household consumption, and each produces different results (OECD 2005: 25).[9]

Neither the per-capita nor the equivalence-scale method is ideal from a gender-equality perspective and for other reasons. The per-capita rule ignores the fact that expenditure across individual household members is usually not equal. More importantly, the per-capita rule ignores gender power differentials that underlie unequal intra-household resource allocation. However, the use of equivalence

scales is no better since equivalence scales refer to resource needs and not resource allocation and control.[10] The choice of a particular equivalence scale also involves using subjective judgement, between scales that confer the same weight to all household members and others that confer a lower weight to dependent children and take account of economies of scale for household members sharing costs of living (ibid.).

In light of these problems, the project considered adopting anthropological or econometric methods to identify allocation rules among household members for different classes of goods, but this too seemed to be both arbitrary and unsatisfactory, as for most countries, little case study or other research exists on the intra-household allocation of resources that could inform our choice of such rules. In the end, the project adopted an equal allocation rule by dividing expenditure equally among all members, adults and children alike, to calculate per-capita expenditure, which was thought to be somewhat less arbitrary than any equivalence-scale approach. Individuals were then sorted into quintiles based on per-capita household expenditure.

The next step in the analysis involved classifying households into categories based on gender relations. The typical approach is to disaggregate households into those headed by males and those headed by females. But this is unsatisfactory for the reasons explained in Chapter 1. We take female and male household headship (using the country definition) as a baseline but then develop two richer gender categories that can be applied across different country contexts for the analysis.

The first category, based on the sex composition of adults in each household, distinguishes between households with a greater number of adult females from households with a greater number of adult males and from households with an equal number of adult males and females. We use sex composition as a proxy for the underlying gender relations that produce 'male' and 'female' expenditure patterns. Clear differences in expenditure patterns emerge from this classification in the country data. For instance, in Argentina, Mexico and Morocco, households with a greater number of females than males typically allocate a greater proportion of their expenditure to medical goods and services than do male-majority households.

The second category is based on employment status of the adults in each household. It distinguishes among female-breadwinner households (with no employed males), male-breadwinner households (with no employed females), dual-earner households and households with no employed adults. We use employment status as a proxy for bargaining power. As noted in Chapter 1, it is likely that employment and outside income allow members to exert greater control over household expenditure, resulting again in different expenditure patterns and tax incidence between male- and female-breadwinner households, and between these and dual-earner and no-earner households.

For both sex composition and employment status, households are disaggregated by those with and without children. It is likely that the composition of expenditure will differ between households with and without children, which would affect tax incidence.

As shorthand, we use the term 'male-type households' to refer to male-breadwinner, male-headed and male-dominated households, and female-type households to refer to female-breadwinner, female-headed and female-dominated households.

The final step in the methodology was to apply scheduled tax rates to the reported expenses and estimated tax paid on each expenditure item, assuming that all the burden of the tax is shifted on to consumers via a higher product price. This is computed as:

$$taxpaid_{ij} = rate_j * (expend_{ij}/(1 + \Sigma_j \, rate_j))$$

where $taxpaid_{ij}$ is the tax paid by household $i$ on item $j$, $rate_j$ is the tax rate on item $j$ and $expend_{ij}$ is the reported expenditure for household $i$ on item $j$.[11] For a unit tax, the amount of tax paid by the household per item is calculated as:

$$taxpaidS_{ij} = (expend_{ij}/price_j) * duty_j$$

where $taxpaidS_{ij}$ is the tax $S$ paid by household $i$ on item $j$, $expend_{ij}$ is the reported expenditure for household $i$ on item $j$, $price_j$ is the retail price of that item and $duty_j$ is the per unit duty on item $j$.

The levy on fuel used as an *input* in the production of many goods and services may be passed through to the consumer in the final price. A full and accurate analysis of this would require using detailed input– output tables, which was not possible with this group of developing countries. However, we do make an adjustment for the public transport sector, in which we assume fuel makes up 30 per cent of input costs in this sector.[12]

This method of calculating tax incidence does not take into account behavioural responses to a tax change; it provides only a first-order approximation of a tax's final incidence. A second source of inaccuracy is the use of simple assumptions about how statutory taxes translate into economic incidence. Almost uniformly, markets are assumed to be competitive, and consumption and excise taxes are assumed to be shifted fully forward onto consumers. Questions of tax avoidance via informal markets or corruption are mostly ignored, even though the ratio of actual taxation to expenditures is often a small fraction of what the statutory rates suggests should be collected. Unfortunately, to address these limitations requires considerably more complex analysis of the behaviour of both consumers and producers in the relevant markets than was possible.

### Indirect tax incidence findings

The indirect tax systems in most countries in our study zero-rate or exempt some goods and services, especially those that are important for poor households. For instance, education and public sector medical services are exempt in South Africa, the United Kingdom, Uganda and Ghana. Some basic foods have reduced

rates in Argentina, are zero-rated in Uganda, Mexico, the United Kingdom and South Africa, and are exempt in India and Morocco. Exports are zero-rated in Argentina, India, Mexico, South Africa and the United Kingdom. Each country has a number of other specific goods and services that are also zero-rated or exempt (see Table 2.4).

For the purposes of comparative analysis in the chapters in this book, the tax rate for exempt goods was assumed to be zero. While the tax rate for exempt goods would be greater than zero if their inputs attract VAT, the effective rate was not calculated because, as noted above, it would require detailed input–output tables, and published ones were either too aggregated or not available for several countries.

Table 2.5 presents the comparative findings of tax incidence on expenditure across countries for total indirect taxes, and separately for the VAT, excises and fuel levies. It shows that overall indirect tax incidence falls most heavily on the top expenditure quintiles in Uganda, Mexico and Morocco; falls most heavily on households in the middle quintiles in South Africa and the United Kingdom; is U-shaped in Ghana (i.e., falls on the richest and poorest households); falls on the poorest in India, and is proportional or slightly progressive in Argentina.[13] The incidence of VAT is mildly progressive in most countries, except for India where it falls on the poorest quintiles, and Argentina and Ghana, where it is proportional. Incidence of excises in most countries falls on the poorest or middle quintiles, while fuel tax is generally progressive.

The analysis shows more complicated and nuanced patterns when taking gendered household structure into account. The main finding suggested by Table 2.6 is that male-headed households bear the highest burden of overall tax incidence, in all countries except India, where female-headed households bear the heaviest incidence. The result is similar for VAT (except in India and Morocco), excises (except in the United Kingdom) and fuel taxes (except in Mexico[14]).

By employment classification, the incidence of indirect taxes falls generally on male-breadwinner households or dual-earner households. Male-breadwinner households bear the heaviest incidence of total indirect taxes, VAT, and excises in Ghana, Mexico, South Africa and Uganda (in Argentina, this is only the case for excises, while male-breadwinner and dual-earner households bear the heaviest incidence on total indirect taxes, VAT and fuel taxes). They also bear the heaviest incidence of fuel levies in Ghana, Uganda and Morocco. Dual-earner households bear the heaviest incidence of VAT in Argentina, Mexico, Morocco and the United Kingdom, excises in Morocco, and fuel levies in Argentina,[15] Ghana, Morocco, South Africa and the United Kingdom.[16] Households with no employed adults bear the heaviest overall indirect tax incidence and the heaviest incidence of excise taxes in the United Kingdom.[17] By sex composition, the results again are similar. Male-majority households bear the largest incidence of indirect taxes in all countries and the largest incidence of the VAT in all countries except Morocco, Mexico and the United Kingdom.

*Table 2.4* Zero-rating and exemptions

| | Argentina | Ghana | India | Mexico | Morocco | South Africa | Uganda | United Kingdom |
|---|---|---|---|---|---|---|---|---|
| Zero-rating | Exports | Exports, locally produced textbooks, locally manufacturing agricultural tools | | All food (except for yogurt and fruit juice), medicine, drinking water, unprocessed food, exports, fishing and agricultural services | Exports, fertilizers, agriculture tools, acquisition of vehicles for taxi usage, residential building construction products and equipment, medicine, donations | 19 basic foods, paraffin, exports, petrol and diesel, farming inputs, certain grants by government | Export goods, milk, seeds, fertilizers, educational materials, cereals, machinery for agriculture, printing services for educational material | Food (except for sugar and confectionary), children's clothing and footwear, public transport, books and newspapers, medical expenditure, education, water and sewage, and helmets for motorcycles and pedal cycles |
| Exemptions | Books, brochures, milk, medicine, education services | Some imported items (including food), animal products, medical supplies, financial services, water, electricity, | Basic food, basic clothing, domestic services, basic stationery and books. | Medical and education services, non-profit activities, books and magazines, residential and | All food of basic necessity (cereals, bread, milk, fish, meat, fruits and vegetables), unprocessed | Residential rental and accommodation, educational services (including creches), public road | Financial and insurance services, education services, medical, dental and | Financial and banking services, private education and health (excluding spectacles |

*Table 2.4* (Continued)

| | Argentina | Ghana | India | Mexico | Morocco | South Africa | Uganda | United Kingdom |
|---|---|---|---|---|---|---|---|---|
| | | printed matter, petroleum products (VAT exempt[1]) | | land buildings, passenger transportation, lottery | food, sugar, salt, paraffin and candles, books and newspapers, medicine, self-construction of main home, healthcare, dental and nursing services, education, handicrafts, agricultural products and services, micro credit, water | and rail transport, non-fee-related financial services, medical aid and medicine, medical services provided by public health institutions | nursing services | lenses, sunglasses, most mobility and hearing equipment, non-NHS medical products and services), registered care services and childcare, postal charges, betting and funerals |
| Reduced rate | Food, meat, fruits and vegetables, bread | | | | | | | Domestic fuel, household energy-saving equipment, women's sanitary products, children's car seats |

*Note*: 1 A number of petroleum products taxed ad valorem excise duties.

*Table 2.5* Which quintile bears the highest incidence of each type of tax?

| Quintile on which incidence falls most heavily: | Total indirect taxes | VAT | Excises | Fuel tax |
|---|---|---|---|---|
| Quintile 5 | Ghana,[1] Mexico, Uganda, Morocco | Mexico, Morocco, Uganda, United Kingdom | | Argentina, Ghana, India, Morocco, South Africa, Uganda |
| Quintile 3–4 | South Africa, United Kingdom | South Africa | Argentina, Morocco, South Africa | |
| Quintiles 1–2 | Ghana,[1] India | India | Ghana, India, Mexico, United Kingdom | Mexico,[4] United Kingdom |
| Proportional | Argentina[2] | Argentina,[3] Ghana | Uganda | |

*Notes*:
1 Indirect taxes are U-shaped, falling on the lowest and highest quintiles.
2 Indirect taxes are slightly progressive.
3 VAT is slightly regressive.
4 Fuel tax was a subsidy and lower quintiles received less subsidy than higher quintiles.

The fact that male-type households, however classified, generally bear larger incidence may not be surprising since the female-type households in the countries in our study tend to be clustered in lower expenditure quintiles than male-type households. All countries further disaggregated the incidence of indirect taxes for each household employment category by quintile (see the tables in Chapters 4–10). Total indirect tax incidence falls most heavily on the richest male-breadwinner or dual-earner households in Argentina, Morocco and Uganda, while it falls on middle quintile dual-earner households in South Africa and no-employed households in the United Kingdom. The incidence of excises generally falls on male-breadwinner or dual-earner households in the middle quintiles in most countries. The United Kingdom is an exception, where excise tax incidence falls on the poorest dual-earner and no-employed households. The pattern of VAT incidence by household type and quintile is not uniform. It is borne by the richest male-breadwinner and dual-earner households in Morocco and Uganda, middle-quintile dual-earner households in South Africa, and the poorest male-breadwinner and dual-earner households in Argentina. The United Kingdom is again an exception where it falls on the richest no-employed households.

Table 2.6 Incidence of indirect taxes by household type

| Incidence falls most heavily on: | Total indirect taxes | VAT | Excises | Fuel tax |
|---|---|---|---|---|
| **By headship (comparing male-headed versus female-headed)** | | | | |
| Male-headed households | Argentina, Ghana, Mexico, Morocco, South Africa, Uganda, UK | Argentina, Ghana, Mexico, South Africa, Uganda, UK | Argentina, Ghana India, Mexico, Morocco, South Africa, Uganda, UK[1] | Argentina, Ghana, India, Morocco, UK, South Africa, Uganda |
| Female-headed households | India | India, Morocco | UK[1] | Mexico |
| **By employment status (comparing male-breadwinner, female-breadwinner, dual-earner, none-employed)** | | | | |
| Male-breadwinner households | Argentina,[2] Ghana, Mexico, South Africa, Uganda | Argentina,[2] Ghana, Mexico, South Africa, Uganda | Argentina, Ghana, Mexico, Morocco,[2] South Africa, Uganda | Ghana,[2] Uganda, Morocco[2] |
| Female-breadwinner households | | | | Mexico |
| Dual-earner households | Argentina,[2] Morocco | Argentina,[2] Mexico, Morocco, UK | Morocco[2] | Argentina, Ghana,[2] Morocco,[2] South Africa, UK |
| No-employed | UK | | UK | |
| **By household sex composition (comparing male-dominated, female-dominated and equal numbers)** | | | | |
| Male-majority households | Argentina, Ghana, India, Mexico, Morocco, South Africa, Uganda, UK | Argentina, Ghana, India, Mexico,[3] South Africa, Uganda | Argentina, Ghana, India, Mexico, Morocco, South Africa, Uganda, UK | Argentina, Ghana,[3] India, Uganda, UK |
| Female-majority households | | | | Mexico |
| Equal-number households | | Mexico,[3] UK | | Ghana,[3] South Africa |
| Proportional | | Morocco | | Morocco |

*Notes*: In Mexico, fuel tax was a subsidy and therefore the cells indicate which household type received less subsidy.

1 The differences in incidence for female-headed and male-headed households are not statistically significant.

2 The differences in incidence between male-breadwinner and dual earners are not statistically significant.

3 The differences in incidence between male-majority and equal number households are not statistically significant.

Importantly, the existence of children in the household has an impact on the incidence of indirect taxes. Generally, incidence falls more heavily on households without children. An exception is the VAT in Morocco, where households with children bear a larger incidence of VAT. Finer differences emerge when the analysis is disaggregated by quintiles. Poorer households with children bear a greater incidence of VAT relative to equally poorer households without children in Ghana, Mexico and Uganda. In South Africa, female-breadwinner and no-employed households with children in the middle quintiles bear a higher VAT and fuel levy tax incidence than do female-breadwinner and no-employed households without children in the same quintiles.

What might explain these results? One reason could be that households without children allocate a higher proportion of their expenditure to alcohol, tobacco, and luxury goods than households with children. In many countries, goods such as alcohol and tobacco carry higher tax rates. Households with children allocate a higher share of expenditure than households without children on necessities and goods that improve children's welfare. As we will see in the following section, the incidence of children's clothing in Ghana and South Africa, food in Morocco, South Africa and Uganda, and fuel for household use in Ghana, Mexico, Morocco, South Africa and Uganda is generally regressive. However, further analysis is needed to understand the behavioural issues that underlie these results.

First, because of gender-specific expenditure patterns, the incidence on specific commodities brings out the gender-differentiated results far more starkly than the results by type of tax. Table 2.7 shows indirect tax incidence for specific commodity groups, including various categories of food, clothing, medical expenditure, housing, fuel, alcohol and tobacco. These commodity groups were chosen for several reasons, but most importantly because they highlight the gendered nature of expenditure.

First, because women are often ascribed the role of securing family survival through food production and preparation, we focused on basic necessities, as defined in the basket of goods used to calculate each country's poverty line (where applicable).[18] Second, because women are largely ascribed the roles of caring for children, and more children tend to live with women than with men though most live with both, we focused on children's goods (e.g., clothing). Third, we were interested in goods and services that substitute for or reduce women's unpaid work, such as child care, medical care, basic processed foods, meals out, public and private transport and water and energy services. And, finally, we were interested in examining leisure goods, such as electronic games, and 'demerit' goods with negative externalities, such as alcohol, tobacco and fuel for transport, which are primarily consumed by men in many countries

Table 2.7 indicates which household type, disaggregated by quintile, bears the highest tax incidence on specific commodity items. For example, the column labelled 'food' shows that female-breadwinner households in the middle quintiles bear the highest incidence of tax on food in Mexico compared to other household categories disaggregated by quintile. Scrolling down the column of particular commodity items, the reader will note that a country is sometimes indicated twice. In the column on total food, the United Kingdom is indicated in two cells:

Table 2.7 Which household type, by quintile, bears the highest tax incidence on selected commodity items?

| Incidence falls most heavily on: | Quintile | Total food | Food: basic unprocessed[1] | Food: basic processed | Food: basic[2] | Food: non-basic |
|---|---|---|---|---|---|---|
| i. Male-breadwinner households | Quintile 5 | | | | | |
| | Quintiles 3–4 | Uganda | | Uganda | | |
| | Quintiles 1–2 | Argentina | Argentina | Argentina[5], Morocco[6] | | India |
| ii. Female-breadwinner households | Quintile 5 | Ghana | | Ghana | | |
| | Quintiles 3–4 | Mexico | | | | South Africa[7] |
| | Quintiles 1–2 | India[3], UK[4] | Ghana | Morocco[6] | | |
| iii. Dual-earner households | Quintile 5 | | | | | |
| | Quintiles 3–4 | | | | | |
| | Quintiles 1–2 | India[3] | | Argentina[5], Morocco[6] | India | |
| iv. No-employed | Quintile 5 | | | | | |
| | Quintiles 3–4 | | | | | Mexico, South Africa[7] |
| | Quintiles 1–2 | South Africa, UK[4] | | Morocco[6] | | |

Notes: Lack of data in India restricts the analysis to household sex composition. Therefore, incidence in India refers to incidence on male-majority (in lieu of male-breadwinner), female majority (in lieu of female-breadwinner) and equal-number (in lieu of dual earner) households.
Countries that zero-rate food and medical expenditure are not included in this table.
[1] In Argentina, Ghana, Morocco and Uganda, basic food was disaggregated by non-processed and processed.
[2] In India, Mexico and South Africa, food was disaggregated by basic and non-basic food.
[3] Female-breadwinner and dual-earner households in the 1st and 2nd quintiles bear the incidence most heavily.
[4] Female-breadwinner and no-employed households in the 1st and 2nd quintiles bear the incidence most heavily.
[5] Male-breadwinner and dual-earners in the 1st and 2nd quintiles bear the incidence most heavily.
[6] All households in the 1st and 2nd quintiles bear incidence most heavily.
[7] Female-breadwinner and no-employed households in the middle quintiles bear the most incidence.

Table 2.7 (Continued) Which household type, by quintile, bears the highest tax incidence on selected commodity items?

| Incidence falls most heavily on: | Quintile | Children's clothing | Medical expenditure | Fuel for household use | Housing | Water, electricity and gas |
|---|---|---|---|---|---|---|
| i. Male-breadwinner households | Quintile 5 | | | | | Uganda |
| | Quintiles 3–4 | Morocco | | | | |
| | Quintiles 1–2 | Argentina, South Africa[8] | | Argentina, Ghana, India[10], Morocco[11], South, Africa[12], Uganda[13], UK | | |
| ii. Female-breadwinner households | Quintile 5 | | Morocco | | | |
| | Quintiles 3–4 | | | | | Morocco |
| | Quintiles 1–2 | Ghana, South Africa[8], Uganda[9] | | India[10] | | UK[15] |
| iii. Dual-earner households | Quintile 5 | | India | | Morocco, South Africa[14] | India |
| | Quintiles 3–4 | | | | | |
| | Quintiles 1–2 | Mexico, Uganda[9] | | South Africa[12] | | UK[15] |
| iv. No-employed | Quintile 5 | | Argentina, Mexico, South Africa | | Argentina, Mexico, South Africa[14] UK | South Africa |
| | Quintiles 3–4 | | | Uganda[13] | | |
| | Quintiles 1–2 | South Africa[8] | | Mexico, Morocco[11] | Ghana | Argentina, Mexico, UK[15] |
| | Proportional | | | | | Ghana |

Notes:
[8] Male-breadwinner, female-breadwinner and no-employed households in the 1st and 2nd quintiles bear the most incidence.
[9] Male-breadwinner and dual-earner households in the 1st and 2nd quintiles bear the most incidence.
[10] Male-breadwinner and female-breadwinner households in the lowest two quintiles bear the most incidence.
[11] Male-breadwinner and no-employed households in the lowest two quintiles bear the most incidence.
[12] Male-breadwinner and dual earner households in the first two quintiles bear the most incidence.
[13] Male-breadwinner in the first two quintiles and no-employed households in the middle quintiles bear the most incidence.
[14] Dual-earner and no-employed households in the highest quintile bear the most incidence.
[15] Female-breadwinner, dual-earner and no-employed households in the lowest quintiles bear the most incidence.

*Table 2.7* (Continued)

| Incidence falls most heavily on: | Quintile | Alcohol | Tobacco | Fuel for transport |
|---|---|---|---|---|
| i. Male-breadwinner households | Quintile 5 | Mexico, Morocco, Uganda | Ghana, India | Argentina, Ghana, India, Mexico[18], Uganda |
| | Quintiles 3–4 | South Africa | South Africa | |
| | Quintiles 1–2 | Argentina[16], India | Argentina[17], Uganda | |
| ii. Female-breadwinner households | Quintile 5 | | | |
| | Quintiles 3–4 | | | |
| | Quintiles 1–2 | | | |
| iii. Dual-earner households | Quintile 5 | | | Mexico[18], Morocco, South Africa |
| | Quintiles 3–4 | | | |
| | Quintiles 1–2 | India, UK (2Q) | Argentina[17], Morocco | UK |
| iv. No-employed | Quintile 5 | Ghana | | |
| | Quintiles 3–4 | | Mexico | |
| | Quintiles 1–2 | Argentina[16] | UK | |
| | Proportional | | | |

*Notes*:

[16] Male-breadwinner and no-employed households in the lowest quintiles bear the most incidence.

[17] Male-breadwinner and dual-earner households in the lowest quintiles bear the most incidence.

[18] Male-breadwinner and dual-earner households in the highest quintile bear the most incidence.

female-breadwinner households and no-employed households. This means that the incidence of tax on total food falls most heavily on these two household types in the 1st and 2nd quintiles.

Female-breadwinner households bear a larger tax incidence on food relative to male-breadwinner households in most countries, except Argentina and Uganda. Households in the poorest or middle-income households bear the greatest food tax incidence in India, Mexico and the United Kingdom, while in South Africa the poorest no-employed households – which are mostly female-headed – bear the highest tax incidence on food. These findings suggest that the incidence of tax on food generally falls most heavily on poorer female-type households across countries.

By employment status, the incidence of tax on medical expenditure generally falls on higher-income households, reflecting in part the fact that only wealthier households in many of these countries can afford to purchase medicine and health-related expenditure and in part the fact that in most countries in this study, some portion of medical expenditure is exempted from tax. However, when households are grouped by sex composition, some pronounced differences emerge. The incidence of tax on medical expenditure falls on the richest female-majority households in Argentina, Mexico and Morocco, and the richest equal-number households in India and South Africa.

Turning to children's goods, the picture is mixed. The incidence of children's clothing falls on the poorer quintiles, but the incidence by gender-specific household type varies by country. The poorest male-breadwinner households in Argentina and the poorest dual-earner households in Mexico and Uganda bear the highest tax incidence on children's clothing. The poorest female-breadwinner households in Ghana and Uganda bear the highest tax incidence on children's clothing. In South Africa, three household types – the poorest male-breadwinner, female-breadwinner and those with no-employed adults – bear the incidence on children's clothing.

The patterns of tax incidence on goods that may reduce or substitute for the unpaid work of women do not show a single pattern across countries. Tax incidence on water and electricity services falls on the richest male-breadwinner households in Uganda, the richest dual-earner households in India, the middle female-breadwinner quintiles in Morocco, the poorest female-breadwinner, dual-earner and no-employed households in the United Kingdom, and the poorest no-employed households in Argentina and Mexico.

When the analysis is by household sex composition as opposed to employment status, the gender differences become more apparent.[19] The incidence of tax on utilities (water, gas and electricity) falls on the bottom or middle quintiles for most countries, except for India, Uganda and South Africa where it falls on the richest households. The progressivity of tax on utilities in these countries masks the fact that the poor cannot afford to purchase them in these countries and rely instead on other sources of fuel and water. Yet, despite the variation in the progressivity of taxes on utilities in some countries, female-majority households largely bear the tax incidence of these services. This is due to the importance of water, gas and electricity on women's socially assigned roles within the household. These items have significant time-saving consequences on women, despite their higher monetary cost.

Tax incidence on fuel for household use is regressive in all countries. This is consistent with findings of previous studies on Ghana and Madagascar (Younger 1996; Younger *et al*. 1999). Incidence falls almost exclusively on the poorest male-breadwinner households in three countries (Argentina, Ghana and the United Kingdom), but on both male bread-winner households and the poorest female-breadwinner households in India, the poorest dual-earner households in South Africa, households with no employed households in the middle quintiles in Uganda, and the poorest no-employed households in Morocco also bear the incidence of fuel for household use.

The incidence of domestic services is generally progressive in all countries, but the incidence by gender-specific household type again varies. The richest female-breadwinner households bear the highest incidence of tax on domestic services in Ghana and the United Kingdom, along with the richest dual-earner households in the United Kingdom. In contrast, the richest male-breadwinner households bear the burden of tax on domestic services in Mexico, and the incidence is generally low. Among other goods that may reduce women's unpaid time burdens, tax incidence on fuel for transport is progressive, except in the United Kingdom, but the incidence is heaviest on the richest male-breadwinner households in Argentina, Ghana, India, Mexico and Uganda, and the richest dual-earner households in Mexico, Morocco and South Africa. The poorest dual-earner households in the United Kingdom bear the highest incidence of tax on fuel for transport.

The patterns of tax incidence on alcohol and tobacco are not surprising given the gendered patterns of expenditure on these items. Male-breadwinner households by and large bear the highest incidence of tax on both alcohol and tobacco expenditures in all countries in the study, although tax incidence of these goods also falls on dual-earner households in India, the United Kingdom, Argentina and Morocco, and no-employed households in Argentina, Ghana, Mexico and the United Kingdom.

There is no evidence of explicit gender bias in the incidence of indirect taxes across the eight countries. However, our findings suggest that some implicit gender biases may exist in some countries for specific commodities that are essential for meeting basic needs, providing care, and reducing women's unpaid work burdens. The poorest female-breadwinner households in India, the United Kingdom, and South Africa bear the heaviest incidence of taxes on food, and female-dominated households generally bear the heaviest incidence of taxes on utilities. The poorest female-breadwinner households in Uganda, Ghana and South Africa bear the largest incidence of tax on children's clothing. Finally, the richest female-dominated households bear the heaviest incidence of taxes on medical expenditure in Argentina, Mexico and Morocco.

There is very little other work against which to compare these findings. Only one known study has examined the incidence of indirect taxes with a gender dimension. Bird and Miller (1989) analyze the incidence of various indirect taxes in Jamaica of low-income households in six household expenditure categories, three each in urban and rural areas.

Unlike other studies, Bird and Miller disaggregate their sample into couple- and female-headed households and take into account the age composition of these households. They find that taxes overall are a heavier burden on couple-headed than female-headed households. They suggest this is because female-headed households are predominantly in urban areas and have higher expenditures than couple-headed households, who are predominantly in rural areas and low income. Seventy-two per cent of rural coupled-headed households are low income compared to 48 per cent of rural female-headed households, while only 20 per cent of urban couple-headed households are low-income sample compared to 26 per cent of female-headed households.

The authors do not provide much explanation for these results but examination of their data suggests that the higher tax incidence on couple-headed households could be driven by the fact that these households bear the burden of food tax, which is the highest of all commodities and greater for both rural and lower-expenditure groups. Indeed, incidence on food is higher for couple-headed households (2.43) than for female-headed households (2.15). In contrast, female-headed households who are predominantly in urban areas and have higher weekly expenditures than rural couple-headed households, have a higher incidence on transport (1.72) than do couple-headed households (1.66). Since the differences in incidence for most other goods are small, it appears that the results are driven by food and transport tax incidence with the latter not high enough to offset the incidence of the former, so that couple-headed households bear the greatest overall indirect tax incidence.

## Policy simulations

Finally, the authors of each chapter undertook a series of simulations of policy reforms designed to reduce the burden of indirect taxes on the poor and on female-type households. They also experimented with various reforms to increase taxes on goods consumed primarily by higher-income and male-type households so as to offset potential revenue declines as a result of the first set of simulations. These simulations are designed to show changes in indirect tax incidence but it is important to note they are essentially static and do not take into account behavioural changes. Nonetheless, they provide important empirical evidence on the varied first-order effects that tax reforms can have on different income groups and gendered household types.

For their simulations, several countries, including Argentina, India and Morocco, reduced or zero-rated key items in the basic food basket in their countries. South Africa zero-rated all non-confectionary food items that are currently not zero-rated, along with children's clothing and footwear; and a basket of basic personal care items (toilet paper, toothpaste/toothbrushes, soap, tissues, contraception and sanitary towels). Ghana simulated the complete removal of VAT on children's clothes and footwear and reduced by half kerosene tax rates. Uganda removed the VAT on salt and halved the tax on paraffin. The United Kingdom raised tax on fuel for transportation, which is higher in households with a man in paid employment.

Generally, these simulations show that it is possible to reform VAT and excises in most countries in selective ways that promote gender equality without compromising the system's ability to raise revenue. Some key findings are:

- *Reducing or zero-rating selected basic food items*: In Argentina, zero-rating basic food reduced the incidence of the VAT and total taxes on poorer households. Female-breadwinner households experienced the smallest reduction in incidence due to the reform although male-breadwinner and dual-earner households continued to bear the largest incidence. In Morocco, reducing the VAT on tea, coffee and edible oils reduced the tax incidence for poorer female- and male-breadwinner and no-employed households. Lastly, in Uganda, removing VAT on salt benefited poorer and female-headed households more than other types of households. India is the only exception, whereby the zero-rating of VAT on all food items did not reduce the higher incidence among female-headed households.
- *Removing VAT on children's clothing and footwear*: In Ghana, reducing the tax incidence on children's goods benefited poorer female-breadwinner and female-dominated households more than their male-household counterparts. In South Africa, zero-rating of children's goods resulted in the largest gains for poorer and female-type households.
- *Reducing VAT on kerosene and paraffin*: In Ghana, halving the tax on kerosene benefited poorer households more than richer households but had no additional impact across different household types. In Uganda, halving the tax on paraffin disproportionately benefited poorer and male-headed households.

In countries which already zero-rate or have reduced rates on basic necessities, the authors simulated the impact of increasing the VAT on these items in order to demonstrate the positive impact that reduced and zero rates have on poorer and female-type households. In South Africa, introducing a 14 per cent VAT rate on basic food and paraffin had the largest negative impact on the poor and female-type households. In the United Kingdom, removing the zero rate on basic food increased incidence disproportionately among poorer households and those with no employed adults. Likewise, in Mexico, a rise in the tax rate from 0 to 15 per cent on basic and non-basic food disproportionately affected poorer households but had no impact on any of the gendered household types. These results confirm that reducing tax on basic necessities such as basic food, household fuel and children's clothing generally decreases the incidence of tax for both poorer households and female-type households.

In summary, we can infer from these simulations that reducing the relative prices of necessities would increase the disposable income of poorer women. This in turn is likely to increase their bargaining power within the household. Hence, we can view a reform that zero-rates or exempts necessities to be a policy that promotes gender equality.

The simulations described above entail some loss in revenue. Each country therefore also simulated a set of reforms to offset these revenue losses. Argentina increased tax on luxury items (cars, boats, some electronics), tobacco and wine to enhance progressivity and gender equity; the United Kingdom increased taxes on fuel for private transport; Ghana, India and Morocco increased tax rates on tobacco; Morocco also increased rates on the entire recreational category, and Ghana increased rates on alcohol and communications (the talk tax). In most cases, the reforms to reduce tax on food, children's clothing and fuel for households, when coupled with measures to increase tax on luxury items, tobacco and alcohol, turned out to be revenue-neutral. Exceptions were the simulation for the United Kingdom, which resulted in a loss in revenue, and for Morocco, which resulted in a revenue increase.[20]

Generally, the results also showed that raising taxes on luxury goods increased incidence for both male-type and richer households. As expected, an increase in tax on tobacco and alcohol also increased incidence for male-type households, except in the United Kingdom where a tax hike on tobacco increased the incidence for poorer female-breadwinner and no-employed households, which include many single-mother households.

The impact on the quintiles among male-type households is less clear-cut. In Ghana and the United Kingdom, increasing tax on tobacco and alcohol resulted in a larger increase in incidence on poorer than richer male-headed households. In contrast, in Argentina, which simulated an overhaul of the tax system, excises were made more progressive because the simulations increased rates on tobacco, wine, electronics and private transport, all goods which are largely consumed by richer households.

Raising taxes on alcohol and tobacco could have negative effects beyond increasing the incidence of taxes on the poor. Increasing taxes on tobacco could induce a shift to cheaper and inferior tobacco products with negative effects on health. There could also be a potential negative gender impact from increasing taxes on both alcohol and tobacco if men reduce their contributions to women's household allowances as a result of the price increases on these goods. However, since we have not considered such behavioural consequences in general, such effects can only be confirmed through a better understanding of the nature of household decision-making, a task for future research.

## Conclusion

This chapter compared the various dimensions of the personal income tax system of the eight countries in this study and commented on the degree to which the rate structure, definition of income exemptions, tax preferences and other features contain implicit and explicit gender biases. It found that personal income tax codes in all countries in this study contain implicit gender biases, and, in three countries, they also contain explicit biases. These biases are candidates for policy reform in all countries, as is discussed in Chapter 11.

In addition, this chapter also explored which households in the eight countries bear the highest and lowest incidence of total indirect taxes, VAT, excises, fuel levels, and taxes on selected commodities such as food, children's clothing, alcohol and tobacco. In all countries, male-type households (by employment status and sex composition) were found to bear the heaviest incidence of indirect taxes (with the exception of India), of VAT (with the exception of India and Morocco) and of excises (with the exception of the United Kingdom).

Yet, the picture becomes much more varied when the analysis disaggregates incidence by type of commodity, with the poorest female-type households largely bearing the highest incidence of taxes on food and children's clothing in several countries. The presence of children, as noted above, also affects the incidence results. We might conclude, therefore, that women's roles in care-giving, which impact household expenditure, underlie the gender differences in indirect taxes found in this study. This study has not found any explicit gender biases in indirect tax incidence, but uncovered implicit gender biases in some countries for commodities that are essential for meeting basic needs, providing care, and reducing women's unpaid work burdens.

Finally, the policy simulations showed that it is possible in all countries to increase the gender equity of indirect taxes by reducing or zero-rating key commodity items and to offset any revenue losses entailed by these reforms by raising rates on luxury items or selected 'demerit' goods (e.g., tobacco).

Before concluding this comparative analysis, two reflections are in order. First, the methodology we have developed in this project is an improvement over approaches that do not distinguish between different types of households, because it brings out more precise patterns of tax incidence within and across countries. Because the household categories are common across a broad range of countries, this methodology can be easily replicated by analysts and policy-makers interested in gaining a fuller and more accurate picture of tax incidence.

Nonetheless, this methodology has some limitations. First, the various household categories, while chosen as the most illuminating household forms for tax purposes, do not capture the multiple variations that exist in practice, and that may be important in specific countries (such as South Africa, where a substantial proportion of grandparents raise children). Moreover, household sex composition and employment status are still only proxies for the underlying gender relationships that determine patterns of household expenditure; understanding the underlying gender relationships requires information on individual expenditure and decision-making patterns. However, lacking such information, the typology used here together with information on expenditure quintile provides a useful picture of the differential impact of tax systems on males and females, enabling policy-makers to design them more equitably.

Second, while our results have generated a comprehensive and detailed set of research findings, and enable us to identify some useful policy recommendations (see Chapter 11), we also exercise some caution. The emphasis of our research, particularly the incidence analyses of indirect taxes, has been on evaluating the distributional dimensions of prevailing tax systems. Yet, tax policy changes

induce important behavioural responses which data limitations prevent us from modelling in any detail. That said, this research not only provides a useful baseline against which future work can be measured but has also yielded some unexpected findings on gender differences, which must be considered in any effort to make tax policy more equitable, both in the eight countries considered in this volume and elsewhere.

## Acknowledgements

## Annex

*Expenditure classifications across countries*

| 1 | FOOD |
|---|---|
| 1.1 | Food |
| 01.1.1 | Bread and cereals |
| 01.1.1.1 | Rice |
| 01.1.1.2 | Bread |
| 01.1.1.3 | Pasta products |
| 01.1.1.4 | Pastry-cook products |
| 01.1.1.5 | Other products |
| 01.1.2 | Meat |
| 01.1.2.1 | Fresh, chilled or frozen meat of bovine animals |
| 01.1.2.2 | Fresh, chilled or frozen meat of swine |
| 01.1.2.3 | Fresh, chilled or frozen meat of sheep and goat |
| 01.1.2.4 | Fresh, chilled or frozen meat of poultry |
| 01.1.2.5 | Dried, salted or smoked meat and edible meat offal |
| 01.1.2.6 | Other preserved or processed meat and meat preparations |
| 01.1.2.7 | Other fresh, chilled or frozen edible meat |
| 01.1.3 | Fish |
| 01.1.3.1 | Fresh, chilled or frozen fish |
| 01.1.3.2 | Fresh, chilled or frozen seafood |
| 01.1.3.3 | Dried, smoked or salted fish and seafood |
| 01.1.3.4 | Other preserved or processed fish and seafood and fish and seafood preparations |
| 01.1.4 | Milk, cheese and eggs |
| 01.1.4.1 | Whole milk |
| 01.1.4.2 | Low fat milk |

| | |
|---|---|
| 01.1.4.3 | Preserved milk |
| 01.1.4.4 | Yoghurt |
| 01.1.4.5 | Cheese and curd |
| 01.1.4.6 | Other milk products |
| 01.1.4.7 | Eggs |
| 01.1.5 | Oils and fats |
| 01.1.5.1 | Butter |
| 01.1.5.2 | Margarine and other vegetable fats |
| 01.1.5.3 | Olive oil |
| 01.1.5.4 | Edible oils |
| 01.1.5.5 | Other edible animal fats |
| 01.1.6 | Fruit |
| 01.1.6.1 | Citrus fruits – fresh |
| 01.1.6.2 | Bananas – fresh |
| 01.1.6.3 | Apples – fresh |
| 01.1.6.4 | Pears – fresh |
| 01.1.6.5 | Stone fruits – fresh |
| 01.1.6.6 | Berries – fresh |
| 01.1.6.7 | Other fresh, chilled or frozen fruits |
| 01.1.6.8 | Dried fruit and nuts |
| 01.1.6.9 | Preserved fruit and fruit-based products |
| 01.1.7 | Vegetables |
| 01.1.7.1 | Leaf and stem vegetables (fresh or chilled) |
| 01.1.7.2 | Cabbages (fresh or chilled) |
| 01.1.7.3 | Vegetable grown for their fruit (fresh, chilled or frozen) |
| 01.1.7.4 | Root crops, non-starchy bulbs and mushrooms (fresh, chilled or frozen) |
| 01.1.7.5 | Dried vegetables |
| 01.1.7.6 | Other preserved or processed vegetables |
| 01.1.7.7 | Potatoes |
| 01.1.7.8 | Other tubers and products of tuber vegetables |
| 01.1.8 | Sugar, jam, honey, chocolate and confectionery |
| 01.1.8.1 | Sugar |
| 01.1.8.2 | Jams, marmalades |
| 01.1.8.3 | Chocolate |
| 01.1.8.4 | Confectionery products |
| 01.1.8.5 | Edible ices and ice cream |
| 01.1.8.6 | Other sugar products |
| 01.1.9 | Food products necessary |
| 01.1.9.1 | Sauces, condiments |
| 01.1.9.2 | Salt, spices and culinary herbs |
| 01.1.9.3 | Baker's yeast, dessert preparations, soups |
| 01.1.9.4 | Other food products necessary |
| 20.2.1 | Food stamps, other food-related expenditure |
| 20.2.1.1 | Food stamps, other food-related expenditure |

| | |
|---|---|
| 1(A) | Meals out |
| 11.1 | Catering services |
| 11.1.1 | Restaurants, cafes and the like |
| 11.1.1.1 | Restaurants |
| 11.1.1.2 | Cafes, bars and the like |
| 11.1.2 | Canteens |
| 11.1.2.1 | Canteens |
| 1(B) | Non-Alcoholic Drinks |
| 01.2.1 | Coffee, tea and cocoa |
| 01.2.1.1 | Coffee |
| 01.2.1.2 | Tea |
| 01.2.1.3 | Cocoa and powdered chocolate |
| 01.2.2 | Mineral waters, soft drinks, fruit and vegetable juices |
| 01.2.2.1 | Mineral or spring waters |
| 01.2.2.2 | Soft drinks |
| 01.2.2.3 | Fruit juices |
| 01.2.2.4 | Vegetable juices |
| 02.1.1 | Spirits |
| 02.1.1.1 | Spirits and liqueurs |
| 02.1.2 | Wine |
| 02.1.2.1 | Wine from grape or other fruit |
| 02.1.2.2 | Other |
| 02.1.3 | Beer |
| 02.1.3.1 | Beer |
| 2(B) | Tobacco |
| 02.2.1 | Tobacco |
| 02.2.1.1 | Cigarettes |
| 02.2.1.2 | Cigars |
| 02.2.1.3 | Other tobacco |
| | |
| 3 | CLOTHING AND FOOTWEAR – for adults |
| 3.1 | Clothing |
| 03.1.1 | Clothing materials |
| 03.1.1.1 | Clothing materials |
| 03.1.2 | Garments |
| 03.1.2.1 | Garments for men |
| 03.1.2.2 | Garments for women |
| 03.1.3 | Other articles of clothing, clothing accessories and haberdashery |
| 03.1.3.1 | Other articles of clothing, clothing accessories and haberdashery |
| 03.1.4 | Cleaning, repair and hire of clothing |
| 03.1.4.1 | Cleaning, repair and hire of clothing |
| 3.2 | Footwear |
| 03.2.1 | Shoes and other footwear |
| 03.2.1.1 | Footwear for men |
| 03.2.1.2 | Footwear for women |
| 03.2.1.3 | Footwear for children (5 to 15 years) and infants (under 5 years) |

03.2.2     Repair and hire of footwear
03.2.2.1   Repair and hire of footwear

3          CLOTHING AND FOOTWEAR – for children
3.1        Clothing
03.1.1     Clothing materials
03.1.1.1   Clothing materials
03.1.2     Garments
03.1.2.3   Garments for children (5 to 15 years) and infants (under 5 years)
03.1.3     Other articles of clothing, clothing accessories and haberdashery
03.1.3.1   Other articles of clothing, clothing accessories and haberdashery
03.1.4     Cleaning, repair and hire of clothing
03.1.4.1   Cleaning, repair and hire of clothing

4          HOUSING
4.1        Actual rentals for housing
04.1.1     Actual rentals paid by tenants
04.1.1.1   Actual rentals paid by tenants
04.1.2     Other actual rentals
04.1.2.1   Other actual rentals
20.1       Housing: accommodation costs, repairs and improvements
20.1.1     Mortgages and housing costs
20.1.1.1   Mortgages and housing costs
20.1.2     Purchase of a main dwelling
20.1.2.1   Purchase of a main dwelling
20.1.3     Capital improvements main and second dwelling
20.1.3.1   Capital improvements main and second dwelling
20.1.4     Second dwelling costs
20.1.4.1   Second dwelling costs
4.3        Maintenance and repair of the dwelling
04.3.1     Materials for maintenance and repair of the dwelling
04.3.1.1   Materials for maintenance and repair of the dwelling
04.3.2     Services for maintenance and repair of the dwelling
04.3.2.1   Services for maintenance and repair of the dwelling
12.5.2     Insurance connected with the dwelling
12.5.2.1   Insurance connected with the dwelling

4          HOUSING UTILITIES – Water
4.4        Water supply and miscellaneous services relating to the dwelling
04.4.1     Water supply
04.4.1.1   Water supply

4          HOUSING UTILITIES – Electricity
4.5        Electricity and gas
04.5.1     Electricity
04.5.1.1   Electricity

| 4       | HOUSING UTILITIES – Gas |
|---------|-------------------------|
| 4.5     | Electricity and gas |
| 04.5.2  | Gas |
| 04.5.2.1 | Town gas and natural gas |
| 04.5.2.2 | Bottled gas |
| 04.5.5  | Heat energy |
| 04.5.5.1 | Hot water, steam and ice |

| 4        | HOUSING UTILITIES – Other |
|----------|---------------------------|
| 04.4.2   | Refuse collection |
| 04.4.2.1 | Refuse collection |
| 04.4.3   | Sewerage collection |
| 04.4.3.1 | Sewerage collection |
| 04.4.4   | Other services relating to the dwelling necessary |
| 04.4.4.1 | Other services relating to the dwelling necessary |
| 4(B)     | Other Fuels |
| 04.5.3   | Liquid fuels |
| 04.5.3.1 | Liquid fuels |
| 04.5.4   | Solid fuels |
| 04.5.4.1 | Solid fuels |

| 5        | FURNISHINGS, HOUSEHOLD EQUIPMENT and ROUTINE-MAINTENANCE OF HOUSE |
|----------|-------------------------------------------------------------------|
| 5.1      | Furniture, furnishings carpets and other floor coverings |
| 05.1.1   | Furniture and furnishings |
| 05.1.1.1 | Furniture and furnishings (household and garden) |
| 05.1.2   | Carpets and other floor coverings |
| 05.1.2.1 | Carpets and other floor coverings |
| 05.1.3   | Repair of furniture, furnishings and floor coverings |
| 05.1.3.1 | Repair of furniture, furnishings and floor coverings |
| 5.2      | Household Textiles |
| 05.2.1   | Household textiles |
| 05.2.1.1 | Household textiles |
| 5.3      | Household appliances |
| 05.3.1   | Major household appliances whether electric or not |
| 05.3.1.1 | Refrigerators, freezers and fridge-freezers |
| 05.3.1.2 | Clothes washing-machines, clothes drying machines and dish washing machines |
| 05.3.1.3 | Cookers |
| 05.3.1.4 | Heaters, air conditioners |
| 05.3.1.5 | Cleaning equipment |
| 05.3.1.6 | Sewing and knitting machines |
| 05.3.1.7 | Other major household appliances |
| 05.3.2   | Small electric household appliances |
| 05.3.2.1 | Small electric household appliances |

05.3.3      Repair of household appliances
05.3.3.1    Repair of household appliances
5.4         Glassware, tableware and household utensils
05.4.1      Glassware, tableware and household utensils
05.4.1.1    Glass and crystal-ware, tableware
05.4.1.2    Cutlery, flatware and silverware
05.4.1.3    Household utensils
05.4.1.4    Repair of glassware, tableware and household utensils
5.5         Tools and equipment for house and garden
05.5.1      Major tools and equipment
05.5.1.1    Major tools and equipment
05.5.2      Small tools and miscellaneous accessories
05.5.2.1    Small tools and miscellaneous accessories
5.6         Goods and services for routine household maintenance
05.6.1      Non-durable household goods
05.6.1.1    Cleaning and maintenance products
05.6.1.2    Other non-durable household articles
5(B)        Domestic Services and Household Services
05.6.2.1    Domestic services
05.6.2.2    Household services
            Childcare


6           HEALTH
6.1         Medical products appliances and equipment
06.1.1      Pharmaceutical products
06.1.1.1    Pharmaceutical products
06.1.2      Other medical products
06.1.2.1    Other medical products
06.1.3      Therapeutic appliances and equipment
06.1.3.1    Therapeutic appliances and equipment
6.2         Out-patient services
06.2.1      Medical services
06.2.1.1    Medical and optical services
06.2.2      Dental services
06.2.2.1    Dental services
06.2.3      Paramedical services
06.2.3.1    Services of medical analysis laboratories and X-ray centres
06.2.3.2    Services of medical auxiliaries
06.2.3.3    Other non-hospital services
6.3         Hospital services
06.3.1      Hospital services
06.3.1.1    Hospital services
12.5.3      Insurance connected with health
12.5.3.1    Insurance connected with health

| 7 | TRANSPORT – collective forms except flights |
|---|---|
| 7.3 | Transport Services |
| 07.3.1 | Passenger transport by railway |
| 07.3.1.1 | Passenger transport by railway and tube (excluding school travel) |
| 07.3.2 | Passenger transport by road |
| 07.3.2.1 | Passenger transport by road |
| 07.3.4 | Passenger transport by sea and inland waterway |
| 07.3.4.1 | Passenger transport by sea and inland waterway |
| 07.3.5 | Combined passenger transport |
| 07.3.5.1 | Combined passenger transport and school travel |
| 07.3.6 | Other purchased transport services |
| 07.3.6.1 | Other purchased transport services |

| 7 | TRANSPORT – flights |
|---|---|
| 7.3 | Transport Services |
| 07.3.3 | Passenger transport by air |
| 07.3.3.1 | Passenger transport by air |

| 7 | TRANSPORT – private transports |
|---|---|
| 7.1 | Purchase of vehicles |
| 07.1.1 | Motor cars |
| 07.1.1.1 | Purchase of new motor cars |
| 07.1.1.2 | Purchase of second-hand motor cars |
| 07.1.2 | Motor cycles |
| 07.1.2.1 | Motor cycles of all types, scooters and powered bicycles |
| 07.1.3 | Bicycles |
| 07.1.3.1 | Bicycles |
| 07.1.4 | Animal-drawn vehicles |
| 07.1.4.1 | Animal-drawn vehicles |
| 7.2 | Operation of personal transport equipment |
| 07.2.1 | Spare parts and accessories for personal transport equipment |
| 07.2.1.1 | Spare parts and accessories |
| 07.2.3 | Maintenance and repair of personal transport equipment |
| 07.2.3.1 | Maintenance and repairs |
| 07.2.4 | Other services in respect of personal transport equipment |
| 07.2.4.1 | Other services in respect of personal transport equipment |
| 12.5.4 | Insurance connected with transport |
| 12.5.4.1 | Insurance connected with transport |
| 7(B) | Fuels and lubricants |
| 07.2.2.1 | Fuels and lubricants |
| 7(C) | School Transport |

| 8 | COMMUNICATION |
|---|---|
| 8.1 | Postal services |
| 08.1.1 | Postal services |
| 08.1.1.1 | Postal services |

| | |
|---|---|
| 9.4 | Recreational and cultural services |
| 09.4.1 | Recreational and sporting services |
| 09.4.1.1 | Recreational and sporting services |
| 09.4.2 | Cultural services |
| 09.4.2.1 | Cinemas, theatres, concerts |
| 09.4.2.2 | Museums, zoological gardens and the like |
| 09.4.2.3 | Television and radio taxes and hire of equipment |
| 09.4.2.4 | Other services |
| 09.4.3 | Games of chance |
| 09.4.3.1 | Games of chance |
| 9.5 | Newspapers, books and stationery |
| 09.5.1 | Books |
| 09.5.1.1 | Books |
| 09.5.2 | Newspapers and periodicals |
| 09.5.2.1 | Newspapers, magazines and periodicals |
| 09.5.3 | Miscellaneous printed matter |
| 09.5.3.1 | Miscellaneous printed matter |
| 09.5.4 | Stationery and drawing materials |
| 09.5.4.1 | Stationery and drawing materials |
| 9.6 | Package holidays |
| 09.6.1 | Package holidays |
| 09.6.1.1 | Package holidays |
| 20.4 | Holiday spending |
| 20.4.1 | Holiday spending |
| 20.4.1.1 | Holiday spending |
| 11.2 | Accommodation services |
| 11.2.1 | Accommodation services |
| 11.2.1.1 | Accommodation services |
| | |
| 10 | EDUCATION |
| 10.1.(A) | creche |
| 10.1 | Pre-primary and primary education |
| 10.1.1 | Pre-primary and primary education |
| 10.1.1.1 | Pre-primary and primary education |
| 10.2 | Secondary education |
| 10.2.1 | Secondary education |
| 10.2.1.1 | Secondary education |
| 10.3 | Post-secondary non-tertiary education |
| 10.3.1 | Post-secondary non-tertiary education |
| 10.3.1.1 | Post-secondary non-tertiary education |
| 10.4 | Tertiary education |
| 10.4.1 | Tertiary education |
| 10.4.1.1 | Tertiary education |
| 10.5 | Education not definable by level |
| 10.5.1 | Education not definable by level |

10.5.1.1   Education not definable by level

12(A)        PERSONAL CARE – necessities
12.1.3       Other appliances, articles and products for personal care
12.1.3.1     Other appliances, articles and products for personal care

12(A)        PERSONAL CARE – baby products
12.1.3       Other appliances, articles and products for personal care (baby-related)
12.1.3.1     Other appliances, articles and products for personal care

12(A)        PERSONAL CARE – other
12.1.1       Hairdressing, salons and personal grooming establishment
12.1.1.1     Hairdressing, salons and personal grooming establishment
12.1.2       Electrical appliances for personal care
12.1.2.1     Electrical appliances for personal care
12.1.3       Other appliances, articles and products for personal care (except
             baby-related or necessities)
12.1.3.1     Other appliances, articles and products for personal care

12           MISCELLANEOUS GOODS and SERVICES
12.2         Prostitution
12.2.1       Prostitution
12.2.1.1     Prostitution
2.3          Narcotics
02.3.1       Narcotics
02.3.1.1     Narcotics
12.3         Personal effects necessary
12.3.1       Jewellery, clocks and watches
12.3.1.1     Jewellery, clocks and watches
12.3.2       Other personal effects
12.3.2.1     Travel goods and other carriers
12.3.2.2     Other personal effects
12.4         Social protection
12.4.1       Social protection services
12.4.1.1     Social protection services
12.5         Insurance
12.5.1       Life insurance
12.5.1.1     Life insurance
12.5.5       Other insurance
12.5.5.1     Other insurance
12.6         Financial services necessary
12.6.1       Financial intermediation services indirectly measured (FISIM)
12.6.1.1     Financial intermediation services indirectly measured (FISIM)
12.6.2       Financial services necessary
12.6.2.1     Financial services

## Notes

1 Tax allowances are subtracted from income subject to tax and can be a fixed amount or related to gross income subject to tax (e.g., in Mexico). Tax credits are deducted from the tax due (e.g., the United Kingdom).

2 There is no deduction for a financially dependent spouse in India, so the PIT paid by a male-breadwinner household and a single male-parent household who earn the same level of income is the same.

3 *Monotributistas* are mostly low-income independent workers, whereas self-employed are middle- to high-income earners.

4 A spousal deduction is not available to common-law partners in Argentina.

5 This is consistent with the 'destination principle' which requires that the total tax paid on a good be determined by the rate levied in the jurisdiction of its final sale. The 'origin principle', in contrast, requires that tax be paid at the rate in and to the country in which the item is produced rather than consumed (Ebrill *et al*. 2001: 3).

6 This definition of indirect tax incidence, or the economic incidence of taxes, differs from legal or statutory incidence in that the burden of the tax is assumed to fall on the final consumer.

7 Greater detail on technical details of all papers can be found in the country papers at http://www.sds.ukzn.ac.za/default.php?7,12,85,4,0 and www.american.edu/cas/economics/programs/gender.cfm

8 Given data constraints, the incidence analysis in India was carried out only in West Bengal.

9 The OECD equivalence scale, designed in 1982, awards the value of 1 to the principal adult household member, the value of 0.7 to other adults, and 0.5 to children under 14. A modified scale was established in 1994 that lowers the value to other adults from 0.7 to 0.5 and values to children from 0.5 to 0.3. This scale results in less weight being given to large families. Some scales are estimated based on parametric methods using a chosen parameter, $\theta$, with $0 < \theta < 1$. An example of a parametric scale uses square roots; it divides gross or net income (expenditures) by the square root of the number of household members (OECD 2005).

10 Equivalence scales were developed to capture consumption, but the careful reader will note that expenditure and consumption are quite distinct although clearly related concepts. Our focus in this volume is on the former.

11 Since the VAT base normally includes excises and fuel taxes, the effective VAT rate on the pretax base was calculated for goods and services subject to excises and fuel taxes. Moreover, since excises and fuel taxes could have been levied on a unit or combination unit and on an ad valorem basis and often on the wholesale, not retail price, further adjustments to get effective excise and fuel tax rates were made. See country papers for details.

12 In his study of Ghana, Younger (1996) assumed that fuel for public transport made up 20 per cent of input costs, which was near the average of the input–output tables for Niger, Madagascar and Cameroon. Lacking country input–output table data and accounting for current prices, we adjusted this figure upward.

13 We define a tax to be progressive if incidence falls on the highest quintile, and regressive if incidence falls on the lowest quintiles.

14 Female-headed households receive the lowest fuel subsidy.
15 However, the difference in incidence between male-breadwinner and dual-earner households is not statistically significant.
16 In Mexico, fuel taxes in the year of the study were actually a subsidy (see Chapter 5 for more explanation). Thus, in Mexico, female-breadwinner households received the lowest subsidy compared to other households.
17 The incidence of tobacco on the poorest, no-employed households is almost double that of female-breadwinner and male-breadwinner households and almost triple that of dual-earner households.
18 Not all countries, e.g., South Africa, have an official poverty line measured in this manner.
19 These results are reported in the country case studies.
20 Mexico and South Africa carry out a counterfactual exercise of imposing VAT on items that are currently zero-rated. Uganda only considers reducing tax on salt and paraffin without measures to meet the revenue shortfall.

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# 3 Gender equality and taxation in Argentina

*Corina Rodríguez Enríquez, Natalia Gherardi and Darío Rossignolo*

## Introduction

A consistent, planned policy of tax reform in Argentina, while badly needed, is currently on hold. In line with the dominant economic paradigm in the region (and the world), public spending is regarded as the main tool by which to reduce income inequalities, neglecting the potential of tax reform. Instead of comprehensive reform, therefore, there have been *ad hoc* changes to the tax system over the years, as well as the addition of specific taxes in response to fiscal needs or sectoral interests.

Perhaps the main reason for the absence of fiscal reform on the current public policy agenda is the multiplicity of interests involved together with a lack of political will. This chapter will evaluate the impact on gender equality of the current tax structure – particularly income tax and indirect taxes – as well as possible reforms. It is hoped that it will also encourage policy-makers in Argentina to take up the issue of comprehensive tax reform.

Following an overview of the economic and tax structure, and the key dimensions for the analysis of gender equality, the chapter looks at income taxes and indirect taxes, then presents the results of a policy simulation designed to make the tax system more equitable from a gender perspective. It then summarizes key findings and offers some policy suggestions to address them.

## The Argentine economy

Argentina is a middle-income country in South America, with a population of 36 million (51 per cent women; 49 per cent men) and a GDP of US$270 billion. Life expectancy averages 73.8 years. Almost 30 per cent of the population is under 14 years old, while nearly 15 per cent is over 60 years old, with older women making up a substantial part of this group. Family organization has been slowly changing, with an increasing number of single-parent households and a decline in extended family households. Nuclear families now make up 55.7 per cent of all households, the majority (94 per cent) headed by a man. In contrast, women head 57 per cent of one-person households and 81.7 per cent of one-parent households.

Argentina's economy has undergone a number of crises and recoveries over the past 20 years. In 1991, after several years of hyperinflation, the local

currency was pegged to the dollar. This helped stabilize the economy, which together with the support of multilateral financial institutions, facilitated a series of structural reforms, including reduced import taxes, market deregulation and privatization of all state-owned industries and some state-provided services (LoVuolo 2001). An important element of these reforms was a policy to reduce labour costs. Together they had a severe impact on the labour market, the principal source of income for most people, as well as on levels of poverty and indigence.

Despite the ups and downs of the economy over the decade 1991–2001, the labour market showed a clear downward trend, as unemployment, under-employment and job insecurity all increased. Although men's situations worsened more quickly than women's, women continued to be over-represented in all forms of unemployment, under-employment and precarious jobs. Indeed, a feature of the economy in those years was its reduced capacity to generate employment, even as production and investment rose.[1]

The economy began once more to slow down definitively in mid-1998, reaching a crisis at the end of 2001. To ensure social stability, the government terminated the currency board, devalued the local currency and adopted emergency social welfare measures. Assisted by a favourable international economic climate, a sustained process of economic recovery began in 2003: production, investment, consumption and employment all rose. Since then, the GDP has grown 8 per cent annually. The change in relative prices that resulted from devaluation has allowed production to gradually recover, thus improving labour market conditions. By the end of 2006, unemployment had decreased to 10 per cent – 8.5 per cent for men and 11.6 per cent for women. The level and quality of employment rose, and the proportion of informal wage earners dropped, although it still represented over 40 per cent of the labour force.

Data also show that labour market opportunities increased, although this did not lead to greater female labour market participation. The presence of small children at home remains a major constraint on women's participation in the labour market, especially among low-income women, whose economic activity rate is substantially lower than that of higher-income women, and lower still compared to male rates.

In addition to having fewer employment options than men, women continued to be over-represented in the lowest quality and less-skilled jobs in the informal economy (56.5 per cent of female workers compared to 43.1 per cent of male workers). Domestic service, which is especially precarious, continued to be the largest source of female employment, representing 17.2 per cent of the female labour force and 22.7 per cent of female wage earners. For all of these reasons, women's income from paid work remains on average 73 per cent of men's income.

In short, the economic recovery did not change the main features of gender inequality. Women find it more difficult to participate fully in the labour market than men do, which translates into greater income vulnerability. This becomes even more important when considering that women are over-represented in single-parent households.
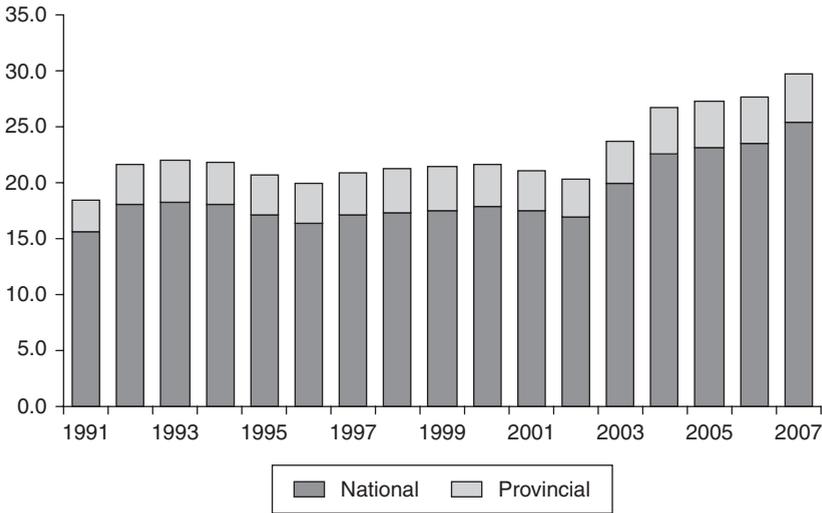
*Figure 3.1* Gross tax burden, Argentina, 1991–2007.

*Source*: Ministry of Economy data, successive years.

## The tax structure in Argentina

Argentina's tax/GDP ratio is moderate, although it has grown rapidly since 2001. From the beginning of the 1990s to the present, two stages can be distinguished: in the first, from 1991 until the end of 2002, the tax/GDP ratio averaged 20.9 per cent of GDP, while in the second, from 2003 to 2008, it averaged 27 per cent of GDP (see Figure 3.1). The growth in recent years is the result of the collection of increased revenues from sources that were only sporadically used in the past, such as export duties and tax on debts and credits in saving accounts, and increased revenues from corporate profits (due to a more stable macroeconomic environment).

As illustrated in Figure 3.2, in 2007, indirect taxes make up almost 60 per cent of total tax revenue (including social security contributions). The share of consumption taxes, value-added tax (VAT), excises and fuel taxes, remains the largest component of revenue (over 30 per cent), although taxes on international trade had grown to over 10 per cent by 2007. Of the direct taxes, income tax makes up 18.6 per cent of total revenue.

A number of factors have contributed to the changes in the tax structure over the past two decades, with shifts in policy often contradicting earlier policy stances. After the 1991 crisis, tax policies aimed to broaden the tax base through the VAT; reduce income tax rates; eliminate export duties; and modify fuel and gas taxes. In the middle of the 1990s, however, financial turmoil resulted in another series of measures, some of which contradicted the previous

**1991**

**1999**

**2007**

Income tax
Property tax
VAT
Excise and fuel
Import and export taxes
Other taxes
Social security contributions
Provincial taxes
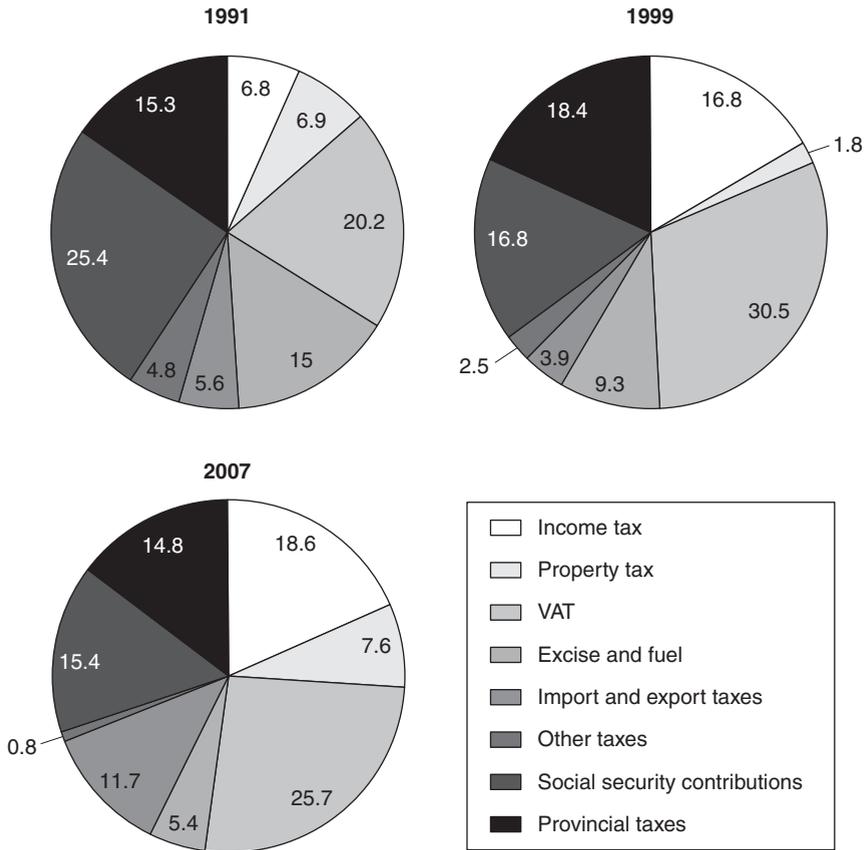
*Figure 3.2* Composition of tax revenue as percentage of total revenue, Argentina.

*Source:* Based on Ministry of Economy data.

ones. The VAT rate was increased from 18 per cent to 21 per cent and its base was broadened, import tariffs were increased, tax refunds on exports and capital assets subsidies were reduced, and the tax base of income and personal assets was expanded. The persistent fiscal deficit led to additional measures, including raising the gasoline tax and reimposing the gasoil tax. Several minor taxes were created, including the Simplified Tax and Social Security Regime (*Monotributo*).

At the end of 1999, as the financial crisis deepened, the new government implemented further tax measures. The VAT base was further broadened and some exemptions were repealed. In addition, the use of differential rates was extended, taxing different services at 10.5 per cent. Furthermore, the personal income tax was amended, broadening the tax base through the reduction of non-taxable income, dependant deductions and special deductions. Once again, in

May 2001, new tax amendments were introduced, the most important being the implementation of a tax on debits and credits in saving accounts.

Finally, after the economic crisis of 2001, export duties were implemented, generating revenues of up to 2.5 per cent of the GDP in 2007. This measure responded to the government's need to appropriate part of the gains produced by the currency devaluation, and to establish a barrier against the impact that fluctuating international prices of primary goods could have on domestic goods prices.

In short, the initial intention of simplifying the tax system was superseded by the need to address financial emergencies, causing a series of reforms. A large part of the recent growth in the tax burden can be explained by an increasing number of what could be considered extraordinary or emergency taxes. It is now important to introduce more comprehensive tax reform, which would give the system better stability, simplicity, and most importantly, greater social and gender equity.

## Personal income tax and gender equality

Personal income tax (PIT) is governed by the Income Tax Act 20628, enacted in 1973 and subsequently supplemented and amended by some 173 regulations. PIT is levied on both individuals and undivided estates resident in the country. In addition, foreign beneficiaries pay income tax on income earned in Argentina.

Each taxpayer in Argentina, regardless of his or her civil status, must file a separate return (where required to do so) and pay the tax based on income subject to tax (Article 29 of the Income Tax Law). However, Article 30 of the Income Tax Law establishes some exceptions, with allocation to the husband of certain joint income earned on joint property in the case of married couples:

> Art. 30. Joint income shall be totally allocated to the husband unless: a) the property was acquired by the wife (under certain specified conditions); b) there has been a legal separation of assets; c) the wife manages the common property by court order.

Two observations are pertinent here. First, Article 30 is prima facie discriminatory because it does not recognize women as subject to tax on income from 'marital property'. Under the Civil Code, all property acquired by the spouses after marriage is marital property, that is, owned in equal parts (except specific cases where declared otherwise at time of purchase). It can be argued, however, that this formal discrimination does not hurt women, who therefore have a lower tax burden than their husband because of the joint title to the property.

Second, the exceptions provided in the law contradict the general provisions in civil law governing matrimonial assets. Without prejudice to the individual taxation system, the law allocates to the husband income from certain assets that may have been acquired and managed by the wife. According to tax specialists, the applicable system is not, strictly speaking, individual taxation, as it would appear, but rather a hybrid, as it involves a sort of joint taxation for marriage partners and is higher for such partners.

The law also permits taxpayers to deduct certain amounts for each family member for which they are responsible, provided the family member resides in the country, and has a net income below a certain level. Deductions can be claimed for spouses (but not common-law partners), ancestors and descendants. In general, these deductions can only be claimed by the most immediate relative. It is important to note that in the case of children, if both the father and mother have taxable income, then both may claim the deduction.

The special deduction is allowed for resident individuals who have net income from employment (salaried workers) or the professions (as self-employed). However, the maximum 'special deduction' is almost four times higher for employed workers than for those who are self-employed. As the proportion of self-employed women is greater than the proportion of self-employed men, while the reverse is the case for salaried workers, this is an implicit gender bias in the system. Although this disparity has been questioned, the 2008 reforms reduced but did not eliminate it.

The law provides that certain entities, and income from certain sources, are exempt from tax. Among tax-exempt incomes are proceeds of court or administrative labour-related awards and seniority compensation in dismissals. It is interesting to note, however, that the law does not exempt tax on damages awarded to women dismissed during pregnancy or within one year after giving birth.

Furthermore, some exemptions are questionable because of their implicit discrimination by class and gender. In the 1990s reforms, the law established exemptions for income from stocks, bonds, certificates, bills, notes and other securities that have been or may in the future be issued by government agencies, and income derived from the purchase, sale, exchange, transfer, or disposition of stocks, bonds and other securities by individuals and undivided estates. These exemptions clearly benefit only persons with a sufficient level of income and understanding to engage in transactions covered by this tax break. Women are under-represented in this group.

### PIT contributions by employment category

One of the features of personal income taxation in Argentina is its segmentation. The system provides for three distinct employment categories, each having its own PIT dispensation: employees, self-employed taxpayers (high- and medium-income independent workers) and *monotributistas* (individuals registered under the simplified tax regime known as *Monotributo* for small and medium-sized taxpayers, who are mostly low-income independent workers).

Self-employed taxpayers must pay income tax in five advance payments of 20 per cent each of total annual tax owed. Monthly income of salaried workers is subject to withholding by the employers, who are responsible for paying the tax to the tax authorities. In the case of *monotributistas*, income tax is included in a single tax payment based on income bracket and, to ease administrative burden, there are no rules related to the assessment of income or deductions. According to information provided by tax authorities, although women are a minor share of

*Table 3.1* Income tax applicable by income bracket, Argentina

| Accumulated taxable net income | | Payment | | |
|---|---|---|---|---|
| *Over AR$* | *Up to AR$* | *AR$* | *Plus %* | *On the excess of AR$* |
| 0 | 10,000 | | 9 | |
| 10,000 | 20,000 | 900 | 14 | 10,000 |
| 20,000 | 30,000 | 2,300 | 19 | 20,000 |
| 30,000 | 60,000 | 4,200 | 23 | 30,000 |
| 60,000 | 90,000 | 11,100 | 27 | 60,000 |
| 90,000 | 120,000 | 19,200 | 31 | 90,000 |
| 120,000 | Above | 28,500 | 35 | 120,000 |

*Source*: Income Tax Law, Section 90.

*Table 3.2* Annual individual personal allowances, Argentina (in AR$)

| Personal allowance | Self-employed taxpayers | Employees |
|---|---|---|
| Non-taxable income | 9,000 | 9,000 |
| Spouse | 10,000 | 10,000 |
| Children (each) | 5,000 | 5,000 |
| Other dependants (each) | 3,750 | 3,750 |
| Special deduction (for income deriving from personal work) | 9,000 | 34,200 |

*Source*: Income Tax Law, Section 23.

taxpayers in all three categories, they are under-represented among self-employed taxpayers (27.9 per cent) and employees (22.2 per cent) and over-represented among *monotributistas* (38.9 per cent).

In the case of employees and self-employed taxpayers, the tax is determined as per taxable net income bracket. Table 3.1 shows non-taxable income brackets, the fixed amounts for each bracket and their corresponding rates. These taxpayers are allowed certain deductions, as outlined in Table 3.2. In addition, in the case of the employed and self-employed, further deductions – including contributions to pension and health care schemes, life insurance premiums, funeral expenses, retirement insurance, medical coverage and interest on mortgage-backed loans – are allowed. Beginning in 2005, it is also possible to deduct all payments made as salaries and employers' contributions to domestic workers.

In the case of *monotributistas*, on the other hand, the tax is a fixed amount established according to the *Monotributo* category into which taxpayers fall, which is determined based on invoicing and/or the surface area of the facilities and/or the use of power during the production process. Tables 3.3 and 3.4 show the total amount to be paid monthly as *Monotributo*, according to their activities and gross income determined on an annual basis. As we will see below, the amount of taxes paid differs substantially for the different categories of PIT taxpayers, partly because *monotributistas* do not enjoy any tax deductions or allowances.

*Table 3.3* Monthly *Monotributo* payments: activities related to the hiring and/or performance of services, Argentina

| Category | Gross income | Tax amount | Pension fund contributions | Health insurance plan contribution | Total payable |
|---|---|---|---|---|---|
| A | Up to AR$ 12,000 | AR$ 33 | AR$ 35 | AR$ 37 | AR$ 105 |
| B | Up to AR$ 24,000 | AR$ 39 | AR$ 35 | AR$ 37 | AR$ 111 |
| C | Up to AR$ 36,000 | AR$ 75 | AR$ 35 | AR$ 37 | AR$ 147 |
| D | Up to AR$ 48,000 | AR$ 128 | AR$ 35 | AR$ 37 | AR$ 200 |
| E | Up to AR$ 72,000 | AR$ 210 | AR$ 35 | AR$ 37 | AR$ 282 |

*Source*: Based on General Resolution AFIP Nº 2431/2008.

*Table 3.4* Monthly *Monotributo* payments: other activities, Argentina

| Category | Gross income | Tax amount | Pension fund contributions | Health insurance plan contribution | Total payable |
|---|---|---|---|---|---|
| F | Up to AR$ 12,000 | AR$ 33 | AR$ 35 | AR$ 37 | AR$ 105 |
| G | Up to AR$ 24,000 | AR$ 39 | AR$ 35 | AR$ 37 | AR$ 111 |
| H | Up to AR$ 36,000 | AR$ 75 | AR$ 35 | AR$ 37 | AR$ 147 |
| I | Up to AR$ 48,000 | AR$ 118 | AR$ 35 | AR$ 37 | AR$ 190 |
| J | Up to AR$ 72,000 | AR$ 194 | AR$ 35 | AR$ 37 | AR$ 266 |
| K | Up to AR$ 96,000 | AR$ 310 | AR$ 35 | AR$ 37 | AR$ 382 |
| L | Up to AR$ 120,000 | AR$ 405 | AR$ 35 | AR$ 37 | AR$ 477 |
| M | Up to AR$ 144,000 | AR$ 505 | AR$ 35 | AR$ 37 | AR$ 577 |

*Source*: Based on General Resolution AFIP Nº 2431/2008.

### Vertical and horizontal (in)equity of personal income tax

This section analyses PIT payments for different types of households to consider issues of horizontal and vertical equity. In order to do this, we apply the PIT provisions, rates and deductions to the following household types: a male-breadwinner household, a single-income female-breadwinner household, and a dual-income household,[2] each with two dependent children.

In order to assess vertical equity, we consider three levels of household income: the median, half the median and twice the median. In the case of Argentina, the first two cases are below the PIT threshold and therefore do not pay income tax. Households whose income is twice the median income or above do contribute, with the rates increasing with income, as shown in Table 3.1. This makes the PIT vertically equitable.

We also consider, for each household type, the PIT payment depending on the source of income, that is, whether the income is taxed in terms of the employee or *monotributistas* provisions. The household types are shown in Table 3.5.

Table 3.6 shows the taxes paid at the median income by the different household types (full calculations are shown in Annex 1). In the first two cases (employees and self-employed taxpayers), income tax would be higher for those

Table 3.5 Household composition and income by type, Argentina

| Type of household | Number of members | Number of income earners | Household annual net income |
|---|---|---|---|
| A | Two married people, one male provider with two underage children | Only the male member has an income | AR$ 72,000 |
| B | Single parent household, one female provider with two underage children | The female member has an income | AR$ 72,000 |
| C | Two married people, both have an income, with two underage children | Both members earn an income: the male's income is high, the female's income is low | AR$ 72,000 |

Table 3.6 Income tax by type of household and income source, Argentina (AR$)

| | | Type of household | | |
|---|---|---|---|---|
| | | A | B | C |
| Income source | Employees | 0 | 2,132 | male = 2,132 female = 0 |
| | Self-employed taxpayers | 5,120 | 7,420 | male = 4,660 female = 0 |
| | *Monotributistas* | 2,520 | 2,520 | male = 900 female = 468 |

*Notes*: A = married male breadwinner with financially dependent spouse and two children.
  B = unmarried (single) female earner and two children.
  C = married dual-earner household and two children.

in common-law marriages since they cannot take the deduction for the spouse who does not earn any income, which currently amounts to AR$10,000 per year.

Argentina's PIT is not horizontally equitable by two other measures. First, the source of income affects the tax paid. For all household types, taxes paid by the self-employed and *monotributistas* are well above those of paid employees. Women predominate among the self-employed and *monotributistas*. Second, within each of the tax categories, there are significant differences in the taxes paid by different household types. These differences occur mainly because the deductions and tax credits available to taxpayers in Argentina favour high-income earners; likewise, several income sources that are excluded from the tax base are more concentrated in the aggregate income of high-income earners. Males dominate high-income earners, while females dominate lower earners. Thus, because women are more concentrated in the lower-income groups and among the self-employed and *monotributistas*, the system contains an implicit bias against women.

As mentioned, given that the system taxes individuals, the second income – usually that of the female spouse – is not subject to a higher marginal tax burden

because it is not added to the first. If both spouses have taxable income, non-taxable income is deducted by both. Both spouses can also take deductions for their dependent children, provided the remaining conditions are present. However, it is important to note that only self-employed workers or employees benefit from these provisions, and employees benefit more than self-employed workers due to the fact that their non-taxable income is higher. Taxpayers in the *monotributistas* category are most disadvantaged.

Thus, in sum, the PIT system is Argentina is not horizontally equitable. The system disadvantages single-parent households, and self-employed and *monotributistas*, all categories where women are over-represented. The tax system also favours two-parent single-earner households and the typical male-breadwinner household where the income earner is an employee.

From the standpoint of gender equality, therefore, there are both strengths and weaknesses in the personal income tax system. One of the strengths is that of being an individual filing system, which does not discourage a priori income generation by women. Furthermore, there is no explicit discrimination in the application of deductions and other tax benefits, which are available equally to men and women. However, an explicit bias against women arises from the treatment of community property income, in that while there is no negative economic impact, women are ignored as individuals with legal rights and duties.

## Indirect taxation: impact and incidence

As stated previously, indirect taxes represent the largest proportion of the Argentine tax revenues. Although some efforts have been made to examine indirect tax incidence in Argentina (Beccaria 1979; Gómez Sabaini and Santiere 1993; Ahumada *et al*. 1996; Gasparini 1998; Santiere *et al*. 2000, 2002; Santiere and Gómez Sabaini 2001; Gómez Sabaini and Rossignolo 2008), none have been done from a gender perspective. In order to estimate the tax burden faced by households among different gender classifications, therefore, we estimated the tax incidence of three kinds of indirect taxes: VAT, excise taxes and fuel taxes, which together represent more than 30 per cent of total revenue.

The exercise allocated the theoretical tax burden to different types of households, based on information on household consumption in the National Survey on Household Expenditure 2004–05 (although the 2007 tax rates were applied). It assumed that tax burden on goods and services is fully passed onto consumers. Calculations using these data show average tax collections in 2005 were 66 per cent of actual tax revenues, with 69 per cent being collected through VAT, 63 per cent through fuel taxes, and 49 per cent through excises. All figures have been annualized and are expressed in thousand pesos.

### Indirect tax rates

Argentina has three VAT rates, plus exemptions (exports are zero-rated). The general tax rate is 21 per cent. A higher rate of 27 per cent is applied to invoices

*Table 3.7* Excise tax rates, Argentina

| Goods taxed | Rate |
| --- | --- |
| *Tobaccos* | |
| Cigarettes | 60 |
| Cigars, etc. | 16 |
| Chewing tobacco, snuff, etc. | 20 |
| *Alcoholic beverages* | |
| Whisky | 20 |
| Cognac, brandy, pisco, gin, vodka, rum, gin, etc. | 20 |
| Others based on proof | |
| First class, from 10 to 29 proof | 20 |
| Second class, 30 proof and higher | 20 |
| *Beer* | 8 |
| *Nonalcoholic beverages, syrups, extracts, concentrates, and mineral water* | 4/8 |
| *Luxury items* | 20 |
| *Pleasure or sports vessels and aircraft* | |
| Sale price between 15000 and 22000 pesos | 4 |
| Sale price over 22000 pesos | 8 |
| Electronics | 17 |
| *Services taxed* | |
| *Labour accident insurance* | 2.5 |
| *Others* | 1 |
| *Cell and satellite telephone service* | 4 |

*Source*: Tax law.

for public services to companies. A lower rate of 10.5 per cent is applied to basic consumption goods such as fruit and vegetables, legumes, grains, bread and honey, some agricultural goods such as live animals and leather, and new home sales. Publications, water, milk, medicine for resale, educational services, life insurance, housing property rental, and a few other specific items are exempt from VAT. A full list of the VAT provisions is provided in Annex 2.

The basis for calculating the tax due is the net price of the operation, including the cost of services provided together with the operation or as a result of it, and financing considerations. The base does not include the VAT generated by the operation itself and domestic taxes applicable to the operation.

Excise taxes apply to the domestic sale and importation of a specific list of goods and transactions: alcoholic beverages, beer, soft drinks and other nonalcoholic beverages, automobiles, gasoline motors and insurance.

In all taxes on goods, the taxable basis includes the tax itself. The taxable basis is the net price billed by the responsible party, defined as the remainder after deduction of discounts and bonuses, financing interest, and the VAT generated by the operation. In the case of cigarettes, the taxable basis is the sale price to the end user, exclusive of the VAT; in the case of insurance, the taxable basis does not include the tax itself, which is the only case in domestic taxes where the legal or nominal rate is applied to the taxable basis. Table 3.7 shows the tax rates for the excises considered.

*Table 3.8* Tax rates on fuels, Argentina

| Product | Rate | Minimum amount imposed per litre/m3 |
|---|---|---|
| Unleaded gasoline, up to 92 octane | 70 | 0.5375 |
| Unleaded gasoline, more than 92 octane | 62 | 0.5375 |
| Leaded gasoline, up to 92 octane | 70 | 0.5375 |
| Leaded gasoline, more than 92 octane | 62 | 0.5375 |
| Straight-run gasoline | 62 | 0.5375 |
| Natural gasoline | 62 | 0.5375 |
| Solvent | 62 | 0.5375 |
| Turpentine | 62 | 0.5375 |
| Gas oil | 19 | 0.15 |
| Diesel oil | 19 | 0.15 |
| Kerosene | 19 | 0.15 |
| Compressed natural gas for use as a fuel | 16 | |

*Source*: Tax law.

Fuel taxes are applied on liquid fuels and compressed natural gas. For fuels, the gas tax applies to all forms of gasoline, solvent, turpentine, gas oil, diesel oil, and kerosene. On natural gas, there is a tax on what is distributed by networks for use as compressed natural gas in vehicles. The tax is applied in a single stage at the point of sale of products of national or imported origin. Exports are exempt. The tax is calculated by applying the respective rates to the net sales price on the invoice or equivalent document for operators engaged in resale at distribution points, issued by those required to do so. Table 3.8 shows the products taxed, tax rates and minimum amounts per unit of measure.

### Incidence of indirect taxation

Table 3.9 shows the aggregate results of the estimated incidence of the indirect taxes under consideration, by sex of household head; by employment status and by gender composition. It shows that the incidence for all households and taxes is 16.8 per cent. Most of that results from the impact of the VAT, the total average incidence of which is 13.8 per cent.

The highest tax incidence is borne by male-type households. The overall tax incidence is relatively higher for households with a male head (16.9 per cent), dual-earner households (17.1 per cent), male-breadwinner households (17.0 per cent) and male-majority households (17.5 per cent).

As regards VAT, although the difference in tax burden borne by different households is statistically significant with male-type households having a higher incidence, the magnitudes of the differences are not large. For example, the incidence for male-majority, female-majority and equal-adult households is respectively 13.9 per cent, 13.8 per cent and 13.8 per cent. The incidence of excise taxes and fuel taxes also falls mainly on male-type households. The differences are more significant for these taxes.

*Table 3.9* Overall incidence by household type: tax as percentage of expenditure, Argentina (standard errors in *italics*)

| | Total tax | VAT | Excise tax | Fuel tax | Households (%) |
|---|---|---|---|---|---|
| *Headship* | | | | | |
| Male headed | 16.97 | 13.82 | 1.26 | 1.89 | 75.83 |
| | *0.042* | *0.018* | *0.022* | *0.034* | |
| Female headed | 16.18 | 13.80 | 1.25 | 1.13 | 24.17 |
| | *0.037* | *0.020* | *0.023* | *0.026* | |
| Total | 16.78 | 13.82 | 1.26 | 1.70 | |
| | *0.040* | *0.019* | *0.022* | *0.033* | |
| *Employment categories* | | | | | |
| Male breadwinner | 17.05 | 13.84 | 1.40 | 1.81 | 36.21 |
| | *0.043* | *0.019* | *0.024* | *0.036* | |
| Female breadwinner | 15.82 | 13.77 | 1.02 | 1.03 | 11.49 |
| | *0.035* | *0.020* | *0.021* | *0.023* | |
| Dual earner | 17.11 | 13.82 | 1.32 | 1.97 | 43.11 |
| | *0.039* | *0.017* | *0.021* | *0.033* | |
| None employed | 15.36 | 13.76 | 0.67 | 0.93 | 9.20 |
| | *0.040* | *0.024* | *0.021* | *0.027* | |
| Total | 16.78 | 13.82 | 1.26 | 1.70 | |
| | *0.041* | *0.019* | *0.022* | *0.033* | |
| *Household sex composition* | | | | | |
| Male majority | 17.46 | 13.86 | 1.62 | 1.98 | 20.68 |
| | *0.045* | *0.018* | *0.027* | *0.037* | |
| Female majority | 16.35 | 13.83 | 1.15 | 1.37 | 27.01 |
| | *0.038* | *0.019* | *0.021* | *0.028* | |
| Equal number adult | 16.73 | 13.79 | 1.17 | 1.77 | 52.31 |
| | *0.040* | *0.019* | *0.021* | *0.033* | |
| Total | 16.78 | 13.82 | 1.26 | 1.70 | |
| | *0.041* | *0.019* | *0.022* | *0.033* | |

In the aggregate, the incidence by quintile shows that indirect taxes are overall proportional, and very slightly progressive (see Table 3.10). In the 1st quintile, that is, households with lower consumer spending, the burden is 16.2 per cent, increasing to 17.2 per cent in the highest quintile. In the analysis by tax, however, the VAT is regressive between quintiles 1 and 4, although it has a U-shaped curve, because the 5th quintile has a burden slightly higher than that of quintiles 3 and 4.

The impact of excises is not clearly defined, because their incidence shows an inverted, U-shaped curve. The 1st quintile faces a tax incidence of 1.2 per cent; the 3rd quintile, 1.4 per cent; and the 5th quintile, 0.9 per cent. The overall incidence of excises is strongly conditioned by the progressive nature of the fuel tax, in which the 1st quintile faces a burden of 0.79 per cent and the 5th quintile, 2.48 per cent.

*Table 3.10* Incidence by quintile: tax as percentage of expenditure, Argentina (standard errors in *italics*)

| Quintile | Total tax | VAT | Excise tax | Fuel tax |
|---|---|---|---|---|
| 1 | 16.23 | 14.22 | 1.22 | 0.79 |
| | *0.040* | *0.021* | *0.029* | *0.025* |
| 2 | 16.57 | 13.75 | 1.43 | 1.38 |
| | *0.043* | *0.019* | *0.025* | *0.033* |
| 3 | 16.87 | 13.68 | 1.44 | 1.75 |
| | *0.044* | *0.019* | *0.023* | *0.036* |
| 4 | 17.02 | 13.66 | 1.25 | 2.12 |
| | *0.041* | *0.017* | *0.018* | *0.035* |
| 5 | 17.21 | 13.78 | 0.94 | 2.48 |
| | *0.034* | *0.016* | *0.013* | *0.031* |
| Total | 16.78 | 13.82 | 1.26 | 1.70 |
| | *0.041* | *0.019* | *0.022* | *0.033* |



*Figure 3.3* Total tax incidence by quintile and household type, Argentina.

These general considerations may differ if the situation is analysed concurrently by household and quintile type, as we did for the employment status household classification. The results for the taxes under consideration as a whole are shown in Figure 3.3. The higher tax incidence is borne by male-breadwinner and dual-earner households, for all expenditure quintiles. In all cases (except households with no adults employed), the tax incidence is higher for households with no children.
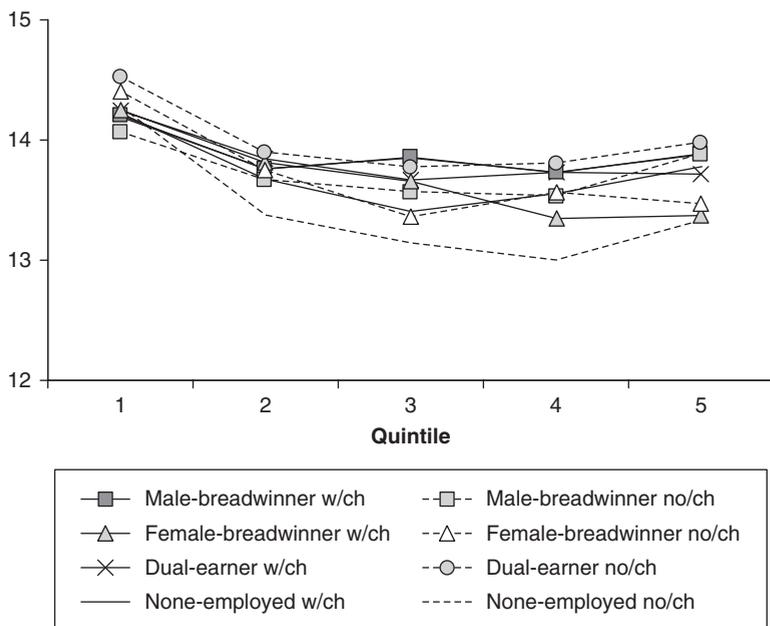
*Figure 3.4* VAT incidence by quintile and household type, Argentina.

In the case of male-breadwinner and dual-earner households, the incidence profile of indirect taxation seems to be slightly more progressive[3] than for the rest of households. Moreover, this difference is substantial as compared to female-breadwinner households, which show a proportional incidence in the case of households with children,[4] and a slightly regressive one in the case of households with no children.[5]

The case of non-employed households is more erratic, with a progressive impact on households with children and a slightly regressive impact on households with no children. It is difficult to analyse this latter category, which includes mainly retired adults, but also households where all adults are unemployed. Moreover, since these households comprise only 5 per cent of the total, no further inferences may be made.

The impact on distribution of the total tax incidence is explained by the simultaneous existence of a certain regressivity of VAT, a marked regressivity of excises and a marked progressivity of the fuel tax. Indeed, the 1st expenditure quintile bears a VAT incidence higher than the other quintiles, with respect to all household types. This regressivity reaches a plateau in the middle segments of distribution and reverts in the 5th quintile (see Figure 3.4).

Although differences in VAT incidence among household types are not significant, female-breadwinner households clearly face the most regressive VAT incidence, implying a gender bias against poor female-type households. VAT is
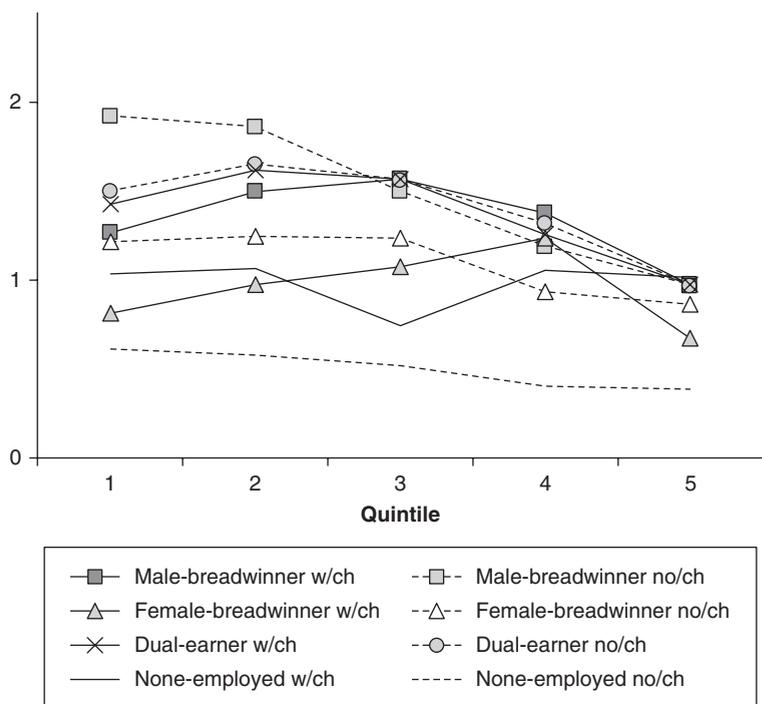
*Figure 3.5* Excise incidence by quintile and household type, Argentina.

regressive between quintiles 1 and 3 for all household types. For male-type households, it becomes proportional between quintiles 3 and 5. In the case of female-type households, it is regressive for all quintiles. It is likely that this results from the fact that most basic consumer goods, including food, are subject to the general tax rate, and only a small number of food items are subject to a differentiated rate. We will further explain this in the analysis by type of good and in the policy simulations.

Excises are overall regressive between quintiles 2 and 5, though with differences according to household type. The incidence is still higher for male-breadwinner and dual-earner households, among those households in the lower quintiles, but these differences almost disappear as progress is made in the distribution scale (see Figure 3.5).

Similarly, for most household types, the impact of this tax is progressive in the lowest quintiles, but as noted above becomes regressive in the highest quintiles. The most significant exception occurs for male-breadwinner households with no children, for which the impact is clearly regressive.

The incidence of fuel tax is progressive for quintiles 1 through 4, and for all household types (see Figure 3.6). As in the previous cases, the highest incidence is borne by male-breadwinner and dual-earner households (with and without children). Female-breadwinner households with children bear the lowest incidence.
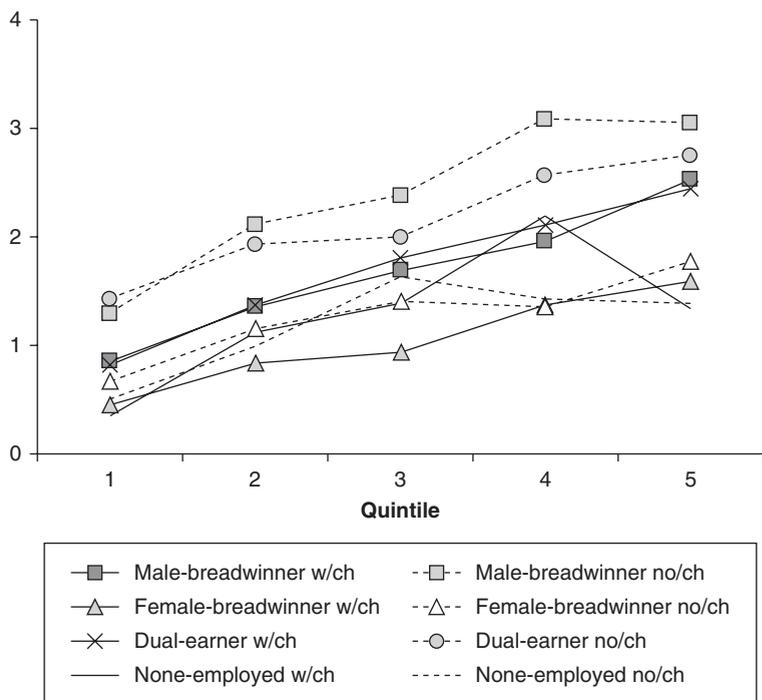
*Figure 3.6* Fuel tax incidence by quintile and household type, Argentina.

In summary, indirect taxation in Argentina shows a proportional incidence in the aggregate and a relative higher incidence on male-type households. Taking into account the employment status classification, the incidence is higher on male-breadwinner and dual-earner households. The proportional effect of the aggregate tax incidence takes a more progressive character on such households and a more regressive (or less progressive) character on female-breadwinner households.

The aggregate incidence results are driven largely by a slightly regressive VAT incidence faced by poorer households, proportional VAT burden faced by households of medium-high expenditure level, the regressive nature of excises and the progressive nature of fuel taxes. The strengthening of these general features among different types of households results from a combination of the characteristics of different consumption structures and the particular taxation of different types of goods.

To illustrate the issue, Figure 3.7 shows tax incidence by type of household and quintile for items in the basic food basket. The analysis suggests that tax incidence on food items is the most regressive. The basic food basket is also decidedly regressive, weighing heaviest on the first quintiles, although the incidence
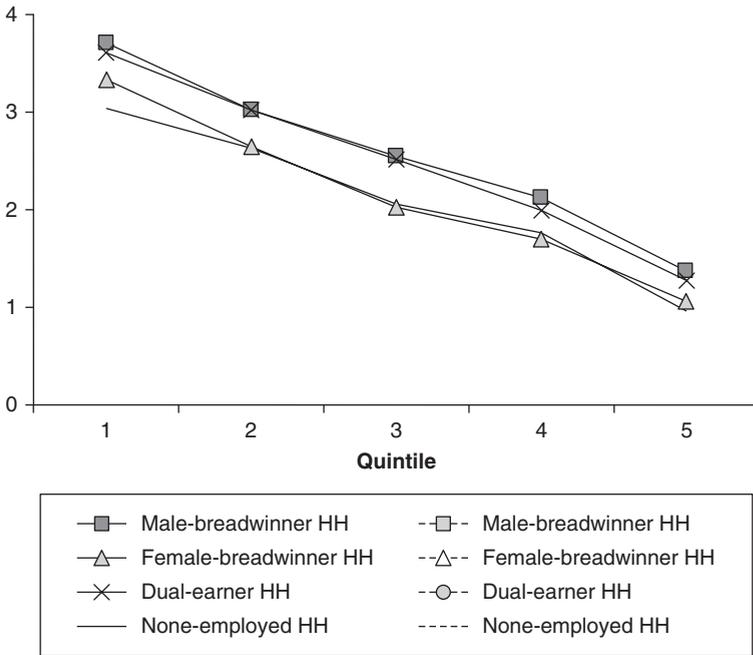
*Figure 3.7* Basic food basket incidence by quintile and household type, Argentina.

is higher for male-breadwinner households. Moreover, female-breadwinner households face the highest tax burden on expenditure on sugar and confectionery even though the tax is progressive.

Although the data are not shown here, our previous work found that the tax levied on nonalcoholic beverages is progressive overall, but female-breadwinner households face the highest burden. An opposite situation occurs with alcoholic beverages; tax on beer shows an inverted U-shaped curve for the average, although the burden is regressive for male-breadwinner households; female-breadwinner households face a lighter burden.

Regarding other commodities, we found the tobacco tax to be very regressive for male-breadwinner and dual-earner households, while for female-breadwinner households there is an inverted U-shaped curve, as there is for children's clothing, where female-breadwinner households face a lower burden than the others. Household utility taxes (housing, water, electricity, etc.) are also regressive, and the tax incidence is similar for the various household type. Although taxation on education is progressive, the heaviest burden falls on female-breadwinner households. The same occurs with the categories of miscellaneous and other necessities for personal care. In the case of health, the heaviest burden is faced by households with no one employed. Tax incidence on public transport is slightly

regressive and higher for female-breadwinner households. School transportation taxation shows a U-shaped curve for female-breadwinner households, which by far have the highest incidence. For the rest of the households the tax is more progressive. The incidence of taxes on fuels and lubricants is progressive and higher for male-breadwinner households. The tax on communications expenditures has a higher incidence for female-breadwinner households. And, finally, the incidence of the taxes on baby products is regressive and clearly higher for male-breadwinner households.

In summary, the analysis by commodity groups suggests that: (1) the tax burden becomes more regressive for certain type of expenditures; and (2) the burden becomes relatively higher for female-breadwinner households for certain type of expenditures. The regressive pattern is particularly clear for food (mainly food included in the basic basket), housing utilities, collective forms of transport and baby products.

Furthermore, female-breadwinner households are especially affected by the tax burden of consumption expenditures on some particular foods (sugar and confectionery, non-alcoholic beverages), education, necessities for personal care, collective forms of transport, school transport and communication.

On the basis of this evidence we propose specific changes to the tax structure to allow a higher level of distributive justice. This would be attained by improving the progressive pattern of indirect taxation, as well as by lightening the tax burden on the most economically vulnerable households, such as female-breadwinner households.

## Indirect tax policy simulations

Given the regressive impact of food taxes, we conduct two simulations to correct this impact and to assess its effect on the overall incidence. First, we propose a zero tax rate for food products included in the basic basket. While this has a positive effect on the system's equality, it results in tax losses. As an alternative, therefore, we suggest a comprehensive amendment which includes changes to the VAT and to domestic taxes and which has a neutral impact on tax collection.

The first alternative recognizes that taxes on food are generally regressive, because the impact is heaviest on lower-income households, who spend most of their income on food. In Argentina the only exempt products are milk and natural water, and there is a lower rate for a limited group, including meat, bread, and wheat flour. However, application of a zero-tax rate to foods in the basic basket entails a loss of revenue, estimated to be about 10.2 per cent of actual revenue, lowering the burden of the tax system to 14.5 per cent from the baseline of 16.8 per cent. As shown in Table 3.11, male-breadwinner and dual-earner households still face the highest tax burden, and the three categories without children are more heavily taxed than those with children.

The main result of this policy measure is that the system becomes more progressive, as can be seen in Figure 3.8. Compared to the baseline, both the total tax incidence and even the VAT become progressive. The main reduction in tax

Table 3.11  Tax incidence by type of tax: base estimates and simulation of zero tax on food products, Argentina

|  | Total tax | | VAT | |
|---|---|---|---|---|
|  | Base | Simulation | Base | Simulation |
| *Headship* | | | | |
| Male headed | 16.972 | 14.674 | 13.825 | 11.522 |
| Female headed | 16.179 | 13.903 | 13.796 | 11.516 |
| Total | 16.780 | 14.487 | 13.818 | 11.520 |
| *Employment status* | | | | |
| Male breadwinner | 17.053 | 14.566 | 13.843 | 11.351 |
| Female breadwinner | 15.823 | 13.624 | 13.774 | 11.570 |
| Dual earner | 17.108 | 14.975 | 13.820 | 11.682 |
| None employed | 15.363 | 12.969 | 13.763 | 11.365 |
| Total | 16.780 | 14.487 | 13.818 | 11.520 |
| *Household sex composition* | | | | |
| Male majority | 17.465 | 15.017 | 13.863 | 11.410 |
| Female majority | 16.348 | 14.113 | 13.831 | 11.591 |
| Equal adults | 16.732 | 14.471 | 13.793 | 11.528 |
| Total | 16.780 | 14.487 | 13.818 | 11.520 |

incidence applies to non-employed households (15.6 per cent) and the least to dual-earner households (12.5 per cent). It is interesting to note that while the differences in tax incidence reduction are small between household type and quintile, female-breadwinner households experienced the smaller reduction.

The second simulation sought to make the system more progressive while avoiding revenue losses, reducing the tax burden on those goods with larger relative consumption by poor households (Gómez Sabaini and Rossignolo 2008), as well as on so-called merit goods while increasing it on so-called demerit goods.

To do this, we changed the VAT tax rates and some excise rates. For the former, although we saw in the first simulation the potential for progressivity by establishing zero-tax rates on foods in the basic basket, this is probably not possible, owing both to its high tax cost (more than 10 per cent of tax revenue, about 3.2 billion pesos), and to the belief that this tax is widely evaded in Argentina. It is therefore more desirable to grant reduced rates rather than a zero rate (which is rarely applied for domestic transactions). This generates incentives to report transactions in order to get the cumulative tax credits that otherwise would not be available.

The procedure regarding the VAT was therefore as follows:

- We analysed the concentration of consumer goods expenditures in the first three food groups, that is, basic unprocessed, basic processed, and confectionery.
- We selected consumption with a high concentration in the lowest income quintile that was equal to or greater than that in the 5th quintile. We verified that the indicated consumption was of goods from the basic unprocessed basket.
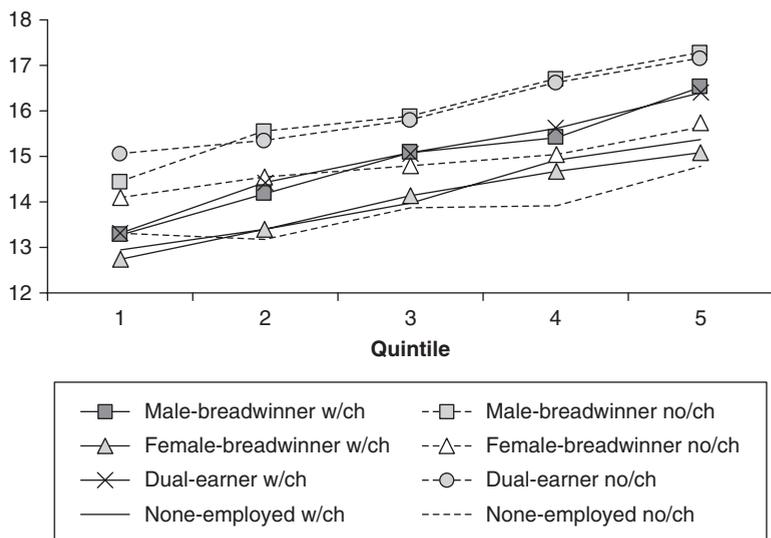
*Figure 3.8* VAT zero rate on food simulation – total incidence – by quintile and household type, Argentina.

- From these (accounting for between 10 and 15 per cent of total consumption in the lowest quintiles) we removed those that could constitute a minimum diet, such as bread, stew beef, eggs, milk, wheat flour and cooking oil.
- We applied a reduced tax rate of 10.5 per cent to the rest of the products considered in the food basket (basic unprocessed and basic processed).
- Given the upward trend in the tax burden on public transportation expenditures, we decided to restore the exemption that was in force in the mid-1990s; we also added an exemption for children's clothing.
- For the rest of the goods and services the current regulatory situation remained unchanged.

Regarding excises, the simulation sought to strengthen the importance of taxes on goods and services based on increased tax rates for demerit goods, in order to generate tax revenue to compensate for the loss of income from the exemption applied to foods in the basic basket.

This implies substantial hikes in the tax rates for products already taxed, and new taxes on goods considered as luxuries, which are purchased more by male-breadwinner or dual-earner households (see Elson 2007). We applied the following changes:

- Addition of excise taxes on household appliances (category of furnishings, household equipment and routine maintenance of the house), with a rate of 20 per cent.
- Increase of the tax rate on luxury items (cars, boats, etc.) to 30 per cent in the private transport group. It should be noted that the survey does not show high purchases in this expenditure group, so the selected tax rate is uniform.

*Table 3.12* Excise tax rates, Argentina

| Goods taxed | Original tax rate | Revised tax rate |
|---|---|---|
| *Tobaccos* | | |
| Cigarettes | 60 | 90 |
| Cigars, etc. | 16 | 32 |
| Chewing tobacco, snuff, etc. | 20 | 40 |
| Pipes, lighters | 0 | 40 |
| *Alcoholic beverages* | | |
| Whisky | 20 | 40 |
| Cognac, brandy, pisco, gin, vodka, rum, gin, etc. | 20 | 40 |
| Others based on proof | | |
| First class, from 10 to 29 proof | 20 | 40 |
| Second class, 30 proof and higher | 20 | 40 |
| *Beer* | 8 | 20 |
| *Nonalcoholic beverages, syrups, extracts, concentrates, and mineral water* | 8 | 8 |
| *Luxury items* | 20 | 30 |
| Pleasure or sports vessels and aircraft | | |
| Sale price between 15000 and 22000 pesos | 4 | 30 |
| Sale price over 22000 pesos | 8 | 30 |
| Electronics | 17 | 30 |
| *Services taxed* | | |
| Labour accident insurance | 2.5 | 2.5 |
| Others | 1 | 1 |
| Cell and satellite telephone service | 4 | 4 |

- Increase in the tax on electronics, in the recreation and culture group, to 30 per cent.
- Higher tax on tobacco and alcohol (beer, spirits), continuing and increasing those from the earlier exercises but now extending them to tobacco users.
- Increase of the wine tax to 15 per cent.
- We decided to exclude VAT in services because taxation on communications group is progressive and female-type households bear a heavy burden.

Table 3.12 summarizes the changes in excises rate proposed.

It should be noted that the alternative proposal to increase tax collection by increasing tax rates on demerit goods, mostly consumed by predominantly male households, does not exclude other alternatives that might also contribute to gender equality. In addition to potential increases in transfers through public expenditure, which are not considered in this study, we may look at increases in other taxes, such as personal income tax, for example.

Of course these proposals are purely for the purposes of the exercise and do not represent judgements regarding the sectors' profitability and the possibility of absorbing the tax, although in all cases the changes are not so great that they

*Table 3.13* Estimated revenue comparison (in millions of current pesos), Argentina

|  | Baseline | Structure (%) | Proposed reform | Structure (%) | Difference |
|---|---|---|---|---|---|
| VAT | 25,360.21 | 81.5 | 21,449.72 | 64.9 | −3,910.5 |
| Excise tax | 1,985.10 | 6.4 | 7,806.51 | 23.6 | 5,821.4 |
| Fuel tax | 3,771.72 | 12.1 | 3,771.76 | 11.4 | 0.0 |
| Total | 31,117.03 | 100.0 | 33,027.99 | 100.0 | 1,911.0 |

*Table 3.14* Tax incidence by type of tax: base estimates and overall tax simulation

|  | Total tax | | VAT | | Excises | |
|---|---|---|---|---|---|---|
|  | Base | Simulation | Base | Simulation | Base | Simulation |
| *Headship* |  |  |  |  |  |  |
| Male headed | 16.972 | 17.230 | 13.825 | 11.410 | 1.261 | 3.933 |
| Female headed | 16.179 | 15.922 | 13.796 | 11.343 | 1.248 | 3.443 |
| Total | 16.780 | 16.914 | 13.818 | 11.394 | 1.257 | 3.815 |
| *Employment status* |  |  |  |  |  |  |
| Male breadwinner | 17.053 | 17.248 | 13.843 | 11.312 | 1.404 | 4.131 |
| Female breadwinner | 15.823 | 15.412 | 13.774 | 11.430 | 1.018 | 2.520 |
| Dual earner | 17.108 | 17.467 | 13.820 | 11.388 | 1.322 | 4.114 |
| None employed | 15.363 | 14.876 | 13.763 | 11.706 | 0.675 | 2.245 |
| Total | 16.780 | 16.914 | 13.818 | 11.394 | 1.257 | 3.815 |
| *Household sex composition* |  |  |  |  |  |  |
| Male majority | 17.465 | 17.764 | 13.863 | 11.324 | 1.618 | 4.457 |
| Female majority | 16.348 | 16.123 | 13.831 | 11.458 | 1.149 | 3.297 |
| Equal adults | 16.732 | 16.986 | 13.793 | 11.390 | 1.171 | 3.828 |
| Total | 16.780 | 16.914 | 13.818 | 11.394 | 1.257 | 3.815 |

would shrink production in the sector. These examples are based on models of partial equilibrium.

Table 3.13 compares the results of the proposed reform with the baseline. The reform generates increased tax revenue of about 2 billion pesos; the loss of revenue from the VAT due to the exemptions is more than offset by the increased income from excise taxes. The latter's share increases from 6 per cent to 24 per cent, while that from the VAT drops to 65 per cent.

Table 3.14 summarizes the results of the simulation. Tax incidence as a percentage of expenditure is 16.9 per cent, slightly higher than in the baseline. However, there is a change in the composition of the tax burden because VAT incidence drops by more than two percentage points, while that of excise taxes increases by the same proportion.

Households that have the highest tax incidence in the reformed scheme are the male-headed, dual-earner, male-majority and equal-number-adult households, while
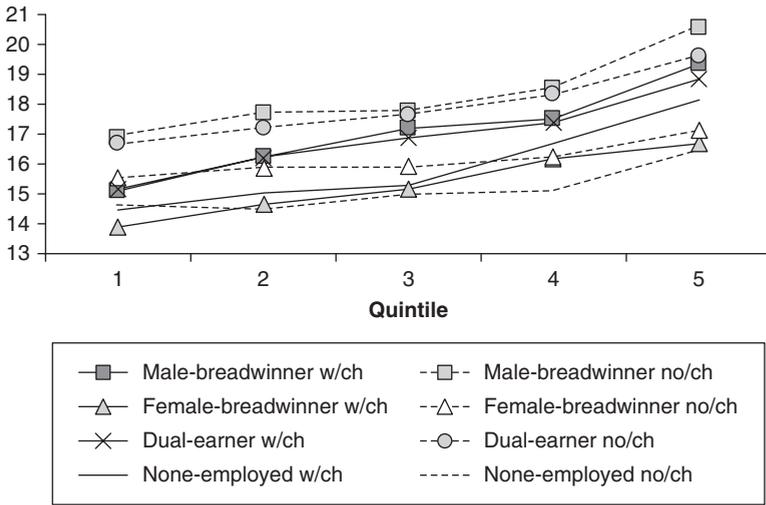
*Figure 3.9* Combined policy simulation – total incidence – by quintile and household type.

households that benefit most are the female-headed, non-employed, female-bread-winner and female-majority households. The proposed reforms would therefore have a positive impact on gender equality by improving income and consumption in female-type households in comparison with the rest.

In terms of vertical equity of the tax burden, this reform makes the system quite progressive. The overall incidence for the 1st quintile is almost four percentage points lower than that for the 5th quintile. This increased progressivity is achieved by eliminating the regressivity of VAT (which is now progressive although with a U-shaped curve), and by making excise taxes decisively progressive. The incidence remains higher for male-breadwinner households and for households with no children. Female-breadwinner households as a whole have a substantially lower tax burden than male-breadwinner households (see Figure 3.9).

## Conclusion and policy recommendations

This chapter has explored the gender dimensions of taxation in Argentina. In looking at how women and men are affected by the tax system in Argentina, we asked whether the tax system promotes greater gender equality by transforming patriarchal gender relations, and how we can transform tax policies in this direction. It is hoped that our findings might stimulate debate on the need for a comprehensive tax reform to gain substantive gender equity in Argentina. Over the past two decades the tax system has undergone frequent changes, designed as stopgap measures to cover budget deficits. Very few of these reforms were intended to improve equity in the system. There is an urgent need for policy-makers in Argentina to consider thorough and systematic reforms to make the system equitable.

Personal income taxation in Argentina has strengths and weaknesses in terms of gender equality. The individual taxation principle is one of the system's strengths because it does not a priori discourage income earning by women. Also positive is the equal treatment of women and men regarding contributing threshold, deductions and exemptions. An important issue is that for a married couple, each spouse is entitled to claim the deductions for their joint children. However, some explicit discrimination remains in the case of failing to recognize women's tax liability for 'income in common', by attributing to the husband income produced from some assets that may have been acquired and managed by his wife.

An important aspect of Argentina's PIT system is its segmentation into three different categories (salaried workers, high-income self-employed and low-income self-employed, or *monotributistas*), and the different treatment they receive regarding threshold and deductions. Our analysis showed that there is discrimination against the last group, which does not receive the same tax benefits. Women are over-represented among *monotributistas*.

Some discrimination also exists in terms of the PIT system, specifically against single-parent households, not-married couples, self-employed workers and lower income female self-employed living in a dual-earner household. This last point is important, because while the PIT system does not discourage women´s participation in the labour market, this might not be entirely true in the case of low-income women.

Another form of discrimination regards exemptions, and implies both horizontal and vertical inequity. In Argentina, while people who earn their income from employment pay income tax (providing their income is above the threshold), those who earn their income from financial investments do not. It should be noted that the latter group is more likely to be mainly high-income people, and mostly men.

Among the policy recommendations this analysis leads to is, first, that explicit discrimination in the PIT code should be eliminated immediately. Second, most exemptions should be eliminated, while the role of deductions for dependants should be reviewed. A gender perspective would link the level of these deductions more closely to the dependant care expenses that justify them. The fact that they are not available to all (especially those with lower incomes, who are not directly taxable), suggests that this issue should be addressed outside the tax system. Specifically, a public care-giving policy should be adopted that guarantees access to quality care-giving services for all who need them. In line with this, the proposal for a universal cash benefit for children is now widely promoted. Adopting either of these policies would allow deductions for dependents in the PIT to be eliminated.

Finally, in order to deepen this type of analysis, it is important that the National Tax Authority supply relevant statistical information disaggregated by sex, and that they incorporate this disaggregated data into their own reports.

Our incidence analysis of indirect taxation focused on VAT, excises and fuel tax. Overall tax incidence is 16.8 per cent, distributed somewhat proportionally among households at different socio-economic levels (classified by per-capita expenditure). This result is driven largely by a slightly regressive pattern of VAT (steeper for households with lower consumption levels), a greater regressive pattern of excise taxes, and marked progressivity of fuel taxes.

Analysing incidence by household type, in general, male-type households bear the highest incidence. Differences among household types are statistically significant, but not very great, although they increase when taxes are considered separately. Households without children (except those with no employed adult) generally have a higher tax incidence than those with children. Finally, the proportionality of indirect taxation is deeper for female-type households than for male-type households. Clearly, any action to provide indirect taxation with a more progressive pattern would improve the overall equity of the system and also enhance gender equality.

Analysing the different commodity groups shows that taxation on food is highly regressive. Despite the higher incidence borne by male-breadwinner households, the incidence is higher for female-breadwinner households for some commodities (sugar, confectionery, nonalcoholic beverages, public transport, school transport). Taxes on goods such as tobacco and alcoholic beverages have a higher incidence for male-breadwinner and dual-earner households, while the same is true for fuel taxes.

These observations suggest two alternative tax policy measures to improve the system's equity. The first is the implementation of a zero tax rate for foods in the basic basket. This policy measure would involve a reduction of two percentage points (13 per cent regarding the baseline) in the overall incidence of indirect taxation, and would make the system more progressive. This increased progressivity would affect all household types.

The main incidence reduction favors none-employed households, and, the dual-earner households, to a lesser extent. The greater progressivity arises from the fact that this decrease is higher in the incidence faced by households in the lower quintiles. It is interesting to note that while the differences in incidence decrease are small, female-breadwinner households experienced the smaller reduction in incidence.

The problem with this type of measure is its fiscal cost, which would be 10 per cent of the total tax revenue. A second alternative is more comprehensive, designed to increase the progressivity of indirect taxation, and do so with neutral revenue consequences. The procedure for this reform was to reduce some rates of the VAT together with an increase in the rates of excises on goods such as tobacco and alcoholic beverages.

The result of this proposal is a moderate increase in the tax burden of male-headed, dual-earner, male-majority, and equal-adult households. Conversely, households that benefit most, in terms of reduced tax incidence, are female-headed, none-employed, female-breadwinner and female-majority households. In other words, the proposed reform appears to have a positive impact on female-type households, which could increase gender equity by improving the consumption and income of these households.

In terms of vertical equity, the reform would add substantial progressivity to the system. The overall incidence borne by the 1st quintile becomes almost four percentage points less than that for the 5th quintile. While this would affect all household types, the change is greater for poorer female-type households. This last exercise is important because it shows that it is possible to design reforms that improve progressiveness without generating any fiscal cost.

It should be noted that although not included in this chapter, if household income rather than household expenditure is used as an indicator, the taxation

system appears even more regressive. Estimates show that considering all three indirect taxes, the poorest households bear a tax incidence that is nearly 10 percentage points higher than that faced by richest households, owing mainly to the strong regressive nature of VAT.

This is only one reason to support reforms that make the system more progressive and do not punish (or even improve the situation of) poor female-type households. If no systemic reform is possible, even partial transformation of indirect taxation on specific commodity groups can be conducted.

To summarize, this work has shown the weak capacity of the current Argentine taxation system to improve gender equality. It has also demonstrated the persistence of explicit and implicit biases in personal income taxation, as well as inequality in indirect taxation, primarily owing to the regressive nature of indirect taxation. Further research is needed in order to fully understand the picture and what sort of policy space and alternatives are available. In this regard, we would like to highlight the following:

- First, it is imperative that the government review its statistics policy, which currently focuses on restricting public access, as well as on reducing the technical quality of the data. If we are to deepen the analysis on this or any issue, we need to count on good quality, systematic, and freely available relevant data.
- A key element for gender analysis regards what happens inside households. For instance, at this point we can say nothing about the situation of women who live in male-breadwinner or dual-earner households, who are in fact the majority of women. Research on intra-household resource allocation and decision-making processes, both quantitative and qualitative, is critical.
- Although overall we concluded that tax system in Argentina does not discourage female participation in the labour market, a deeper analysis of fiscal incentives on male and female behaviour might provide insights for policy analysis. An analysis of the impact of tax policy on the national care-giving system might also be useful for policy recommendations.
- The analysis conducted for PIT and the three types of indirect taxes considered in this chapter might be extended to the full tax structure. In Argentina, the analysis of import taxes and export duties might be of special relevance.
- Finally, it would be useful to develop net impact analysis of public expenditure and taxation. This would make it possible to establish the overall distribution of fiscal policy in Argentina, and to design policy alternatives for greater gender equality.

Although there is still a lot of work to be done, we hope we have begun to highlight the relevance of this type of analysis, to encourage readers to undertake further research, and to remind everyone of the need to keep working for more equitable societies.

## Acknowledgements

## Annex 1

*Table A.1* Estimate of PIT by household type and contribution category

| Employees | Type of household | | |
|---|---|---|---|
| | A | B | C |
| Tax calculation and payment | By the employer on behalf of the employee through withholding regime | | |
| Net earnings | AR$ 72,000 | AR$ 72,000 | AR$ 50,000 – male<br>AR$ 22,000 – female |
| Non-taxable income | (AR$ 9,000) | (AR$ 9,000) | (AR$ 9,000) – male<br>AR$ 0 – female |
| Family deductions | AR$ 5,000 deduction per child, AR$ 10,000 deduction for spouse (AR$ 20,000) | AR$ 5,000 deduction per child (AR$ 10,000) | AR$ 5,000 deduction per child – by male female is exempt (AR$ 10,000) – male |
| Special deduction | (AR$ 34,200) | (AR$ 34,200) | (AR$ 34,200) |
| Total deductions | (AR$ 63,200) | (AR$ 53,200) | (AR$ 53,200) – male |
| Taxable amount | AR$ 8,800 | AR$ 18,800 | AR$ 18,800 – male<br>AR$ 0 – female |
| Fixed amount and applicable rate | AR$ 0 | AR$ 900 + 14% of AR$ 8,800 | AR$ 900 + 14% of AR$ 8,800 – male<br>AR$ 0 – female |
| Total tax owed | AR$ 0 | AR$ 2,132 | AR$ 2,132 – male<br>AR$ 0 – female |
| Household net income | AR$ 72,000 | AR$ 69,868 | AR$ 69,868 |

| | Type of household | | |
|---|---|---|---|
| Self-employed taxpayers | A1 | B1 | C1 |
| Tax calculation and payment | By each income earner through a tax return and the payment of the resulting amount in five advance bimonthly payments | | |
| Net earnings | AR$ 72,000 | AR$ 72,000 | AR$ 50,000 – male<br>AR$ 22,000 – female |
| Non-taxable income | (AR$ 9,000) | (AR$ 9,000) | (AR$ 9,000) – male |
| Family deductions | AR$ 5,000 deduction per child; AR$ 10,000 deduction for spouse (AR$ 20,000) | AR$ 5,000 deduction per child (AR$ 10,000) | AR$ 5,000 deduction per child – male female is exempt (AR$ 10,000) – male |
| Special deduction | (AR$ 9,000) | (AR$ 9,000) | (AR$ 9,000) – husband |
| Total deductions | (AR$ 38,000) | (AR$ 28,000) | (AR$ 28,000) – male |
| Taxable amount | AR$ 34,000 | AR$ 44,000 | AR$ 44,000 – male |
| Fixed amount and applicable rate | AR$ 4,200 + 23% of AR$ 4,000 | AR$ 4,200 + 23% of AR$ 14,000 | AR$ 4,200 + 23% of AR$ 2,000 – male – 0% – female |
| Total tax owed | AR$ 5,120 | AR$ 7,420 | AR$ 4,660 – male<br>AR$ 0 – female total: AR$ 4660 |
| Household net income | AR$ 66,880 | AR$ 64,580 | AR$ 67,340 |

Table A.1  (Continued)

| Monotributistas | Type of household | | |
| | A2 | B2 | C2 |
| --- | --- | --- | --- |
| Tax calculation and payment | By the income earner, on the basis of an income bracket that determines the amount of the fixed monthly tax to be paid | | |
| Annual gross income | AR$ 72,000 | AR$ 72,000 | AR$ 50,000 – male AR$ 22,000 – female |
| Taxpayer category | E | E | C – male B – female |
| Tax payable monthly | AR$ 210 | AR$ 210 | AR$ 75 – male AR$ 39 – female |
| Tax payable annually | AR$ 2,520 | AR$ 2,520 | AR$ 900 – male AR$ 468 – female total household: AR$ 1368 |
| Household net income | AR$ 69,480 | AR$ 69,480 | AR$ 70,632 |

## Annex 2

### Items with 10.5 per cent VAT rate

The 10.5 per cent rate applies to new house sales and to a limited list of goods and services, including:

- work directly or indirectly performed on a third party's real estate, intended for residential purposes, but excluding work performed on pre-existing constructions that are not works in progress;
- live animals belonging to the bovine, ovine, camelid or caprine species, their meat and edible remains, either fresh, refrigerated or frozen;
- fresh, refrigerated or frozen fruits, legumes and vegetables;
- grains – cereals and oily seeds, excluding rice – and dry legumes – beans, green beans and lentils;
- certain works, construction and services contracts related to the procurement of live animals of the bovine and ovine species, fruits and legumes;
- fresh vegetables, grains – cereals and oily seeds, excluding rice – and dry legumes – beans, green beans and lentils;
- dry fresh or salted bovine leather;
- honey in bulk;
- domestic transportation services for passengers by land, water or air, except for taxis and rental car services on routes less than 100 km;
- medical and paramedical sanitary services rendered or hired by cooperatives, social security entities and prepaid medical systems, if not exempted. The direct rendering of these services to a private patient and without reimbursement rights is taxable with a 21 per cent rate.
- Newspapers, magazines and journals. The lease of advertising spaces is taxable with a 10.5 per cent rate when the publishing house is a small or medium-sized company (PYME).

- Capital goods specifically listed.
- Bread, cookies, bakery products and/or pastries, cookies and biscuits, made with wheat flour, not previously packaged for marketing.

## Notes

1  During this period, the average employment rate decreased from 37.1 per cent to 36.1 per cent, while the unemployment rate increased from 7.9 per cent to 15.4 per cent. Rodríguez Enríquez (2008) disaggregates these indicators for men and women and provides additional data on the deterioration of individual labour trajectories over the period.
2  The example presented here assumes that the man in the household earns more than the woman. The result would be the same in the case of the woman earning more than the man.
3  Incidence is progressive between quintiles 1 and 2, regressive between 2 and 3, progressive between 3 and 4 and proportional between 4 and 5.
4  Incidence is proportional between quintiles 1 and 3, progressive between quintiles 3 and 4 and regressive between quintiles 4 and 5.
5  Regressivity is clear between quintiles 1 and 2, and between quintiles 3 and 4. It is also regressive if we compare quintiles 1 and 5.

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# 4 Gender equality and taxation in India

## An unequal burden?

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### Introduction

Until India's structural adjustment programme was introduced in 1991, much of the discussion about tax policy in the country was shaped by a debate on how to raise sufficiently large amounts of revenue to eliminate poverty and raise standards of living while at the same time support national industries under a protected regime. Fiscal reforms since 1991 have made rapid and significant changes in tax policy and have brought down the rates of both direct and indirect taxes sharply. They have also touched off some new discussion on the gender dimensions of such changes, especially in the case of direct taxes.

To understand these and other impacts of tax policy, this chapter presents a gendered picture of employment and income in India, and reviews the overall tax structure, including a series of tax reforms and the gender impacts thereof. It presents the results of several simulated policy changes that might advance gender equality and concludes with a consideration of their implications.

A study of the gender impacts of tax policies in India is both timely and important. India is, as we shall see, one of the few examples where taxes have been used as an affirmative action policy – women in India are explicitly advantaged by some aspects of the tax system and reforms. Is this effective, and does it really advantage women, especially those in low-income groups? The central government and state governments of India are now considering the introduction of an integrated goods and services tax in fiscal year 2010/11. What are the likely impacts of this new system on women and on poor households? The analysis here suggests that indirect taxes currently place an unfair burden on women, especially those in low-income households; if this burden is not taken into account in the reforms, these women are likely to bear a large negative share of the impact from the reforms.

### Gender and employment

India has a total population of around 1.2 billion. Of this, some 417.9 million people are in the labour force, with 323 million in the rural labour force and 94.7 million in the urban labour force. Women are over-represented in the rural workforce. Of a total of 139.4 million women in the labour force, 118.3 million are in
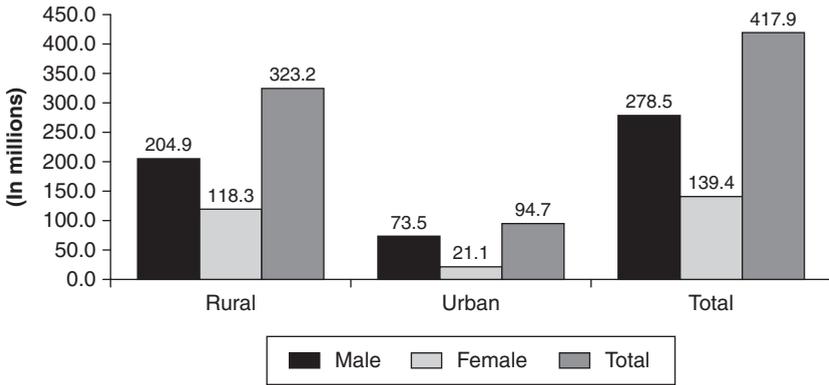
*Figure 4.1* Indian labour force by sex: rural and urban differences.

*Table 4.1* Gender disparities in Indian labour force participation rates, 2004–05 (in %)

| | *Male* | | *Female* | |
|---|---|---|---|---|
| | *Principal status* | *Principal and subsidiary status* | *Principal status* | *Principal and subsidiary status* |
| Rural | | | | |
| 2004–05 | 53.5 | 54.6 | 24.2 | 32.7 |
| 1999–00 | 52.2 | 53.1 | 23.1 | 29.9 |
| 1993–94 | 53.8 | 55.3 | 23.4 | 32.8 |
| 1987–88 | 51.7 | 53.9 | 24.5 | 32.3 |
| Urban | | | | |
| 2004–05 | 54.1 | 54.9 | 13.5 | 16.6 |
| 1999–00 | 51.3 | 51.8 | 11.7 | 13.9 |
| 1993–94 | 51.3 | 52.1 | 12.1 | 15.5 |
| 1987–88 | 49.6 | 50.6 | 11.8 | 15.2 |

*Source*: NSSO (2005).

the rural labour force while only 21.1 million are in the urban labour force (see Figure 4.1).

The disparity between male and female labour force participation rates has remained quite substantial over the years (see Table 4.1). Urban women's labour force participation is also low compared to that of rural women, particularly when subsidiary economic activities such as maintaining kitchen gardens, tending poultry, and so on are included. Since the scope for such activities is limited in urban areas, urban women's labour force participation rates do not change much even when the subsidiary category is included.

Self-employment accounts for the major share of employment for women and men, especially in rural areas (Table 4.2). Those in regular salaried/wage employment represent about 7 per cent of the total labour force in rural India and only

*Table 4.2* Employment structure of the labour force, India, 2004–05

|  | Male | Female | Total (weighted) |
|---|---|---|---|
| *Rural* |  |  |  |
| Self-employed | 57.2 | 62.5 | 59.1 |
| Regular salaried/wage employed | 8.8 | 3.7 | 6.9 |
| Casual labour | 32.4 | 32.0 | 32.2 |
| Total employed (work force) | 98.4 | 98.2 | 98.3 |
| Unemployed | 1.6 | 1.8 | 1.7 |
| Labour force | 100 | 100 | 100 |
| *Urban* |  |  |  |
| Self-employed | 43.1 | 44.4 | 43.4 |
| Regular salaried/wage employed | 39.1 | 33.1 | 37.8 |
| Casual labour | 14.0 | 15.6 | 14.3 |
| Total employed (work force) | 96.2 | 93.1 | 95.4 |
| Unemployed | 3.8 | 6.9 | 4.5 |
| Labour force | 100 | 100 | 100 |
| *Total* |  |  |  |
| Self-employed | 53.5 | 59.8 | 55.6 |
| Regular salaried/wage employed | 16.8 | 8.1 | 13.9 |
| Casual labour | 27.5 | 29.5 | 28.2 |
| Total employed (work force) | 97.8 | 97.4 | 97.7 |
| Unemployed | 2.2 | 2.6 | 2.3 |
| Labour force | 100 | 100 | 100 |

*Source*: NSSO (2005).

*Table 4.3* Employment by sector, India, 2004–05 (in millions)

|  | *Rural* | | | *Urban* | | |
|---|---|---|---|---|---|---|
|  | Male | Female | Total (weighted) | Male | Female | Total (weighted) |
| Agriculture and Allied | 134 | 97 | 231 | 4 | 4 | 8 |
| Manufacturing | 32 | 12 | 43 | 24 | 6 | 31 |
| Services | 36 | 8 | 44 | 42 | 10 | 52 |
| Total | 202 | 116 | 318 | 71 | 20 | 90 |
| *Sectoral employment share ( %)* |  |  |  |  |  |  |
| Agriculture and Allied | 66 | 83 | 73 | 6 | 18 | 9 |
| Manufacturing | 16 | 10 | 14 | 34 | 32 | 34 |
| Services | 18 | 7 | 14 | 59 | 49 | 57 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |

4 per cent of the female rural labour force. Around one-third of the total labour force (both male and female) are in the casual labour category. In urban India, the share of the labour force engaged in regular/salaried employment is much higher, at about 37 per cent with women's share at 33 per cent. A greater proportion of women workers than male workers are employed in casual work, which tends to be less remunerative and have poorer working conditions than regular work.

*Table 4.4* Employment in organized sectors, India (in millions)

| Organised sectors | 2005 |
|---|---|
| *Public sector* | |
| Male | 15.1 |
| Female | 2.9 |
| Persons | 18 |
| *Private sector* | |
| Male | 6.4 |
| Female | 2.1 |
| Persons | 8.5 |
| *Public and private sectors* | |
| Male | 21.4 |
| Female | 5.0 |
| Persons | 26.5 |
| *Shares in employment (in %)* | |
| *Public sector* | |
| Male | 83.8 |
| Female | 16.2 |
| Persons | 100 |
| *Private sector* | |
| Male | 75.2 |
| Female | 24.8 |
| Persons | 100 |
| *Public and private sectors* | |
| Male | 81.0 |
| Female | 19.0 |
| Persons | 100 |

*Source*: Ministry of Finance (2008a).

Thus, not only do women get paid less than men for similar work, but the kind of work they are employed in tends to be less remunerative.

Looking at employment by sector, two things are clear. First, the predominant occupation in rural India is agriculture and related activities and 83 per cent of working women are engaged in this work (see Table 4.3). Second, in urban India, the service sector, which has seen massive growth in recent years, now predominates, employing about 60 per cent of the employed labour force, and 49 per cent of the female employed labour force.

The organized sector is made up of all public sector and non-agricultural establishments in the private sector with 10 or more workers. Women are over-represented in the unorganized sector of the economy. Women make up only 19 per cent of the workforce employed in the organized sector. It is important to note that women's share of organized public sector employment has been as low as 16 per cent, while it is 26 per cent in the private sector. The share of organized sector employment is only 6.5 per cent of the total employed labour force (5.3 per cent male; 1.23 per cent female); the share of women's organized sector work is only 3.6 per cent of the total female labour force.

*Table 4.5* Ratio of female to male wages, India

|  | 1993–94 | 2004–05 |
| --- | --- | --- |
| Rural regular | 0.60 | 0.59 |
| Urban regular | 0.80 | 0.75 |
| Rural casual | 0.66 | 0.63 |
| Urban casual | 0.55 | 0.58 |

*Source*: NSSO Reports.

*Table 4.6* Wage/salary per day received by regular salaried employees, India, 2004–05 (in Rs)

|  | Male rural | Female rural | Male urban | Female urban |
| --- | --- | --- | --- | --- |
| Not literate | 72.47 | 35.74 | 98.79 | 48.7 |
|  | (1.7) | (0.8) | (2.3) | (1.1) |
| Literate and up to primary | 98.59 | 47.75 | 111.44 | 64.79 |
|  | (2.3) | (1.1) | (2.5) | (1.5) |
| Secondary and higher | 158.04 | 100.19 | 182.58 | 150.41 |
| secondary | (3.6) | (2.3) | (4.2) | (3.4) |
| Diploma/certificate | 214.38 | 200.4 | 274.87 | 237.02 |
|  | (4.9) | (4.6) | (6.3) | (5.4) |
| Graduate and above | 270.02 | 172.7 | 366.76 | 269.17 |
|  | (6.2) | (3.9) | (8.4) | (6.2) |
| All | 144.93 | 85.53 | 203.28 | 153.19 |
|  | (3.3) | (2.0) | (4.6) | (3.5) |

*Source*: NSSO (2005).

*Note*: Figures within brackets are dollar equivalence wage rate. Exchange rate in 2004–05 was US $1 = 43.75 Indian Rupees.

### Employment and earnings

Despite laws legislating equality in wages, gender disparities in wages have persisted over the past decade (see Table 4.5). In fact, gender wage disparity appears to have increased between 1993–94 and 2004–05.

Considerable gender disparities persist even in regular employment, including among workers with higher educational qualifications (graduate and post-graduate); female workers tend to receive lower wages than do their male co-workers, although the gender gap tends to decrease with increasing education (see Table 4.6).

## The structure of taxation in India

India's three-tier federal fiscal system gives rise to an extremely complicated tax structure. At the federal level, the major taxes collected are personal income tax (PIT), corporate income tax (CIT), and customs and excise duties. State-level taxes are primarily on consumption, and include the value-added tax (VAT), state excise duty on liquor, stamps and registration fees and taxes on vehicles. The central government also has the power to tax services, but these are done on a stand-alone basis
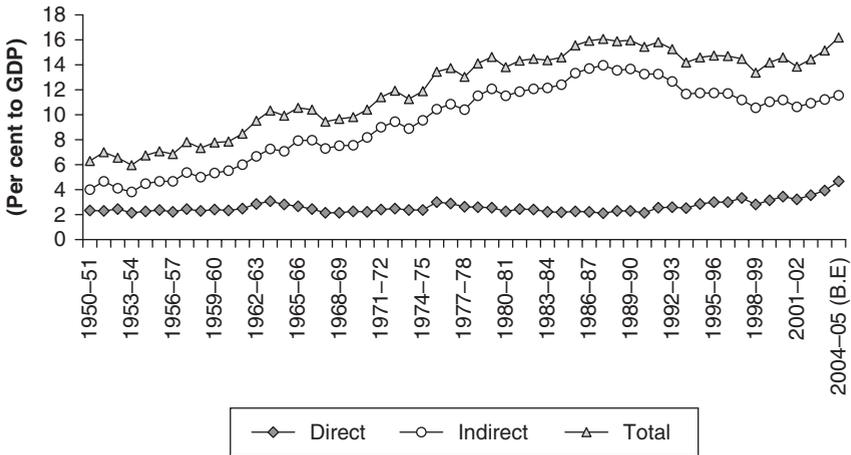
*Figure 4.2* Tax to GDP ratio, India, 1950–51 to 2006–07.

and are not integrated with the goods tax.[1] Major local level taxes are property taxes and entertainment tax. The share of local taxes in the combined revenues of all levels of governments is negligible.

Beginning in 1991, the central government undertook a major tax reform programme. States also reformed their tax system by introducing the VAT in 2005. At the central government level the major reforms have included reducing the rate on CIT, reducing customs and excise duties, and steps towards broadening the tax base (Rao and Rao 2005). Services are taxed on a stand-alone basis. Together, these reforms have greatly influenced tax structure and revenue mobilization. The combined tax–GDP ratio increased from just over 5 per cent during the first half of the 1950s to more than 16 per cent during the mid-1980s. With the introduction of rapid tax reforms during the 1990s, the tax to GDP ratio declined initially, but started showing improvement from early 2000 onwards (see Figure 4.2).

Following the reforms, the tax structure at the central level, which was heavily dependent on excise and trade taxes, shifted significantly. The share of direct taxes (PIT and CIT together) which was only 18 per cent in 1990–91 increased to 51 per cent in 2006–07 (see Figures 4.3 and 4.4).

## Analysis of gender and taxation

Having outlined some of the contextual issues related to gender and the tax structure in India, we now move on to examine the gender issues in the tax system. We first explore the issues in direct taxation, specifically examining the PIT system, and then consider issues of indirect taxes through an incidence analysis of VAT, excise taxes and fuel taxes. Given different tax structures in different states,
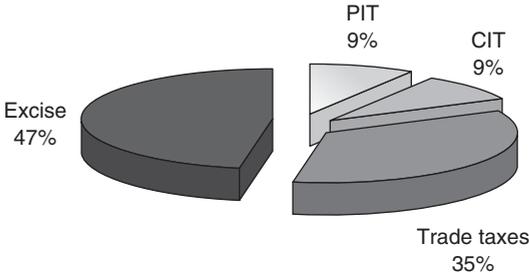
*Figure 4.3* Structure of taxes, India, 1990–91.
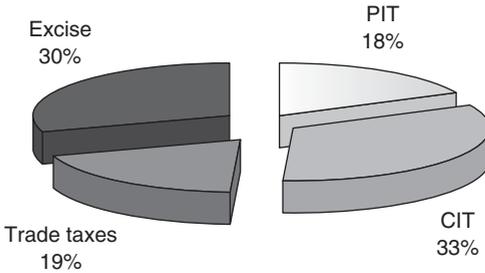


*Figure 4.4* Structure of taxes, India, 2006–07.

our incidence analysis is limited to one state – West Bengal – using from the 61st round of the National Sample Survey in West Bengal.

### Personal income tax (PIT)

The PIT code in India is schedular in structure and tax liability is determined according to the source of income. It is based on individual filing, which implies that any person liable for income tax files an individual tax return, and each individual is assessed independent of the income of the rest of the household. For salaried individuals, in most cases returns are filed by the employer. PIT is imposed on income earned in India, though certain provisions of the tax code provide for foreign earnings to be deemed to have been earned in India. PIT is imposed on all persons who earn income in India, whether resident or non-resident. However, agricultural income is not taxed but is taken into account along with any other sources of income from investments, property and so on, while calculating tax on them, so that tax is paid at a higher rate on other income.

The tax code classifies income earned from salaried employment, business and professional activities, capital gains, house property, and certain other sources as taxable income. Income from house property is taxed only if the income is

derived from a second residential or other property (i.e., the primary residence is not taxed). If the property is not leased, a deemed market rent is applied. All transfer of capital assets attracts capital gains taxes. If assets are held for more than 36 continuous calendar months prior to transfer, they are called long-term assets and their transfer results in long-term capital gains, which is taxed at a rate of 20 per cent. The only exception to this is with respect to securities, for which the period of holding prior to transfer is 12 months, to be considered as long-term capital assets, and the rate of tax is nil, provided the securities transaction tax has been paid. Any transfer of assets held for less than these periods would result in short-term capital gains, which is taxed at rates common to all assets except securities. For securities, the rate of tax is 10 per cent, together with a securities transaction tax.

Any individual or group of individuals or artificial bodies which have earned income during the previous years are required to pay tax on that income. The legislation makes provision for a special category of taxpayer called the Hindu Undivided Family (HUF), for which there are specific tax provisions (see below).

The definitions and computation of taxable income are the same for both men and women; the legislation defining different types of income does not make any specific provision for gender. There are no provisions for joint tax filing. Non-labour income is treated in a gender-neutral fashion and all joint property and income are assessed on the basis of who has earned that income.

The Indian taxation system recognizes the Hindu Undivided Family as a separate and distinct taxable legal entity, reflecting a typical social and economic arrangement that is inherently biased against women. The HUF ensured the accumulation and consolidation of wealth in male hands, as a Hindu male alone had a right in the ancestral property at birth; a male alone could put his individual property into Joint Family Property, whereas a Hindu female could not do so. The right to enforce partition was customarily enjoyed only by male members of a Hindu undivided family. Female members were only entitled to maintenance out of the family property. Income of ancestral property was also taxable as income of the Hindu undivided family.

As the inherent inequity and gender bias in the Hindu Law and therefore in the taxation system became subject to increasing public debate, Parliament introduced the Hindu Succession Act in 1956, which significantly reduced the gender inequities in the HUF. Although not abolishing the joint family and joint family property provisions of the HUF, the Act confers full and heritable capacity on a female heir in respect of all property acquired by her, whether before or after the Act came into force, with the result that by retroactive operation of that section, she holds the property in her possession as full owner and not as a limited owner. The restraints and limitations on the powers of a female heir have ceased to exist even regarding existing property. Thus, with the amendments in the Hindu Succession Act, a significant explicit bias in the tax system against women has now been removed.

*Table 4.7* Income tax rates and brackets, India, 2008–09

| Income bracket: general | Tax rate | Income bracket: women | Tax rate | Income bracket: senior citizen | Tax rate |
| --- | --- | --- | --- | --- | --- |
| Up to Rs. 150,000 | Nil | Up to Rs. 180,000 | Nil | Up to Rs. 225,000 | Nil |
| Rs. 150,001 to Rs. 300,000 | 10 per cent | Rs. 180,001 to Rs. 300,000 | 10 per cent | Rs. 225,001 to Rs. 300,000 | 10 per cent |
| Rs. 300,001 to Rs. 500,000 | 20 per cent | Rs. 300,001 to Rs. 500,000 | 20 per cent | Rs. 300,001 to Rs. 500,000 | 20 per cent |
| Rs. 500,001 and above | 30 per cent | Rs. 500,001 and above | 30 per cent | Rs. 500,001 and above | 30 per cent |

*Source*: Ministry of Finance (2008b).

*Note*: Figures within brackets are dollar equivalence income. Exchange rate in 2008–09 was US$1 = 40.24 Indian Rupees.

### Exemptions and rate structure of the PIT

In 2008–09, the income tax threshold was increased from Rs. 110,000 (US$2,733, based on an exchange rate of 40.24 Rs. = 1 US($)) to Rs. 150,000 and from Rs. 145,000 to Rs. 180,000 for women income earners. For both males and females over 65, it is even higher, at Rs. 225,000. It is important to note that India is one of the few countries, and the only one in this volume, where the tax system provides such positive discrimination for women. Until 2001, the tax rates on individuals, both men and women, were the same. In 2001, women were given a special rebate up to Rs. 5,000 against taxes payable, unless they were above 65, in which case they received the senior citizen rebate of Rs. 20,000. In 2005, the minimum non-taxable income was raised to Rs. 125,000 for women taxpayers as against the general threshold of Rs. 100,000. In 2005, the tax exemption limit for women was raised to Rs. 1,35,000, while the Rs. 5,000 tax rebate was discontinued and in 2007, this limit was raised to Rs. 1,45,000 (see Table 4.7).

Apart from the higher exemption thresholds for women, most deductions and exemptions are available to all individuals paying income tax, irrespective of sex – making them both gender-neutral and gender-blind. These tend to be fairly standard allowances and deductions – for items such as entertainment allowances, expenditure on uniforms and travel allowances.

### Horizontal and vertical equity: a hypothetical example

The application of income tax in India provides preferential tax treatment to women by the higher basic exemption limit. Also income tax is levied on individuals

irrespective of their family size and number of dependants. However, the tax incidence differs significantly in dual and single-earner households because of the basic exemption.

A simple exposition of differential incidence of personal income tax in dual-earner and single-earner households is given in Table 4.8. This shows that in a dual-earner household, income earned by both male and female earners together, if up to Rs. 300,000, would not attract any tax if both of them earned below their respective exemption limits of Rs. 150,000 and Rs. 180,000. However, in a male single-earner household, it would attract, Rs. 15,000 as tax and in a female single-earner household, it would attract Rs. 12,000 as tax, showing that the household with a single female earner would attract less tax on the same amount of income.

Although the Indian tax system positively discriminates by gender due to the higher tax threshold for women, the effectiveness of such a policy is limited as the number of women within the income tax net is a miniscule proportion of the total number of income taxpayers and an even more minuscule proportion of the total number of adult women in India. Currently, the total number of individual taxpayers is about 27 million out of a total population of about 1 billion, so approximately 2.7 per cent of the population falls within the income tax net (see Table 4.9). Women likely constitute less than 3 per cent of this small number. Since, as per the 2001 census, women constitute 49 per cent of the population, tax-paying women are only about 0.00001 per cent of all women and 0.27 per cent of working-age women. In other words, the use of income tax as a means to further gender equality seems limited.

More importantly, there is little evidence that the higher tax threshold has a positive impact on women's lives in India. The higher threshold may have had the impact of shifting some property ownership from men to women (to exploit the higher tax threshold), which would give women more power within the household, but the impact would be limited to the very small proportion of women inside the tax net.

### Indirect tax incidence

As each of the 28 state governments and 7 centrally administered union territories has an independent tax system and administration, in looking at the incidence of indirect consumption tax, we have focused on the middle-income state of West Bengal, in which VAT constitutes the single largest share (59 per cent) of own tax revenues for the state (see Figure 4.5). The nature of the goods falling under different categories of VAT rate is given in Table 4.10. Basic food items, such as cereals and vegetables, basic clothing, domestic services, basic stationery and books are exempted from VAT. The main food items that are exempted from VAT are: bread (except pizza bread containing any type of fruit or vegetable), coarse grains, curd, buttermilk, separated milk, fresh milk and pasteurized milk, fresh vegetables and fruits.

Table 4.8 Income tax paid by dual- and single-income household categories, India

| | Household 1 | Household 2 | Household 3 |
|---|---|---|---|
| Scenario 1: Hypothetical median income of Rs: 300,000 | | | |
| Household size | 5 | 5 | 5 |
| Composition | Male and female earner 3 dependants | Male earner 4 dependants | Female earner 4 dependants |
| Total income | 300,000 | 300,000 | 300,000 |
| Tax rate | 10% | 10% | 10% |
| Exemption | Rs. 150,000 for Male Rs. 180,000 for Female | Rs. 150,000 | Rs.180,000 |
| Tax paid | Nil | 15,000 | 12,000 |
| Scenario 2: Hypothetical half the median income: Rs. 150,000 ($3727.63) | | | |
| Total income | 150,000 | 150,000 | 150,000 |
| Tax rate | 10% | 10% | 10% |
| Exemption | Rs. 150,000 for male Rs. 180,000 for female | Rs. 150,000 | Rs. 180,000 |
| Tax paid | Nil | Nil | Nil |
| With Tax Credit for higher exemption | Nil | Nil | Nil |
| Scenario 3: Hypothetical double the median income: Rs. 600,000 | | | |
| Total income | 600,000 | 600,000 | 600,000 |
| Tax rate | 10% on (150,001 to 300,000 for men) 10% on (180,001 to 300,000 for women) | 10% on (150,001 to 300,000 for men) 10% on (180,001 to 300,000 for women) 20% on (on 300,000 to 500,000 for men) 30% on Rs. 500,000 and above | 10% on (150,001 to 300,000 for men) 10% on (180,001 to 300,000 for women) 20% on (on 300,000 to 500,000 for men) 30% on Rs. 500,000 and above |
| Tax paid | 27,000 | 75,000 | 72,000 |

Table 4.9 Number of effective taxpayers, India

| Year | Company | Individual | HUF | Firms | Trusts | Others | Total |
|---|---|---|---|---|---|---|---|
| 2000–01 | 334,261 | 20,662,926 | 553,194 | 1,336,861 | 63,999 | 51,035 | 23,002,276 |
| 2001–02 | 349,185 | 23,734,413 | 607,519 | 1,378,706 | 97,272 | 58,784 | 26,225,879 |
| 2002–03 | 365,124 | 25,935,556 | 644,489 | 1,345,232 | 117,304 | 57,224 | 28,464,929 |
| 2003–04 | 372,483 | 26,624,224 | 654,848 | 1,338,613 | 154,276 | 57,952 | 29,202,396 |
| 2004–05 | 373,165 | 24,792,990 | 620,468 | 1,235,373 | 71,375 | 65,190 | 27,158,561 |
| 2005–06 | 382,021 | 27,370,659 | 642,759 | 1,234,424 | 74,543 | 58,077 | 29,762,483 |
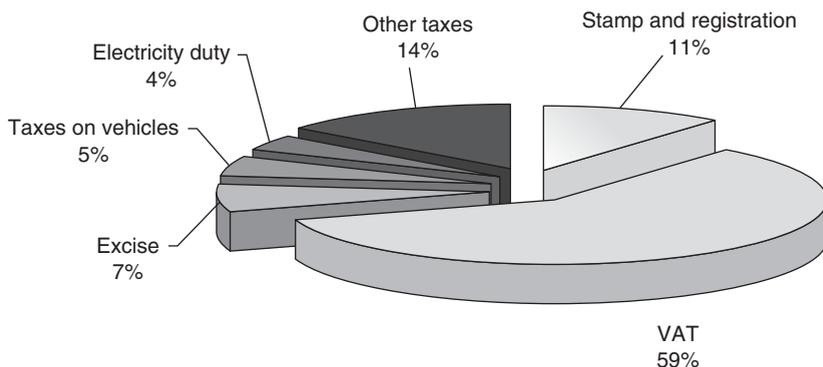
*Figure 4.5* The structure of West Bengal tax revenues, 2005–06.

*Table 4.10* Nature of commodities and the applicable VAT rate, West Bengal

| Tax rate | No. of goods under VAT | Nature of goods |
| --- | --- | --- |
| Exempt | 170 | Basic food items like cereals and vegetables, basic clothing, domestic services, basic stationery and books |
| 1% | 3 | Jewellery and ornaments |
| 4% | 79 | Food items other than basic, processed fruits and vegetables, household goods, medicine, etc. |
| 12.50% | 81 | Beverages, processed food, food in restaurant, electronic goods, some medical equipments and expenses, household goods which can be classified as luxuries and other items not listed in the 4 per cent and exempted category |

*Source*: West Bengal Commercial Taxes Department (n.d.).

Food items, other than basic, are taxed at 4 per cent and include biscuits, dry fruits, edible oil, fried and roasted grains, maize starch, glucose, maize gluten, maize germ and oil, pizza-bread, bun or bread containing any type of fruit or vegetable, porridge and cottage cheese, processed meat, poultry and fish, processed and preserved vegetables and fruits, skimmed milk powder, dairy whitener, spices and hydrogenated vegetable oil. Food eaten at restaurants is taxed at the highest VAT rate of 12.5 per cent. The state also has a list of exempted commodities, which are treated as goods of local importance and exempted from VAT.

Selected items currently under sales tax are kept outside the VAT and taxed at a higher rate, including diesel, petrol and aviation turbine fuel (ATF), crude oil

*Table 4.11* Tax rate on commodities outside the VAT, West Bengal

| Item | Tax rate |
|------|----------|
| Country liquor | 20.00 |
| Beer | 20.00 |
| Foreign liquor or refined liquor | 20.00 |
| Petrol | 25.00 |
| Diesel | 25.00 |

*Source*: West Bengal Commercial Taxes Department (n.d.).

and liquor (see Table 4.11). Floor rates for all these taxes are 20 per cent for all the states. In West Bengal, except for petrol and diesel which are taxed at 25 per cent, non-VATable commodities are taxed at the floor rate of 20 per cent.

In addition to examining the tax incidence in the aggregate, we have examined the incidence for the urban and rural sub-samples. We anticipate that rural and urban households will have different expenditure patterns and thereby a different tax incidence. As India's economy is predominantly rural, with more than two-thirds of the population living in rural areas and relying primarily on subsistence agriculture, it is important to analyse the urban and rural sectors separately.

Unlike the other countries in this volume, we have not been able to do the tax incidence according to the employment status of the households, as consumer expenditure surveys do not include data on employment status of household members. Employment surveys are conducted separately and the consumption expenditure survey data cannot be mapped against employment survey data.

In addition to data from the 61st round of the National Sample Survey of consumer expenditure, we have taken a sub-sample of combined estimates based on all rounds. The survey collects data on household characteristics, demographic details and household-level expenditure on almost 400 items. For some frequently purchased items the expenditure data are collected for a 30-day reference period, while for not so frequently purchased items the data are collected for both a 30-day and a 365-day reference period. For certain items data about both quantity and value are collected, but for others only values are collected. Finally, for consumer durables, only the 365 days reference period is used.

Our sample consists of 7,877 households, both urban and rural, from West Bengal. Table 4.12 shows the mean tax incidence for households in each quintile. This indicates that for both urban and rural households, the tax incidence falls most heavily on the poorest quintile, and this regressivity is much higher in urban households than in rural households. It also shows that the VAT incidence is higher than the incidence of the fuel levy and excise tax and that, unlike excise taxes, the fuel levy appears to be progressive, its incidence rising with expenditure quintile. However, when broken down into the levy for household fuel and

*Table 4.12* Tax incidence of consumption tax in households in West Bengal (% of expenditure)

| Quintile | Total tax | VAT | Excise | Fuel levy |
|---|---|---|---|---|
| **Total** | | | | |
| 1st | 1.37 | 1.28 | 0.04 | 0.001 |
| 2nd | 0.58 | 0.54 | 0.02 | 0.003 |
| 3rd | 0.48 | 0.44 | 0.02 | 0.004 |
| 4th | 0.52 | 0.48 | 0.01 | 0.012 |
| 5th | 0.69 | 0.62 | 0.01 | 0.051 |
| **Rural** | | | | |
| 1st | 0.83 | 0.75 | 0.03 | 0.001 |
| 2nd | 0.42 | 0.39 | 0.02 | 0.001 |
| 3rd | 0.40 | 0.36 | 0.01 | 0.003 |
| 4th | 0.41 | 0.38 | 0.01 | 0.008 |
| 5th | 0.49 | 0.43 | 0.01 | 0.046 |
| **Urban** | | | | |
| 1st | 3.89 | 3.75 | 0.08 | 0.000 |
| 2nd | 1.33 | 1.25 | 0.02 | 0.013 |
| 3rd | 0.79 | 0.74 | 0.02 | 0.010 |
| 4th | 0.78 | 0.73 | 0.02 | 0.020 |
| 5th | 0.84 | 0.76 | 0.02 | 0.054 |

that for transport, we see that the incidence of the former is regressive. The urban poor in particular bear a high incidence for indirect taxes, and this is driven primarily by VAT.

Table 4.13 presents the incidence of tax by gender of the head of the household and household sex composition. Households are classified into five categories: male-headed; female-headed; having a greater number of males (male-dominated); having a greater number of females (female-dominated); and having an equal number of males and females. Looking at the incidence based on household headship, we see that the aggregate incidence of tax is higher for female-headed households than it is for male-headed households. The incidence of excise and fuel levy is greater in male-headed than in female-headed households. Looking at incidence based on household sex composition, by contrast, we find that the aggregate tax incidence is highest in male-dominated households, followed by households with an equal number of males and females and lowest for female-dominated households. This result is consistent with the incidence shown for the male and female headship category as the number of male-headed households is 8.66 times higher than the number of female-headed households.

The distribution of incidence is different in urban and rural areas (see Table 4.14). In urban India, looking at household headship, we see that male-headed households

*Table 4.13* Overall tax incidence by household type, West Bengal (% of expenditure)

| | Total tax | VAT | Excise tax | Fuel tax | Number of households |
|---|---|---|---|---|---|
| *Headship* | | | | | |
| Male-headed | 2.08 | 1.90 | 0.05 | 0.06 | 7,066 |
| Female-headed | 2.12 | 2.02 | 0.03 | 0.02 | 821 |
| *Household sex composition* | | | | | |
| Male-dominated | 2.24 | 2.04 | 0.05 | 0.07 | 3,282 |
| Female-dominated | 1.95 | 1.81 | 0.03 | 0.05 | 2,552 |
| Equal number of females and males | 2.01 | 1.85 | 0.04 | 0.05 | 2,043 |

bear a higher tax incidence than do female-headed households, while in rural India, the incidence is higher in female-headed households than in male-headed households. In all household categories, VAT is the predominant tax. This result is obvious as the tax structure is predominantly VAT based with its relative share in total tax revenue at around 60 per cent.

Table 4.15 disaggregates the results by whether or not the respective households have children. It indicates that the tax incidence is highest for male-dominated households without children. Within male-dominated households with children, the incidence is highest in the richest quintile, although higher in the poorest quintile than in the middle quintiles. In overall terms, the tax incidence for male-dominated households is relatively higher than it is for female-dominated households across all quintiles, for households both with and without children. Further, in male-dominated households, households in the poorest quintile bear the highest tax incidence, while among female-dominated households, those in the richest quintile bear the highest incidence. The pattern of overall incidence for male-dominated households is U-shaped, being highest in quintile 1 (2.96), declining to 1.75 in quintile 2 and 1.77 in quintile 3 and then increasing to 2.78 in quintile 5; while for female-dominated households it is progressive, with the lowest incidence (1.67) in quintile 1 and the highest (2.69) in quintile 5.

Table 4.16 shows how the tax burden is distributed across quintiles for different commodity groups within each household category. Taking all the commodities together, for all households, the tax incidence is much higher in the lowest expenditure quintile. However, looking at the specific commodities, it is clear that this higher tax incidence for the lowest expenditure quintile is due primarily to the high incidence of taxes on basic necessities and on beverages (i.e., food, clothing and footwear, fuel, tobacco and alcoholic and non-alcoholic beverages). The highest expenditure quintile also bears the highest incidence of tax for housing, water, electricity and gas, health care and medicine and fuel and transport. However, among households with an equal number of males and females, the tax incidence is highest for quintiles 4 (2.184) and 5 (2.944).

*Table 4.14* Rural and urban tax incidence by household type, West Bengal (% of expenditure)

| | Urban | | | | | Rural | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Total tax* | *VAT* | *Excise tax* | *Fuel tax* | *Number of households* | *Total tax* | *VAT* | *Excise tax* | *Fuel tax* | *Number of households* |
| *Headship* | | | | | | | | | | |
| Male-headed | 2.98 | 2.69 | 0.12 | 0.11 | 254 | 1.74 | 1.61 | 0.02 | 0.04 | 4516 |
| Female-headed | 2.76 | 2.65 | 0.05 | 0.06 | 349 | 1.82 | 1.72 | 0.02 | 0.01 | 472 |
| *Household sex composition* | | | | | | | | | | |
| Male-dominated | 3.33 | 3.02 | 0.14 | 0.11 | 1277 | 1.78 | 1.62 | 0.02 | 0.05 | 2006 |
| Female-dominated | 2.55 | 2.36 | 0.08 | 0.07 | 907 | 1.73 | 1.61 | 0.02 | 0.04 | 1645 |
| Equal number | 2.77 | 2.49 | 0.09 | 0.13 | 706 | 1.73 | 1.61 | 0.02 | 0.02 | 1337 |

*Table 4.15* Tax incidence by sex composition, presence of children, and quintile, West Bengal

| Quintile | Total tax | VAT | Excise tax | Fuel tax | Number of HHs | Quintile | Total tax | VAT | Excise tax | Fuel tax | Number of HHs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Male-dominated with children | | | | | | Male-dominated without children | | | | | |
| 1 | 1.79 | 1.68 | 0.01 | 0.00 | 222 | 1 | 4.32 | 4.00 | 0.15 | 0.00 | 292 |
| 2 | 1.54 | 1.44 | 0.01 | 0.00 | 389 | 2 | 2.35 | 2.23 | 0.02 | 0.02 | 149 |
| 3 | 1.69 | 1.55 | 0.01 | 0.01 | 484 | 3 | 2.00 | 1.83 | 0.03 | 0.05 | 161 |
| 4 | 1.92 | 1.80 | 0.04 | 0.03 | 525 | 4 | 2.30 | 2.15 | 0.06 | 0.02 | 212 |
| 5 | 2.59 | 2.21 | 0.10 | 0.25 | 571 | 5 | 3.12 | 2.64 | 0.16 | 0.30 | 277 |
| Total | 1.90 | 1.73 | 0.04 | 0.06 | 2191 | Total | 2.97 | 2.7 | 0.09 | 0.09 | 1091 |
| Female-dominated with children | | | | | | Female-dominated without children | | | | | |
| 1 | 1.53 | 1.47 | 0.01 | 0.00 | 248 | 1 | 1.92 | 1.84 | 0.03 | 0.00 | 214 |
| 2 | 1.62 | 1.52 | 0.01 | 0.00 | 365 | 2 | 2.03 | 1.94 | 0.00 | 0.00 | 71 |
| 3 | 1.62 | 1.54 | 0.01 | 0.01 | 393 | 3 | 2.19 | 2.16 | 0.01 | 0.00 | 68 |
| 4 | 1.91 | 1.78 | 0.03 | 0.05 | 456 | 4 | 2.41 | 2.22 | 0.01 | 0.12 | 77 |
| 5 | 2.57 | 2.27 | 0.10 | 0.17 | 530 | 5 | 3.17 | 2.87 | 0.12 | 0.15 | 130 |
| Total | 1.86 | 1.72 | 0.03 | 0.05 | 1992 | Total | 2.29 | 2.15 | 0.04 | 0.05 | 560 |
| Equal number of females and males with children | | | | | | Equal number of females and males without children | | | | | |
| 1 | 1.49 | 1.31 | 0.02 | 0.00 | 138 | 1 | 1.71 | 1.59 | 0.01 | 0.00 | 280 |
| 2 | 1.53 | 1.46 | 0.01 | 0.00 | 241 | 2 | 1.94 | 1.76 | 0.03 | 0.00 | 137 |
| 3 | 1.70 | 1.60 | 0.01 | 0.00 | 269 | 3 | 2.09 | 1.96 | 0.06 | 0.07 | 112 |
| 4 | 1.90 | 1.81 | 0.03 | 0.02 | 274 | 4 | 2.79 | 2.57 | 0.09 | 0.09 | 137 |
| 5 | 2.59 | 2.29 | 0.08 | 0.20 | 269 | 5 | 3.42 | 3.04 | 0.13 | 0.24 | 186 |
| Total | 1.83 | 1.69 | 0.03 | 0.04 | 1191 | Total | 2.28 | 2.08 | 0.05 | 0.07 | 852 |

*Note*: Tax as a percentage of post-tax expenditure.

Table 4.16 Tax incidence for each consumption category by sex composition and quintile, West Bengal

| Category | Male-dominated | | | | | | Female-dominated | | | | | | Equal number females and males | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total |
| *Food subtotal* | 0.37 | 0.37 | 0.36 | 0.33 | 0.30 | 0.34 | 0.40 | 0.36 | 0.36 | 0.33 | 0.31 | 0.35 | 0.40 | 0.37 | 0.37 | 0.33 | 0.31 | 0.36 |
| Basic | 0.18 | 0.21 | 0.20 | 0.18 | 0.14 | 0.18 | 0.23 | 0.22 | 0.21 | 0.18 | 0.15 | 0.20 | 0.24 | 0.22 | 0.21 | 0.18 | 0.14 | 0.20 |
| Other | 0.15 | 0.13 | 0.13 | 0.12 | 0.12 | 0.13 | 0.15 | 0.12 | 0.12 | 0.11 | 0.12 | 0.12 | 0.14 | 0.12 | 0.12 | 0.11 | 0.13 | 0.13 |
| Sugar/confectionery and others | 0.04 | 0.03 | 0.03 | 0.03 | 0.04 | 0.03 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.03 | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.03 |
| Meals out | 1.17 | 0.18 | 0.09 | 0.09 | 0.09 | 0.30 | 0.09 | 0.07 | 0.03 | 0.04 | 0.03 | 0.05 | 0.02 | 0.03 | 0.09 | 0.06 | 0.06 | 0.05 |
| Non-alcoholic beverages | 0.28 | 0.14 | 0.12 | 0.12 | 0.12 | 0.15 | 0.1 | 0.12 | 0.10 | 0.11 | 0.12 | 0.11 | 0.12 | 0.11 | 0.09 | 0.11 | 0.11 | 0.11 |
| Beer | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Spirits | 0.13 | 0.09 | 0.12 | 0.06 | 0.03 | 0.08 | 0.05 | 0.09 | 0.06 | 0.06 | 0.04 | 0.06 | 0.13 | 0.08 | 0.07 | 0.04 | 0.02 | 0.07 |
| Tobacco | 0.07 | 0.02 | 0.02 | 0.04 | 0.12 | 0.05 | 0.02 | 0.01 | 0.01 | 0.03 | 0.11 | 0.03 | 0.01 | 0.02 | 0.02 | 0.05 | 0.10 | 0.04 |
| *Clothing and footwear subtotal* | 0.24 | 0.23 | 0.22 | 0.23 | 0.24 | 0.23 | 0.24 | 0.23 | 0.23 | 0.24 | 0.24 | 0.24 | 0.21 | 0.22 | 0.23 | 0.24 | 0.23 | 0.22 |
| *Housing, water, electricity, gas subtotal* | 0.01 | 0.02 | 0.03 | 0.11 | 0.27 | 0.09 | 0.02 | 0.04 | 0.06 | 0.13 | 0.30 | 0.11 | 0.03 | 0.04 | 0.07 | 0.18 | 0.32 | 0.12 |
| Utilities | 0.01 | 0.02 | 0.03 | 0.10 | 0.27 | 0.09 | 0.02 | 0.04 | 0.06 | 0.13 | 0.30 | 0.11 | 0.03 | 0.04 | 0.07 | 0.18 | 0.32 | 0.12 |
| Housing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fuel for HH use | 0.12 | 0.12 | 0.09 | 0.09 | 0.05 | 0.09 | 0.12 | 0.10 | 0.09 | 0.08 | 0.05 | 0.09 | 0.11 | 0.11 | 0.09 | 0.08 | 0.04 | 0.09 |
| Furniture, HH equipment and maintenance | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |
| Domestic and household services | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Medical expenditure | 0.13 | 0.20 | 0.30 | 0.44 | 0.52 | 0.33 | 0.21 | 0.28 | 0.32 | 0.40 | 0.52 | 0.35 | 0.21 | 0.29 | 0.29 | 0.45 | 0.66 | 0.37 |
| *Transportation subtotal* | 0.01 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |
| Collective forms of transport | 0.01 | 0.02 | 0.01 | 0.02 | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 |
| Private transport including air | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

*Table 4.16* (Continued) Tax incidence for each consumption category by sex composition and quintile, West Bengal

| Category | Male-dominated | | | | | | Female-dominated | | | | | | Equal number females and males | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *1* | *2* | *3* | *4* | *5* | *Total* | *1* | *2* | *3* | *4* | *5* | *Total* | *1* | *2* | *3* | *4* | *5* | *Total* |
| Fuel for transport | 0.00 | 0.00 | 0.02 | 0.03 | 0.27 | 0.07 | 0.00 | 0.00 | 0.00 | 0.06 | 0.16 | 0.05 | 0.00 | 0.00 | 0.02 | 0.04 | 0.22 | 0.05 |
| Communication | 0.03 | 0.03 | 0.03 | 0.08 | 0.29 | 0.09 | 0.02 | 0.02 | 0.03 | 0.09 | 0.33 | 0.10 | 0.02 | 0.02 | 0.04 | 0.14 | 0.39 | 0.11 |
| Recreation | 0.03 | 0.04 | 0.04 | 0.08 | 0.17 | 0.07 | 0.03 | 0.03 | 0.05 | 0.08 | 0.17 | 0.07 | 0.01 | 0.04 | 0.06 | 0.13 | 0.17 | 0.08 |
| Education | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Miscellaneous | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 |
| *Personal care subtotal* | 0.34 | 0.30 | 0.29 | 0.28 | 0.28 | 0.30 | 0.37 | 0.30 | 0.29 | 0.32 | 0.29 | 0.31 | 0.35 | 0.30 | 0.31 | 0.30 | 0.27 | 0.31 |
| Necessary personal Care | | | | | | | | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | | | | | |
| TOTAL | 2.96 | 1.76 | 1.77 | 2.02 | 2.78 | 2.24 | 1.67 | 1.68 | 1.69 | 1.98 | 2.69 | 1.95 | 1.63 | 1.66 | 1.79 | 2.18 | 2.94 | 2.01 |
| Number of HHs in quintile | 514 | 538 | 645 | 737 | 848 | 3282 | 462 | 436 | 461 | 533 | 660 | 2552 | 418 | 378 | 381 | 411 | 455 | 2043 |
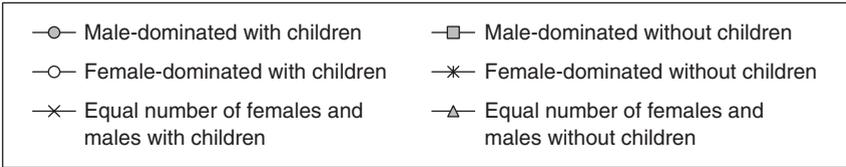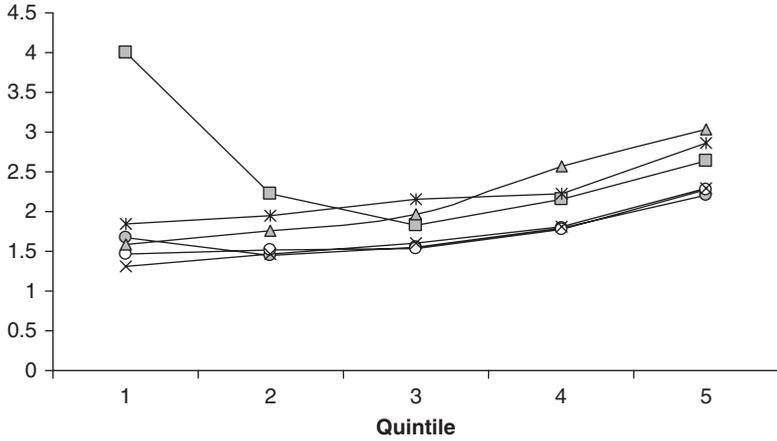
*Figure 4.6* Total VAT incidence, across household type, West Bengal.

Within the subcategories, among male-dominated households, the tax incidence related to meals out is significantly higher for quintile 1; while among female-dominated households, the incidence related to basic food, medical expenses and clothing is highest in quintile 1, reflecting the fact that female-dominated households have higher expenditure on these items. Male-dominated households have a higher indirect tax incidence for expenditure on non-alcoholic beverages, spirits in quintile 1, tobacco and transportation.

Figures 4.6–4.8 show that the overall tax incidence is highest for the lowest quintile in the male-dominated households without children compared to all other household categories, and remains highest for this quintile even after disaggregating the tax incidence due to VAT and excise. This result may be driven by meals taken out and by processed foods, which are taxable goods consumed in urban areas. But for the poorest male-dominated households, actual liability may be less than what is evident from the table because much of these food items, especially 'meals taken out by the poor', would invariably be in the informal/unorganized food chain managed by roadside food venders who do not come under the tax net. But NSS data do not give us a way to determine how many of the meals taken out are in the formal chains of restaurants liable to tax and how many are from the informal food chain outside the tax net. So the actual liability may be less than what is presented in Table 4.16.
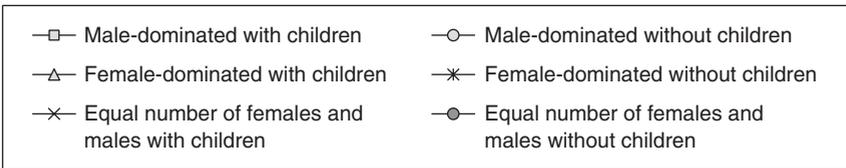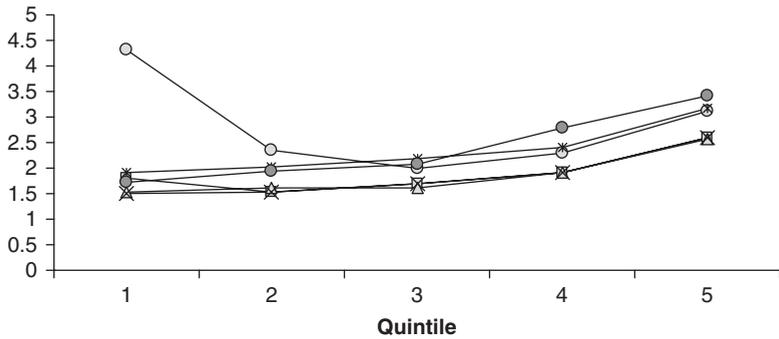
*Figure 4.7* Total tax incidence, across household type, West Bengal.

*Note*: Shown as percentage of total post-tax expenditure.
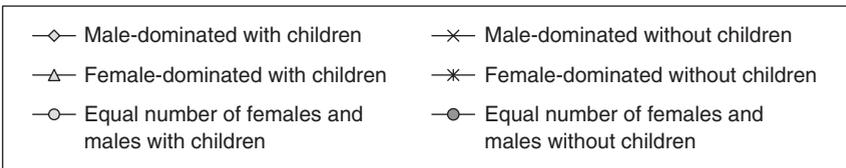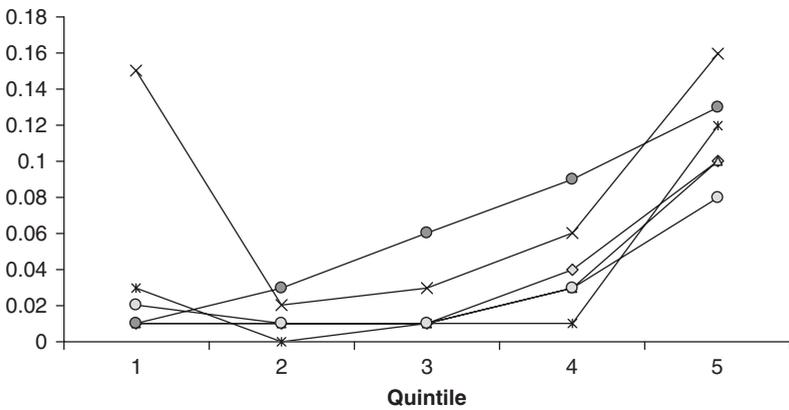


*Figure 4.8* Total excise tax incidence, across household type, West Bengal.

*Note*: Shown as percentage of post-tax expenditure.
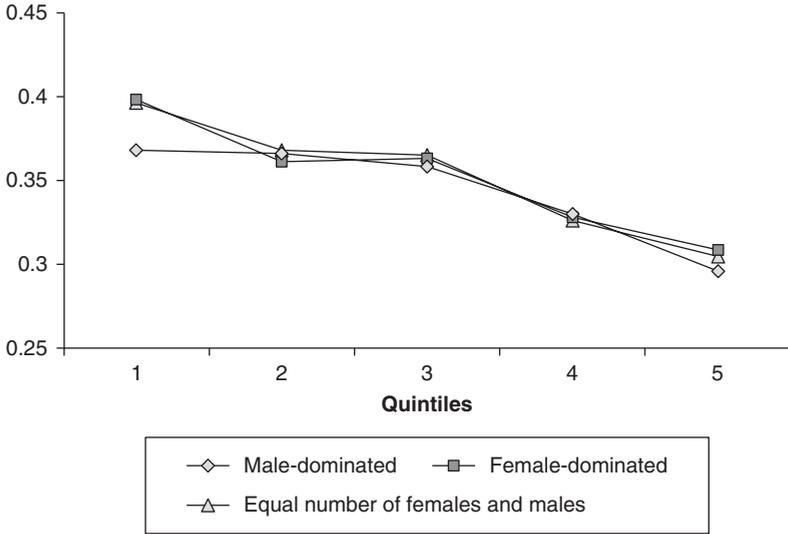
*Figure 4.9* Food tax incidence, across household type, West Bengal.

*Note*: Shown as percentage of total post-tax expenditure.

Apart from this, the highest tax incidence is among the higher quintiles in households with an equal number of males and females without children. In addition, the VAT incidence is relatively higher for female-dominated households without children than for female-dominated households with children, perhaps because having children in the household shifts consumption toward basic food items that are VAT exempt. Among male-dominated households also, the tax incidence is relatively lower in households with children than in households without children.

However, the pattern of food tax incidence is entirely contradictory (see Figure 4.9). Among female-dominated households, the lowest quintile bears a higher tax incidence than does the lowest quintile in male-dominated households, although the incidence of the lowest quintile of female-dominated households is comparable to households with an equal number of males and females. This result is also likely due to the composition of the food basket which clearly differs across household types. In addition, across all categories, the lowest quintiles bear a higher food tax incidence than do the higher quintiles, which has serious policy implications related to taxing the essential commodities. Our results suggest that there is a significant mismatch between the basic food items exempt from VAT and the basic food items that the poor consume. This is clearly an area for policy intervention.

## Policy simulations

Given the fact that tax on items of basic necessities is one of the main reasons for the regressive tax incidence in the results presented above, we conducted two

policy experiments to assess how changing the rate structure of taxes affects the incidence of taxes across various groups. First, we examine the incidence outcome that results from zero-rating all food items in the consumption basket that attract VAT; and, second, the incidence outcome across households of a simulation that doubles the rate of tax on tobacco items. The objectives of this policy simulation are two-fold. First, policy simulations should provide alternative sources to generate new tax revenues to replace tax losses arising due to the zero-rating of food items. In other words, the issue is how to maintain revenue neutrality while advancing gender equality through tax policy. Thus, if food is zero-rated, is it possible for the government to tax tobacco at a higher rate which is primarily consumed by men to increase revenues? The second objective of this simulation is to see how the indirect tax incidence pattern changes when two different consumption items, specifically, food and tobacco, are treated differently by policy reforms.

As indicated in Table 4.10, the food items that attract VAT are processed food, food in restaurants, packed foods, edible oils, spices, and so on. As some of the basic ingredients of food such as spices and oil are taxed at a 4 per cent rate, the poor would have a disproportionate burden of tax on these items given their heavily food-dependent consumption basket. Also, as the food eaten in restaurants attracts the highest rate of 12.5 per cent, it would also be important to see how the overall tax incidence pattern behaves when all the food items are zero-rated across quintiles.

Zero-rating of food does reduce the overall tax burden in all household categories, but it does not change the pattern of tax incidence. Even when food is zero-rated, for example, the female-headed households still bear a higher incidence compared to male-headed households. However, when the rates are increased on tobacco, which is primarily consumed by men, we see that aggregate tax incidence in male-headed households becomes higher than it is in female-headed households. This result is not only due to the differences in the consumption basket but also due to the differential rate structure of these two commodities. Among households differentiated by sex composition, the tax incidence falls most heavily on male-dominated households followed by households with an equal number of males and females and by female-dominated households (see Tables 4.17 and 4.18).

## Conclusion and policy implications

Our aim in this chapter has been to examine India's direct and indirect taxes from a gender perspective. For indirect taxes, the analysis was restricted to the state of West Bengal. The analysis of personal income tax shows that there is no apparent explicit negative gender bias in the Indian tax code, India does not have joint filing, and there is no differential treatment of non-labour income in the tax code. The gender biases that were present under the HUF have been removed by altering the Hindu Act as well as through judicial rulings. In fact, India is one of the few cases in which women are specifically privileged by the tax system because

*Table 4.17* India policy simulation 1: tax on all food = 0

|  | Total tax | VAT | Excise tax | Fuel tax | Number of households |
|---|---|---|---|---|---|
| *Headship* | | | | | |
| Male-headed | 1.51 | 1.33 | 0.04 | 0.06 | 7066 |
| Female-headed | 1.63 | 1.53 | 0.03 | 0.02 | 821 |
| Total | 1.52 | 1.35 | 0.04 | 0.06 | 7877 |
| *Household sex composition* | | | | | |
| Male-dominated | 1.52 | 1.32 | 0.05 | 0.07 | 3282 |
| Female-dominated | 1.49 | 1.36 | 0.03 | 0.05 | 2552 |
| Equal number of | | | | | |
| females and males | 1.55 | 1.39 | 0.04 | 0.05 | 2043 |
| Total | 1.52 | 1.34 | 0.04 | 0.06 | 7877 |

*Table 4.18* India policy simulation 2: tax on tobacco doubled

|  | Total tax | VAT | Excise tax | Fuel tax | Number of households |
|---|---|---|---|---|---|
| *Headship* | | | | | |
| Male-headed | 2.17 | 1.90 | 0.13 | 0.06 | 7066 |
| Female-headed | 2.16 | 2.02 | 0.07 | 0.02 | 821 |
| Total | 2.17 | 1.91 | 0.12 | 0.06 | 7877 |
| *Household sex composition* | | | | | |
| Male-dominated | 2.33 | 2.04 | 0.14 | 0.07 | 3282 |
| Female-dominated | 2.01 | 1.81 | 0.10 | 0.05 | 2552 |
| Equal number of | | | | | |
| females and males | 2.09 | 1.85 | 0.12 | 0.05 | 2043 |
| Total | 2.17 | 1.91 | 0.12 | 0.06 | 7877 |

of a higher income tax threshold that applies to women. We have shown that only a very small proportion of women in India are able to enjoy this tax advantage, and we remain unconvinced that this is good public policy.

Our overview of direct taxes has revealed that the tax system in India is very complex with a plethora of exemptions serving very limited purposes. There is thus a need to consolidate and rationalize exemptions. It must be emphasized that income tax has very limited power as an instrument for a pro-gender fiscal stance as tax-paying women constitute a miniscule proportion of the total number of working women in India.

In the case of indirect taxes, we found that while in the aggregate, the tax system is regressive in West Bengal, there was greater variation in the incidence of taxes according to household characteristics. Thus, while our results suggest that female-headed households bear a higher tax incidence, this is not the case for female-dominated households. Nevertheless, our results do suggest the VAT on basic consumption goods especially places a greater burden on poor households in

specific household categories when we look at the incidence of various commodities across expenditure quintiles. The tax incidence on basic necessity items and on food and beverages was found to be higher for the lowest expenditure quintile. It is interesting too that the tax incidence for the highest expenditure quintile was higher for housing, water, electricity and gas, fuel and transport as well as health care and medicine. The latter is particularly difficult to interpret in the Indian context. The relatively low incidence of consumption tax on these items for poorer households could result from the fact that these poorer households lack access to the formal modern health care system, especially in the rural areas. The same applies to the incidence of taxes on consumption of housing, electricity and gas.

The analysis conducted here is particularly timely since in India, the central government as well as all state governments are considering the introduction of an integrated goods and services tax for the 2010/11 fiscal year. Our analysis for West Bengal suggests that the burden of such taxes may place an undue burden on women, and on poorer households unless the rate structure or the design of the tax is calibrated properly. Of course, we have considered only one dimension of fiscal policy. On the expenditure side, programmes such as food subsidies and the subsidy for household fuel may well counter some of the negative impacts of indirect taxes on poor households. Nevertheless, our findings do suggest that any extension of indirect taxes needs carefully to consider the gender and poverty impacts.

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# 5 Gender analysis of taxation in Mexico

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## Introduction

Income distribution in Mexico, as in many Latin American countries, is very unequal. Nearly 43 per cent of the population lives below the poverty line, according to the National Institute of Statistics (INEGI 2006). This presents fiscal policy-makers with the challenge of financing economic growth and social welfare at a time when total financial resources are insufficient to meet the country's social protection needs. In part, this reflects a long-standing reluctance by Mexican policy-makers to confront the need to address the problem of growing income inequality through a more equitable tax policy.

In examining the options for such a policy, this chapter looks at the current tax structure and its impact on different household income groups and considers several ways in which tax policy might be revised in order to lessen the burden on the lowest income households. It also examines the ways in which current tax policy differentially affects men and women, particularly in lower-income households. Finally, it offers a series of recommendations for modifying both personal income tax and indirect taxation in order to expand social protection to all income groups.

## A gendered picture of the economy

Gender research on taxation, as on other economic topics, strengthens economic analysis, since it provides insights into how public policies reinforce or dismantle traditional gender roles. A gender analysis questions the assumed neutrality of tax policy. Gender analysis of taxation seeks to understand the impact of taxation on diverse households and social groups by taking into account the different roles that women and men perform in the economy.

In analysing tax policy from a gender perspective, the first task is to establish whether a given tax has a similar impact on women and men, given their respective economic situations, as, for example, differences in jobs, markets and salaries, as well as ownership over productive assets. These factors influence the amount of tax owed. This differential economic power will also affect men's and women's ability to identify and take advantage of tax loopholes. For example, as men are often paid more, they are more likely to be able to hire expensive lawyers and accountants who can help them devise ways to avoid paying taxes.

*Table 5.1*  Economically active population by job position, Mexico, 2006

| Position | Women | (%) | Men | (%) | Total | (%) |
|---|---|---|---|---|---|---|
| Paid workers and subordinates | 10,393,394 64.9% | 37.1 | 17,655,104 65.8% | 62.9 | 28,048,498 65.5% | 100 |
| Salaried | 9,921,791 61.9% | 38.2 | 16,018,474 59.7% | 61.8 | 25,940,265 60.5% | 100 |
| Non-salaried | 471,603 2.9% | 22.4 | 1,636,630 6.1% | 77.6 | 2,108,233 4.9% | 100 |
| Employers | 385,768 2.4% | 18.5 | 1,704,805 6.4% | 81.5 | 2,090,573 4.9% | 100 |
| Self-employed | 3,551,115 22.2% | 36.7 | 6,125,190 22.8% | 63.3 | 9,676,305 22.6% | 100 |
| Unpaid workers | 1,690,556 10.6% | 55.8 | 1,340,209 5.0% | 44.2 | 3,030,765 7.1% | 100 |
| Total | 16,020,833 | — | 26,825,308 | – | 42,846,141 | — |

*Source*: STPS. National Labour Survey. Fourth Quarter 2006.

*Note*: The percentage column indicates the proportion of women and men according to the total in each category. Percentages below amounts in each column show the share of the total for women and men.

A gender analysis also takes into account the contribution of women to the national economy, which includes unpaid work, such as caring for relatives and raising children. Time use data in Mexico show that 293,176 million hours are spent yearly on domestic and care-giver chores, and 84 per cent of them are carried out by women (INEGI 2002). Women age 15 and older provide more than 30 hours a week of unpaid domestic work, which can be considered a substantial contribution to the overall economy, even though it is not captured in the official gross national product.

## Employment and income differences

From 2000 to 2006, the Mexican population increased by 7 million people (7.4 per cent), bringing the total to 105.2 million. Women represented approximately 52 per cent of this growth, according to the Department of Labour and Social Welfare. Women represent only 37.5 per cent of the economically active population over age 14 in Mexico even though they make up 53.1 per cent of the total population over 14 years of age (Secretaría del Trabajo y Previsión Social 2006). Only 41 per cent of women and girls aged 14 and older report being economically active.

Female and male labour force participation rates differ in most sectors of employment. While women make up only 38 per cent of salaried employees, they comprise 55 per cent of unpaid workers (see Table 5.1). Women tend to be clustered in the tertiary or service sector in roles similar to those they perform at home, such as work in child-care centres (ibid.).

Gender gaps in income are evident both within and between income levels. The average minimum wage in 2006 was 48 Mexican pesos per day.[1] As Table 5.2 shows, if we add the proportion of the total population that does not have any earned income (9 per cent) to the proportion that earns three times the minimum

*Table 5.2* Economically active population by income level, Mexico, 2006

|  | Women | Men | Total |
|---|---|---|---|
| Up to 1 minimum wage | 2,842,612 | 2,746,652 | 5,589,264 |
|  | 17.7% | 10.2% | 13.0% |
| Between 1 and 2 minimum wages | 3,812,743 | 4,902,550 | 8,715,293 |
|  | 23.8% | 18.3% | 20.3% |
| Between 2 to 3 minimum wages | 3,130,989 | 6,187,077 | 9,318,066 |
|  | 19.5% | 23.1% | 21.7% |
| Between 3 to 5 minimum wages | 2,247,231 | 5,485,808 | 7,733,039 |
|  | 14.0% | 20.5% | 18.0% |
| More than 5 minimum wages | 1,418,386 | 3,700,238 | 5,118,624 |
|  | 8.9% | 13.8% | 11.9% |
| No income | 1,735,667 | 2,104,326 | 3,839,993 |
|  | 10.8% | 7.8% | 9.0% |
| Unspecified | 8,33,205 | 1,698,657 | 2,531,862 |
|  | 5.2% | 6.3% | 5.9% |
| Total | 16,020,833 | 26,825,308 | 42,846,141 |
|  | 100% | 100% | 100% |

*Source*: STPS. National Labour Survey. Fourth Quarter 2006.

*Note*: Percentages below amounts in each column show the share of the total for women and men.

wage (the threshold under which people do not have to pay income taxes) or less (55 per cent), we see that 64 per cent of the total economically active population earns less than three times the minimum wage and consequently do not pay income taxes.[2] Among women, however, this share rises to 71.8 per cent.

Working hours are another vital element in a gender analysis of the labour market. A majority of the economically active population (72.3 per cent) work 35 hours a week or more. However, 39 per cent of women work less than 35 hours each week, while only 20 per cent of men do so (ibid.). Due to the sexual division of labour, which leaves women primarily responsible for household and care-giving tasks, many women can take on only part-time jobs, often in the informal sector, which are insecure, lacking in benefits and often very poorly paid.

Finally, a gender analysis is not complete without looking at social security benefits, which include health care insurance and pensions. Only about 21 million workers in the public and private sectors are covered by these benefits in Mexico, which extends to about 58 million including dependants. Among government employees, women make up 47 per cent of those covered and men 53 per cent. In the private sector, however, only 38 per cent of those covered are women while 62 per cent are men. These figures support the premise that the public sector offers better terms of employment to women than does the private sector.

### Gender inequalities in the household

Understanding the differential participation of Mexican women in the labour market requires an examination of household structure. According to the National

*Table 5.3* Federal revenue by source, Mexico, 2005–08 (% GDP)

|  | 2005 | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| Total federal revenues | 15.4 | 15.1 | 15.3 | 16.9 |
| Tax revenues | 8.8 | 8.6 | 8.9 | 8.2 |
| Income taxes | 4.2 | 4.3 | 4.7 | 5.0 |
| Value-added tax | 3.5 | 3.7 | 3.6 | 3.8 |
| Excises[1] | 0.5 | –0.1 | –0.1 | –1.4 |
| Import taxes | 0.3 | 0.3 | 0.3 | 0.3 |
| Others[2] | 0.3 | 0.3 | 0.3 | 0.4 |
| Non-tax revenue | 6.5 | 6.5 | 6.3 | 8.7 |
| Products, services[3] | 1.2 | 0.7 | 1.2 | 1.0 |
| Others[4] | 0.0 | 0.0 | 0.0 | 0.0 |
| Duties on hidrocarbon | 5.1 | 5.6 | 4.9 | 7.5 |
| Non-hidrocarbon duties | 0.2 | 0.2 | 0.2 | 0.2 |

*Source*: Ingresos presupuestales del Sector Público. Secretaría de Hacienda y Crédito Público (SHCP) and Instituto Nacional de Estadística y Geografía (INEGI).

*Notes*:
1  Includes gasoline and diesel, alcoholic beverages, beer and soft drinks, tobacco, lotteries and raffles.
2  Includes tax on excess oil yield, tax on cash deposits, tax on automobile use, new cars and public interest services.
3  Includes sale of goods owned by government, interest earned on bonds, loans and securities, sales of public enterprises, central bank operating surplus.
4  Includes contribution to public works and infrastructure.

Population Council (CONAPO), the average household has four members, at least two of whom are usually related by blood or by marriage to the head of household.

Of the 24.8 million households identified in 2005, 22.8 million comprised members of a family. The other 2 million comprised individuals living alone or people not related to each other. Of the family households, 17.1 million consisted of nuclear families, according to the Department of Interior. The average household had 2.1 income earners.

## The tax structure in Mexico

In 2006, three sources of public revenue made up 20.2 per cent of Mexico's gross domestic product (GDP). Oil revenues, at 7.3 per cent, were the largest single contributor, followed by three main taxes: income tax (including personal income tax and corporate income tax), value-added tax (VAT) and Special Tax on Production and Services, which together totalled 8 per cent of GDP. The other major sources of government revenue were social security payments and Federal Electricity Commission payments (not shown).

From 2005 to 2008, tax revenues as a percentage of GDP stood at approximately 8.5 per cent. Table 5.3 shows the change in the federal revenue structure as a percentage of GDP from 2005 to 2008; the revenue structure as a percentage of total federal revenue from 2005 to 2008 is presented in Table 5.4. Tax revenues

*Table 5.4* Percentage structure of federal government revenues, Mexico, 2005–08 (% total federal revenues)

|  | *2005* | *2006* | *2007* | *2008* |
|---|---|---|---|---|
| Total federal revenues | 100.0 | 100.0 | 100.0 | 100.0 |
| Tax revenues | 57.4 | 57.1 | 58.6 | 48.5 |
| Income taxes | 27.2 | 28.7 | 30.8 | 29.6 |
| Value-added tax | 22.5 | 24.4 | 23.9 | 22.3 |
| Excises[1] | 3.5 | –0.3 | –0.4 | –8.2 |
| Import taxes | 1.9 | 2.0 | 1.9 | 1.7 |
| Others[2] | 2.2 | 2.2 | 2.4 | 3.0 |
| Non-tax revenue | 42.6 | 42.9 | 41.4 | 51.5 |
| Products, services[3] | 8.0 | 4.5 | 7.9 | 5.9 |
| Others[4] | 0.0 | 0.0 | 0.0 | 0.0 |
| Duties on hidrocarbon | 33.2 | 37.1 | 32.1 | 44.2 |
| Non-hidrocarbon duties | 1.4 | 1.3 | 1.5 | 1.4 |

*Source*: Ingresos presupuestales del Sector Público. Secretaría de Hacienda y Crédito Público (SHCP) and Instituto Nacional de Información Estadística y Geográfica (INEGI).

*Notes*:
1  Includes gasoline and diesel, alcoholic beverages, beer and soft drinks, tobacco, lotteries and raffles.
2  Includes tax on excess oil yield, tax on cash deposits, tax on automobile use, new cars and public interest services.
3  Includes sale of goods owned by government, interest earned on bonds, loans and securities, sales of public enterprises, central bank operating surplus
4  Includes contribution to public works and infrastructure.

constitute about 49 per cent of federal revenues in 2008. The percentage of income tax in total tax revenues increases from 27 per cent in 2005 to over 29 per cent in 2008. Similarly, the share of VAT in total tax revenues remains constant at 22 per cent from 2005 to 2008. The change in the composition of tax revenues is driven by the variation in fuel taxes, explained below.

The federal government recently passed legislation establishing two new direct taxes: the corporate flat rate tax (IETU), implemented on 1 January 2008, and a tax on cash deposits (IDE), implemented in June 2008. The IETU was designed to complement the income tax and increase the tax base. It is much easier to administer than the corporate income tax and provides less opportunity for preferential treatment. This prevents tax evasion, a major factor in the country's chronically low tax revenue. Similarly, the tax on cash deposits was specifically designed to prevent tax evasion in the large informal sector and provides a way of establishing control over money in circulation. The IDE levies a 2 per cent tax on cash deposits over $25,000 pesos a month whether held by private individuals or by businesses. It is not imposed on cheque deposits or money transfers.

### *Personal income tax*

Taxes on individual and corporate income, generated by a product or activity that increases income, whatever its nature, origin or denomination during the tax year,

make up the bulk of Mexico's tax revenue. Income taxes are paid by private individuals, corporations and businesses, Mexican residents overseas with permanent businesses in Mexico, who are taxed on any revenue obtained from their activity, and permanent foreign residents, on any income generated in Mexico. This chapter looks only at the effect of personal income tax on individuals.

Income tax forms must be submitted individually, as joint filing is not permitted. Individual income tax is owed on the following types of revenue, irrespective of whether it is generated in cash, in kind, as services, loans, by accumulation or in any other way:

- earnings from economic activities (including wages);
- earnings from rendering professional services;
- earnings from gains in exchange rate transactions;
- salaries and other remuneration for services performed for federal, state or municipal government; and
- advance payments, monetary benefits and other types of revenue.

The Income Tax Law exempts certain types of earnings, including:

- non-salary earnings for those who make less than the minimum wage;
- compensation for overtime;
- reimbursements for medical and funeral expenses;
- social security payments;
- non-salary earnings (bonuses) of wage workers;
- insurance indemnities or compensation; and
- per diems and travel allowances incurred while on the job and at the expense of the employer, as well as similar compensation.

Exemptions reduce taxable income. In a country such as Mexico, where most of the population live on very little income, and more men than women have formal jobs, exemptions are mainly claimed by men, whose earnings are more likely to put them within the tax net.

Article 123 of the Income Tax Law stipulates that individuals who earn revenue through business activities or professional services are entitled to the following tax deductions, among others: reimbursements, discounts and bonuses once base revenue has been taxed; goods, raw materials and discontinued products used to render services, to manufacture or to dispose of merchandise; expenses; and investments. Article 176 includes additional deductions of a personal nature, including: payments for medical, dental, hospital fees, and similar expenses; funeral costs; charitable donations; and mortgage interest, inflation-adjusted. In addition, Article 108 specifies that tax deductions are also available for inherited wealth and for revenues gained from jointly owned goods of married couples.

The Income Tax Law establishes earning brackets used to calculate taxes on money income and determine subsidies and wage credits for individuals with

incomes below a specified threshold. Each year the government issues tables that set the tax-earning brackets and their corresponding tax rates, taking into account the consumer price index and other factors (simplicity, ease of calculation, income redistribution and tax burden). As Table 5.5 indicates, the number of brackets and the tax rate applied both decreased between 2001 and 2006. In 2001, the highest earnings bracket was anything over $212,744.85 pesos a month, with income above that taxed at 40 per cent. In 2006, the top rate was 29 per cent, applied on monthly earnings over $8,601.51 pesos. This sharp reduction in tax brackets and rates over a short period of time acts to ease the burden on the wealthy at the expense of middle-income groups. In the absence of other taxes/fees, it also reduces the amount of desperately needed public funds to increase social welfare for the 42.5 per cent of the population living below the poverty line.

The Income Tax Law also establishes subsidies for taxpayers who earn less than a specified amount, currently $7,382.34 pesos a month. Any individual who earns below that amount gets a 'wage credit' based on the beneficiary's salary bracket.

Table 5.6 shows the salary brackets set by the Income Tax Law and the corresponding subsidy in 2006. For instance, a person earning between $1,768.97 and $2,653.38 pesos a month is entitled to a monthly subsidy of $406.83 pesos. This subsidy is progressive: the greater the beneficiary's income, the smaller the subsidy. However, only wage workers are eligible; independent or self-employed workers are not eligible, which may constitute an implicit gender bias against women as there are more men than women paid workers and subordinates. Taxpayers with incomes over $7,382.34 pesos a month are not entitled to the wage credit, under the assumption that they are earning enough to make ends meet.

Table 5.7 shows how income tax would be calculated in three different cases: two cases represent workers who deserve the wage credit (workers A and B). Worker A earns three times the minimum wage and does not pay taxes and worker B earns a bit more than four minimum wages, entitled to the wage credit and pays taxes. The third case is a worker earning an amount where she/he is not entitled to the wage credit (worker C). In 2006, thanks to the wage credit, worker A (those earning $4,380.30 pesos, triple the minimum wage) and below did not pay income tax. As noted above, 64 per cent of the economically active population falls into this category, including 72 per cent of women workers.

Tax laws divide taxpayers into two distinct categories: those who derive their income from business activities or professional services, and wage earners. The self-employed, including businesspeople and independent workers paid professional fees, fall under a tax system similar to the corporate income tax, but their rate follows the individual tax brackets. This system allows them to deduct the cost of what they pay for goods and services necessary for their work, as well as expenses and investments, in addition to taking the personal deductions allowed to all individual taxpayers. On the other hand, only wage earners can benefit from tax subsidies, since their employers collect income tax on a pay-as-you-earn basis. They can claim their tax credit at the end of the fiscal year.

*Table 5.5* Rates for calculating monthly income tax, Mexico, 2001 and 2006 (pesos and %)

| 2001 | | | | 2006 | | | |
|---|---|---|---|---|---|---|---|
| *Lower bracket limit* | *Higher bracket limit* | *Fixed levy* | *% over the excess* | *Lower bracket limit* | *Higher bracket limit* | *Fixed levy* | *% over the excess* |
| 0.01 | 435.72 | 0 | 3 | 0.01 | 496.07 | 0 | 3.0 |
| 435.73 | 3,698.27 | 13.07 | 10.0 | 496.08 | 4,210.41 | 14.88 | 10.0 |
| 3,698.28 | 6,499.38 | 339.32 | 17.0 | 4,210.42 | 7,399.42 | 386.31 | 17.0 |
| 6,499.39 | 7,555.25 | 815.52 | 25.0 | 7,399.43 | 8,601.50 | 928.46 | 25.0 |
| 7,555.26 | 9,045.69 | 1,079.49 | 32.0 | 8,601.51 | Onwards | 1,228.98 | 29.0 |
| 9,045.70 | 18,243.86 | 1,556.42 | 33.0 | | | | |
| 18,243.87 | 53,186.21 | 4,591.82 | 34.0 | | | | |
| 53,186.22 | 159,558.62 | 16,472.20 | 35.0 | | | | |
| 159,558.63 | 212,744.84 | 53,702.56 | 37.5 | | | | |
| 212,744.85 | Onwards | 73,647.39 | 40.0 | | | | |

*Source*: Servício de Administración Tributaria (SAT).

Table 5.6 Earnings schedule for wage credit, Mexico, 2006 (pesos)

| Earnings from | To | Monthly wage credit |
|---|---|---|
| 0.01 | 1,768.96 | 407.02 |
| 1,768.97 | 2,604.68 | 406.83 |
| 2,604.69 | 2,653.39 | 406.83 |
| 2,653.39 | 3,472.85 | 406.62 |
| 3,472.85 | 3,537.87 | 392.77 |
| 3,537.88 | 3,785.54 | 382.46 |
| 3,785.55 | 4,446.15 | 382.46 |
| 4,446.16 | 4,717.18 | 354.23 |
| 4,717.19 | 5,335.42 | 324.87 |
| 5,335.43 | 6,224.67 | 294.63 |
| 6,224.68 | 7,113.90 | 253.54 |
| 7,113.91 | 7,382.33 | 217.61 |
| 7,382.34 | Onwards | 0 |

*Source*: SHCP, SAT.

Table 5.7 Tax calculation and application of wage credit, Mexico (pesos)

| | Concept | Worker A | Worker B | Worker C |
|---|---|---|---|---|
| | Taxable income | 4,371.30 | 6,000 | 18,000 |
| Minus: | The amount that corresponds to the lower limit of the bracket | 4,210.42 | 4,210.42 | 8,601.51 |
| Equals: | Excess over that lower limit | 160.88 | 1,789.58 | 9,398.49 |
| Multiplied by: | Tax rate applicable to excess | 17% | 17% | 29% |
| Equals: | Tax levy | 27.35 | 304.23 | 2,725.56 |
| Plus: | Fixed levy by racket | 386.31 | 386.31 | 1,228.98 |
| Equals: | Total tax | 413.66 | 690.54 | 3,954.54 |
| Minus: | Credit to wage | 382.46 | 294.63 | 0 |
| Equals: | Total tax liability (tax due): | 31.20 | 395.91 | 3,954.54 |

### Gender bias in the personal income tax (PIT) code

Since it tends to be expressed in laws, codes, norms and rules, explicit gender bias is clearly evident in tax law and in the way it is applied. The Mexican tax system in general, and the Income Tax Law specifically, exhibit no explicit gender bias of any kind.

Implicit gender bias is apparent, however, in the 'different ways in which the tax system affects the welfare of men and women' (Stotsky 2005: 2). It can be found in direct taxation systems that treat individuals and groups in the same way but have different impacts for males and females because of their unequal social and economic arrangements. The same rules are applied to both women and men, with no acknowledgement of the different social roles that they fulfil in the household and the economy and without taking into account the uneven distribution of power in society.

Personal income tax is levied on particular individuals with no consideration of the sources and amount of income derived by those living under the same roof. Implicit gender biases are embedded in exemptions, deductions and the employment subsidy. The Income Tax Law for individuals limits its benefits to wage earners. However, a higher proportion of men than women have full-time, formal jobs and men typically also earn more than women. More women earn income from part-time and informal employment, and are consequently not entitled to deductions or even the wage credit. As a result they implicitly benefit men more than women since with similar incomes, men are likely to face a lower tax liability.

In addition, even if only a relatively small number of women pay taxes, they can only take advantage of possible exemptions and deductions if they are familiar with the Income Tax Code for Individuals or hire an accountant. Since women earn less, hiring an accountant represents a proportionally greater expense for them than it does for a man. Therefore the complexity of the code is effectively discriminatory against women.

A fair system of direct taxation must take the contribution of women's unpaid work to the national economy into account, which requires additional research. Changes in direct taxation can only go so far, however, in advancing gender equality in Mexico since economically active women make up just 41 per cent of the female population 14 years of age and older and only 28 per cent of the female population is subject to income taxes.

Tax calculations are made without distinctions based on the taxpayers' age, gender, marital status or whether or not they have children. Any subsidies and deductions are applied solely on the basis of income.

## Indirect taxes and gender

Mexico has two kinds of indirect taxes. The value-added tax (VAT) is a tax on consumption paid by individuals and legal entities on the exchange of goods, the provision of services, the temporary use of goods, or the import of goods and services. The VAT has three different rates: a general rate of 15 per cent; a rate of 10 per cent on transactions in the border area and a 0 per cent rate. Specific goods, as shown in Table 5.8, are exempt.

The Special Tax on Production and Services (STPS) is an excise tax levied on the final consumer through an addition to the price, on top of the VAT, to consumption of alcoholic beverages, soft drinks and sports drinks, tobacco, gasoline and diesel fuel. It varies between 20 per cent and 110 per cent, depending on the product. The tax rate for alcoholic beverages and beer is determined by alcohol content: beverages with up to 14 per cent alcohol (mainly beer) are taxed at 25 per cent, those between 14 per cent and 20 per cent (mostly wine) at 30 per cent and those above 20 per cent (mainly liquor) at 50 per cent. The tax on soft drinks and sports drinks is a flat 20 per cent. For tobacco, the rates are 110 per cent for cigarettes and 21 per cent for cigars and loose leaf tobacco.

Although the fuel tax is classified as an STPS, it has a different objective from the others. Taxes are imposed on gasoline and diesel for transportation and

*Table 5.8*  VAT rates, Mexico, 2006

| General VAT rate | Exemptions | Zero rate | Other preferential rates |
|---|---|---|---|
| 15 per cent | • Medical services<br>• Educational services<br>• Not-for-profit activities<br>• Sport and cultural services<br>• Books and magazines<br>• Overland passenger transportation<br>• Lottery<br>• Residential land and buildings | • Exports<br>• Foods<br>• Medicines<br>• Milk<br>• Potable water<br>• Non-processed animals<br>• Fishery and agricultural services<br>• Wholesale trade of gold and jewellery | 10 per cent in the border area |

*Source*: Ley del Impuesto al Valor Agregado. SHCP.

industrial use to compensate for the reduction in tax revenue generated by the production and export of crude oil. The rate varies according to international prices as follows: (1) the international price of gasoline and diesel, including transportation cost, is set as a reference price; (2) the Mexican price for gasoline and diesel fuel is calculated excluding the profit margin and VAT; and (3) the difference between Mexican and international prices is calculated. This price differential, divided by the international price, becomes the tax rate. Thus, when Mexican fuel prices are higher than international fuel prices, the tax rate is positive and it increases as the price difference becomes greater.

On the other hand, when Mexican fuel prices are lower than international fuel prices, the rate applied is negative and effectively becomes a subsidy. The logic behind this tax is that, when international fuel prices are low, oil-related income and the public revenue oil generates are also low and need to be compensated with a higher tax on fuels. When international fuel prices are high, so too are oil-related income and taxes, and some of this surplus can be transferred to consumers in the form of a fuel subsidy. After November 2005, the international prices of crude oil and diesel fuel were higher than Mexican prices so in 2006 the fuel 'tax' was actually a subsidy.

The VAT is by far the most important indirect tax as a proportion of total revenue from this source – consistently comprising more than 60 per cent, as can be seen in Table 5.9. Over time, the VAT share has increased as the fuel tax has decreased, and in 2006, due to the increase in international fuel prices, it became a subsidy. However, if we eliminate the volatility created by fluctuations in the fuel tax, the VAT share in total indirect tax revenue has remained stable at 90 per cent, with the remaining 10 per cent coming from STPS.

*Table 5.9* Revenue from indirect taxes, Mexico (millions of pesos)

| Year | VAT | STPS | Fuel tax | Total |
|------|-----|------|----------|-------|
| 2000 | 257,929.31 | 20,858.42 | 90,069.57 | 368,857.30 |
| 2001 | 266,534.16 | 30,054.65 | 111,505.81 | 408,094.62 |
| 2002 | 265,985.46 | 29,267.18 | 136,646.35 | 431,898.99 |
| 2003 | 296,336.42 | 35,148.99 | 102,002.98 | 433,488.40 |
| 2004 | 317,849.04 | 35,585.77 | 59,476.97 | 412,911.78 |
| 2005 | 340,679.14 | 36,846.89 | 16,247.39 | 393,773.43 |
| 2006 | 392,904.59 | 38,173.71 | −43,585.11 | 387,493.20 |

*Source*: Ingresos Presupuestales del Sector Público. SHCP.

## Tax incidence analysis

An analysis of expenditure patterns in different types of household reveals whether the goods and services bought generate a higher or lower tax incidence, and how this in turn affects household income. This can provide a better understanding of the impact of indirect taxes on different social groups and identify differences that can and should be mitigated.

The first studies of fiscal incidence in Mexico were carried out in the 1980s and focused mainly on vertical tax incidence, which this study of horizontal tax incidence is intended to complement. The information came primarily from the National Household Income and Expenditure Survey (ENIGH) compiled by the INEGI (INEGI 2006). The survey provides information about the distribution, amount and structure of household income and expenditure. It also provides socio-demographic information: activity status and occupational characteristics of all household members aged 12 or older, as well as household infrastructure and home furnishings. For this study, we used the 2006 survey, which was implemented through direct personal interviews between August and November 2006.

Since the ENIGH provides data on both income and expenditure of households, the analysis was conducted using these two measures. We first examine the incidence of indirect taxes on household expenditure by type of household (see below) and by quintiles of per capita expenditure. We also examine the tax incidence of different categories of goods. This allows us to observe the effect of different expenditure patterns on the total tax paid, which will vary according to the proportion of exempt or zero-rated VAT goods, or the presence of additional indirect taxes, in a household's total expenditure. Second, we analyse the incidence of indirect taxes in total household income for different household types, per capita income quintiles and types of commodities. To avoid confusion between these two types of analysis, we will refer to the incidence calculated on household expenditures as expenditure incidence and that on household income as income incidence.

*Table 5.10* Household categories, Mexico

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- Household Head – Whether the household head is male or female.
- Occupational Status – Defined as:
  *Male breadwinner*: Only men in the household are employed.
  *Female breadwinner*: Only women in the household are employed.
  *Dual breadwinner*: There are as many women as men in the household with some form of employment.
  *Unemployed*: All household members are unemployed.
- Household Gender Composition – Classified according to the number of women and men in the household as:
  *Majority of men*: more men than women in the household.
  *Majority of women*: more women than men in the household.
  *Equal number*: men and women are equal in the household.

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### Incidence analysis by expenditure

Tax incidence was calculated for each type of tax (VAT, STPS and fuel tax), as well as for total indirect taxes, in each of the three household types used in the study (see Table 5.10). The analysis shows that tax incidence by expenditure is higher for all male-type households than female-type households. In households with no clear male or female predominance (dual-breadwinner or equal number of men and women), tax incidence is comparable to that of male-headed or male-breadwinner households.

This pattern is readily apparent in Figure 5.1, which shows the way in which male-type households have a higher tax incidence by expenditure than do female-type households. It also shows that the incidence is higher when households are classified according to sex composition as opposed to employment status. This pattern is similar for the VAT, fuel tax and total tax incidence. The STPS (alcohol, soft drinks and tobacco taxes) pattern is similar, with the slight difference that equally gendered households bear a similar incidence as female-type households, rather than male-type households.

When the analysis disaggregates households into rural and urban (more than 2,500 inhabitants) areas, the pattern is similar. Male-headed, dual-breadwinner, and equal number male/female households all bear a higher tax incidence than female-type households in both rural and urban areas.

However, as Figure 5.2 shows, rural and urban households exhibit some noteworthy differences. First, overall tax incidence is higher in urban than in rural areas. This can be explained largely by the lower level of income in rural areas and the tendency of rural households to spend more on basic goods, which are untaxed. The only exception is in the no-employed category, where tax incidence is higher in rural areas. However, it is worth pointing out that the no-employed category includes households with revenues not directly related to employment, such as pensions, rental incomes and federal subsidy programmes that may generate different expenditure patterns.

| | Male | Female | Both | None |
|---|---|---|---|---|
| ─△─ Headship | 7.4617 | 7.1306 | | |
| ─◇─ Employment status | 7.4744 | 7.0268 | 7.4323 | 7.2810 |
| ─□─ HH composition | 7.5889 | 7.1338 | 7.5184 | |
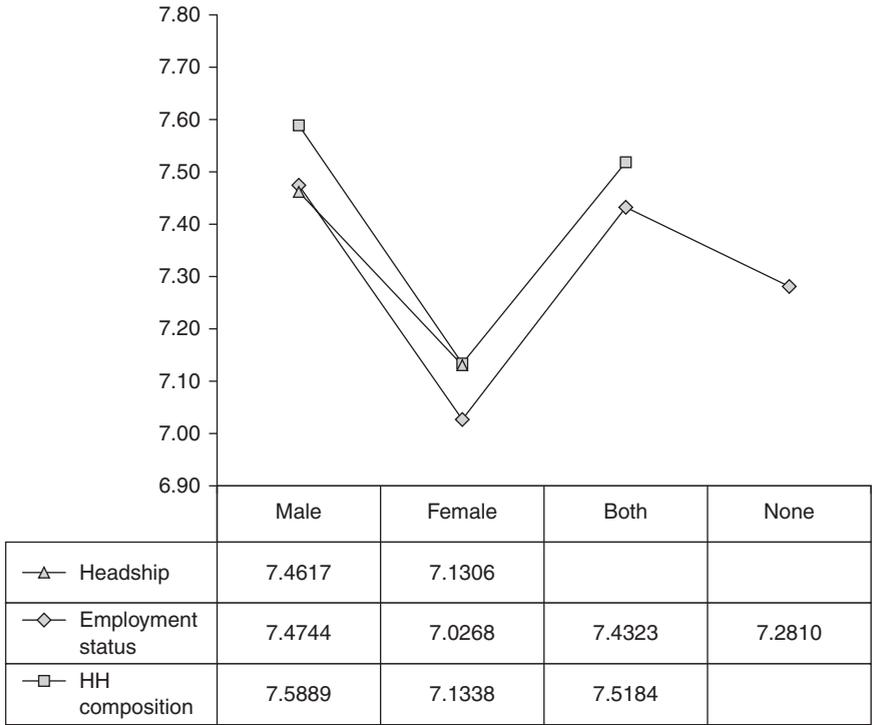
*Figure 5.1* Incidence on expenditure: total indirect tax incidence by household type, Mexico.
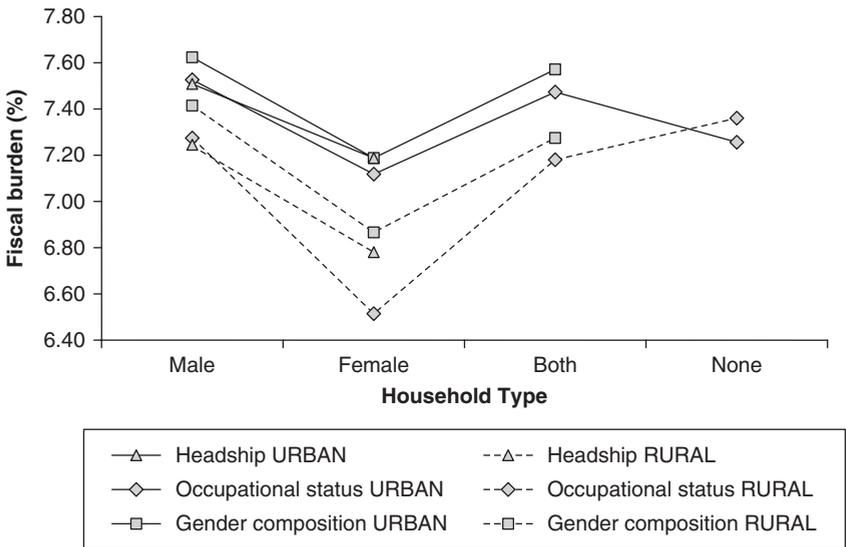


*Figure 5.2* Incidence on expenditure: total indirect tax incidence by household type and location, Mexico.
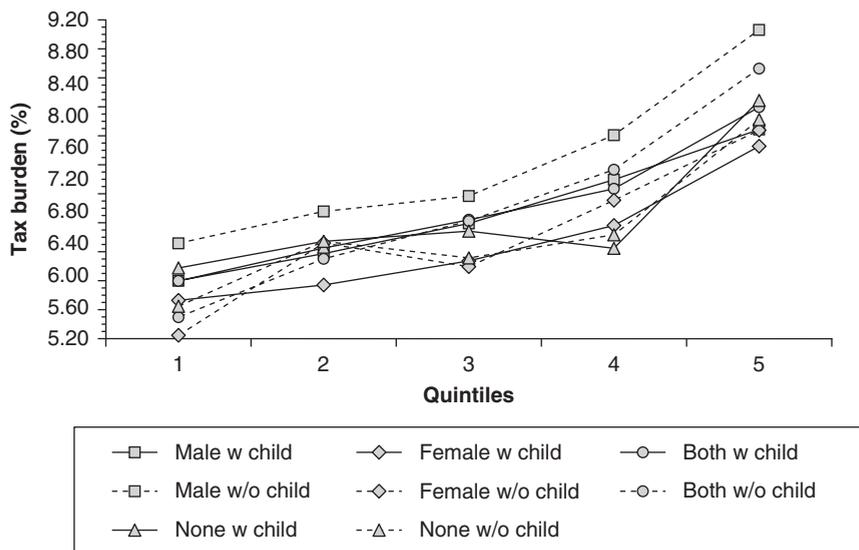
*Figure 5.3* Incidence on expenditure: total indirect tax incidence by occupational status and quintile, Mexico.

Urban female-headed households also bear a slightly lighter tax burden than male-headed rural households. Female-type households overall pay less indirect tax; among these, rural female-type households (either headed by a woman or where the main breadwinner is a woman) bear a significantly lower burden

This pattern holds true for the VAT and the fuel tax. However, the pattern for STPS is the opposite: in all categories, tax incidence is greater in rural areas, where households spend a greater proportion of their incomes on goods such as soft drinks, alcoholic beverages and tobacco. In all categories, male-headed and male-breadwinner households have a higher STPS tax burden.

Figure 5.3 shows tax incidence by expenditure quintile for households with and without children. Total tax incidence is greater in higher expenditure quintiles and in households without children than in lower expenditure quintiles and households with children. The largest variation can be found in households without dependants: those with a male breadwinner have the highest tax burden; those with a female breadwinner have the lowest; and dual-earner households are somewhere in between, especially in the top three quintiles. In the lower two quintiles, female-breadwinner and dual-earner households have similar tax burdens; male-headed households pay more of their expenditure on taxes. This indicates that households without dependants in high expenditure quintiles devote a larger proportion of their expenditures to taxed goods than to exempt goods or products with lower tax rates, such as basic foodstuffs, health and education.

Expenditure behaviour tends to be variable in households with no employed members. The explanation may be that individuals and families in different

expenditure quintiles have different expenditure patterns, which can be temporary or not, depending on income and other factors, such as the timing of the receipt of children's scholarships in the lower quintiles or the interest on financial assets in higher quintiles.

Although the STPS contribution to total tax revenue is small compared to that of the VAT, its incidence is greatest in households in the lower expenditure quintiles and is lowest in higher expenditure quintiles. This is particularly evident in male-breadwinner households without dependants. This indicates that lower-income households spend a higher proportion of their earnings on products such as soft drinks, alcoholic beverages and tobacco. Female-breadwinner households, irrespective of whether they have any dependants, show the smallest STPS burden, suggesting that women do not spend as much on these products as do men. These same patterns hold when households are classified by sex composition.

### Incidence analysis by income

In analysing the incidence of indirect taxes in relation to household income,[3] we used the same household categories as we did for expenditure in order to facilitate a comparison of results. In this analysis, incidence is derived from total household income and households are classified into quintiles based on per capita income rather than per capita spending. Since we have data on source of income by household member, we are also able to include an additional category to our household classification – one that reflects which family member generates the most household income. We refer to *male-maintained* households as those in which men are responsible for 60 per cent or more of the total household income. Similarly, *female-maintained* households are those in which women contribute 60 per cent or more of household income. Finally, households where neither partner contributes 60 per cent or more of total household income are referred as *jointly-maintained* households.

In contrast to the results based on per capita household expenditure, tax incidence relative to income among different household type exhibits no consistent pattern. Figure 5.4 shows that total tax incidence is similar between households with both male and female heads. In households categorized by employment status, incidence is similar for male and female breadwinners, and households with no earners, and all of these households bear a higher tax incidence than households with dual earners.

However, when we differentiate households by their sex composition, the pattern is similar to what we found using expenditure: households where women are in the majority have a lower tax incidence than those with equal numbers of men and women, and these in turn have a lower incidence than households where men are in the majority; in other words, male majority households bear the highest incidence of households in this categorization.

Classification by income generation also reveals some contrasting results. Households in which most income is earned by women have a higher tax incidence than households where men earn most of the income. Incidence is lowest in households where men and women both contribute their earnings.
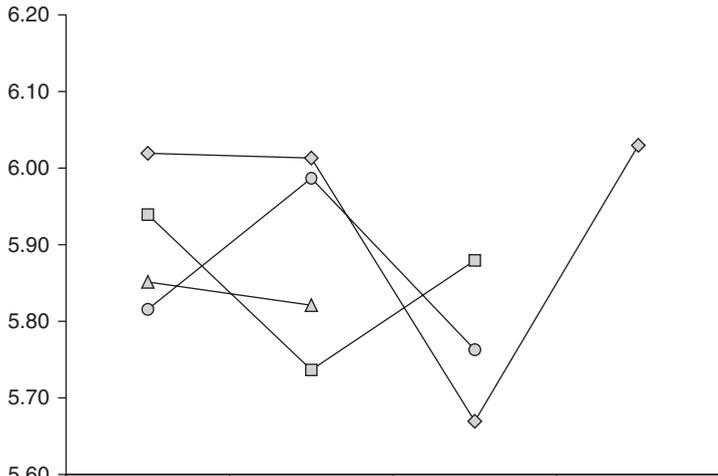
| | Male | Female | Both | None |
|---|---|---|---|---|
| —△— Headship | 5.8509 | 5.8211 | | |
| —◇— Employment status | 6.0198 | 6.0137 | 5.6693 | 6.0302 |
| —□— HH composition | 5.9386 | 5.7359 | 5.8788 | |
| —○— Income Generation | 5.8157 | 5.9866 | 5.7623 | |

*Figure 5.4* Incidence on income: total indirect tax incidence by household type, Mexico.

What explains these different results? It could be that in households where women contribute the largest share of household income, or where they are the main breadwinner, they have greater power to decide on household spending, and they spend a larger fraction of their income than do other types of households on those goods and services that attract tax. Indeed, an analysis of the composition of consumption expenditures shows that female-maintained households have a higher share of their income allocated to items such as personal care, adult clothing, housing, house furnishing and equipment, and communications, especially as their income increases, than consumption expenditure in male and jointly-maintained households.

This pattern is similar for VAT, fuel tax and total tax incidence. The pattern for STPS incidence is similar to what we saw in the analysis by expenditure. Male households of all types have the highest incidence of STPS.

Disaggregating households by their urban or rural location shows that, similar to expenditure, rural households generally bear a lower incidence of total tax than do urban households. But, two issues are worth noting here. First, when the classification
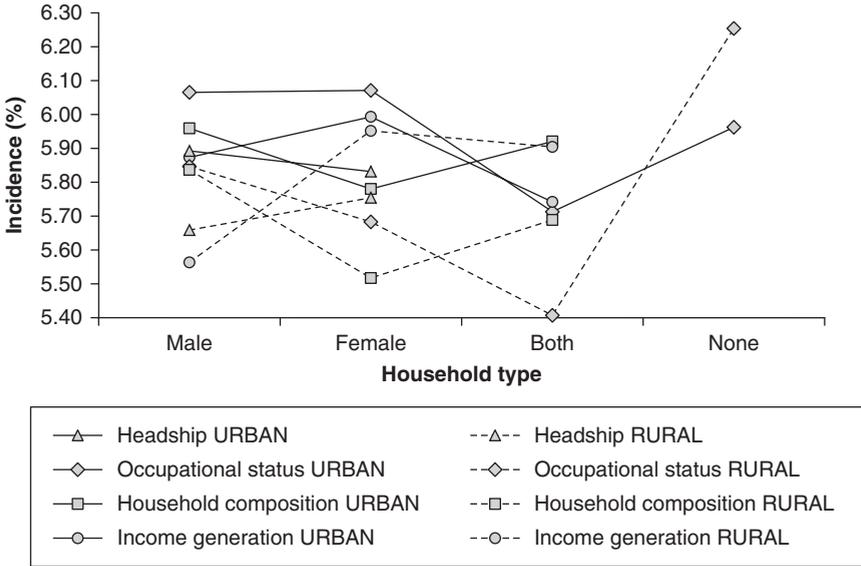
*Figure 5.5*  Incidence on income: total indirect taxes by household type and location, Mexico.

is by income generation, several results stand out: rural and urban households with female earners show a similar tax incidence; tax incidence is lowest for rural households where men contribute the largest share of household income. Second, among rural households, those headed by women have a higher incidence than those headed by men (see Figure 5.5).

As in the tax expenditure analysis, households with no employed adults in rural areas bear the highest incidence of all household types, male or female. Again, we need to keep in mind that this category includes households with sources of revenue that are not necessarily linked to employment, such as pensions, rental incomes and federal programme subsidies that may generate very different expenditure patterns.

As in the expenditure incidence analysis, patterns of tax incidence are consistent for VAT, the fuel tax, and total incidence, while STPS incidence follows a different pattern (not shown). For each category, incidence is higher in rural households than in urban. In all categories, households in which men predominate have a higher STPS tax incidence than households where women are the major earners.

In the new category of 'income generation', tax incidence follows a pattern similar to that for employment status and different from that for household sex composition. This makes sense. In a given household, the gender proportion of earners will be directly related to employment status rather than to a household's overall gender balance. Figure 5.6 shows that the general pattern is regressive, though comparing the first two quintiles, incidence clearly diminishes as income
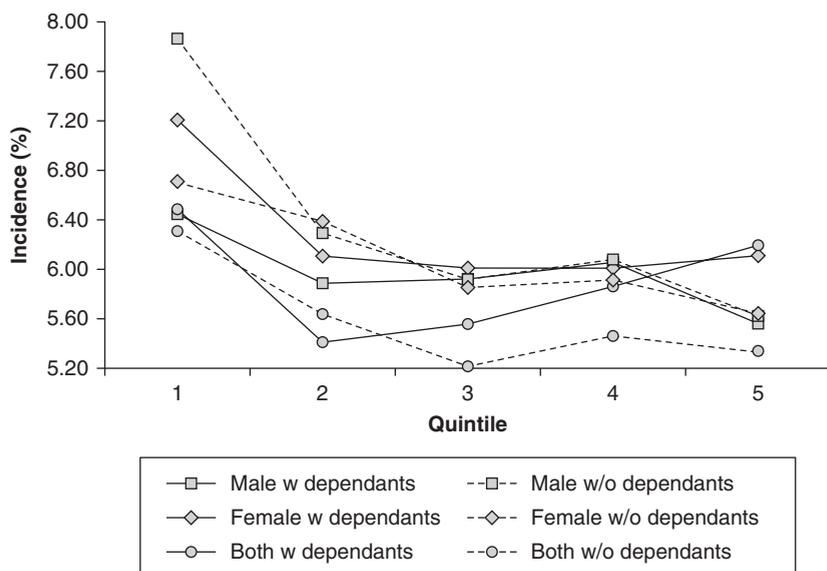
*Figure 5.6* Incidence on income: total indirect taxes by income generation, number of dependants and quintile, Mexico.

increases, whereas hardly any difference appears in the highest three quintiles. This differs from the results of employment status using per capita expenditure as opposed to income, where the higher the quintile, the larger the tax burden.

Figure 5.6, which shows tax incidence by income generation, dependants, and quintiles, establishes a similar pattern between households where women contribute most of the earnings, and those in which men bring in most of revenue, although incidence tends to be higher in women-maintained homes, except for the first quintile for male-type households without dependants and the last quintile of both maintainers without dependants. In all quintiles except the 2nd, tax incidence is greater in households with dependents. In the lower two quintiles, tax incidence is higher in households with no dependants, but the difference between households with and without dependants practically disappears in the other three quintiles.

There is a steady decline from the 1st quintile to the 5th quintile, mainly in households where men contribute most of the income and there are no dependants. If we compare total tax incidence of households by income generation and quintile, we see that the general pattern is regressive. Closer examination reveals that for the first two quintiles incidence clearly diminishes as income increases, whereas for the highest three quintiles, it is practically flat. With respect to dependants, incidence falls most heavily on the poorest male- and female-maintained households without children and female-maintained households with children. Households that are maintained jointly by male and female incomes, both with

and without dependants, tend to have the lowest incidence compared to male and female-maintained households, except in the richest quintile. The pattern for VAT and STPS follows previous analysis.

Finally, comparing the results of the incidence analysis based on income versus expenditure (using the household classification of income generation for the former and employment status for the latter) shows that total indirect taxes are borne more heavily by the poor using the metric of income. The results for income and expenditure are similar for the 2nd quintile, whereas from the 3rd quintile onwards, the pattern switches – incidence by the metric of expenditure is higher than incidence by the metric of income with the gap between the two widening, the higher the quintile. In strictly numerical terms, this seems to imply that, in the 1st quintile, household income may be less than expenditure, so that tax incidence with regards to income is greater than the tax incidence with regards to spending. In the 2nd quintile, income and expenditure are similar. For quintiles 3, 4 and 5, income seems to be greater than spending, with the gap between the two becoming greater in the higher quintiles. As before, VAT incidence rates account for almost the totality of indirect tax incidence.

This is consistent with a priori expectations, since when incidence is measured on income, the analysis captures the effect of the higher propensity to save, producing a lower incidence on higher income, whereas on expenditure the analysis is only on the share on total expenditure, and not on total income allocation.

Moreover, income-based quintiles are not necessarily comprised of the same group of households as expenditure-based quintiles. Expenditure quintiles likely include a more diverse group of households than income quintiles. They are made up of individuals who spend similar amounts on the same product basket, regardless of income level, reasons to do so, and other uses of their income. By contrast, households grouped by income quintile allocate income based on preferences, peer pressure, social conditioning, education level and other factors that are correlated to income, which makes the groups more uniform. A deeper understanding of the differences between income-based and expenditure-based incidence requires an analysis of the determinants of household income allocation, which is not possible with household-level data.

In summary, several patterns emerge from this analysis. When measured on expenditure, the highest incidence falls on all types of male-households, on urban households and on households without children. Expenditure incidence is similar for female-headed and female-breadwinner households, as well as for male-headed and male-breadwinner households, with the two male-type households bearing a larger incidence than the two female-type households. Moreover, incidence by expenditure increases with quintiles, that is, is progressive. By contrast, the patterns for income incidence are more varied. Incidence on income resembles expenditure incidence only in households classified by sex composition but not in households classified by headship and occupational status. Female-maintained and female- and male-breadwinner households, along with households with no income earners, bear the highest income incidence of indirect taxes. Income incidence is higher for urban than for rural households. Finally, in contrast to tax incidence by

expenditure, tax incidence by income is relatively regressive and much higher for the lowest quintiles.

### Incidence analysis by consumption categories, employment status and quintile

This section examines various categories of goods and services in relation to total household monthly income in order to understand the different contribution of each to overall tax incidence. Table 5.11 lists the incidence on income for individual commodity categories by quintile and occupational status.

Consider first the incidence on by commodity for male-breadwinner households. Like the previous analysis, the first two quintiles have similar incidence rates for the same goods and services. However, the 3rd, 4th and 5th quintiles show high tax incidence in four categories: private means of transportation, entertainment, communication and meals out. In these categories, the 5th quintile shows the highest incidence rates, except in communications, where the 4th quintile is higher. These four categories of goods and services show a clearly progressive tax incidence, that is, the incidence is higher for higher-income quintiles.

For the 1st quintile the categories with the highest tax incidence are non-alcoholic beverages, home equipment and maintenance, children's clothing, meals out, basic personal care products, and adult clothing. For all of these, the tax incidence is clearly regressive, except for meals out and adult clothing.

By contrast, in female-breadwinner households, the lowest incidence overall is for public transportation, basic foods, spirits, sugar, confectionery and other foodstuffs, water, and wine. One key difference with male-breadwinner households is that the peaks in the 5th quintile are limited to private transport, recreation, and fuel for transport.

The commodities with the highest incidence are the same in both female- and male-breadwinner households in the 1st quintile, but the rates differ. Similar to male-breadwinner households, the trend is regressive for non-alcoholic beverages, home equipment and maintenance, children's clothing, and personal care products. Electricity and communications have a higher tax incidence than does adult clothing. Unlike in male-breadwinner households, meals out has one of the highest incidences for female-breadwinner households in the 1st quintile.

In dual-breadwinner households, tax incidence of commodities consumed by the lower quintiles resembles that in male-breadwinner households, except for private means of transportation which has the highest incidence for households in the 5th quintile. Households with no employed members are more like female-breadwinner households although the dispersion of incidence rates between the quintiles is lower and non-alcoholic drinks are inversely related to income. Also, unlike for other household types in the 1st quintile, commodities with the highest incidence in no-employed households include utilities like gas and electricity instead of meals out and adult clothing. Finally, the six commodities with the highest incidence show a regressive pattern.

*Table 5.11* Total indirect tax incidence by consumption categories and employment status, Mexico (tax as a percentage of income)

| Category | Male Breadwinner | | | | | Female Breadwinner | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| *Food subtotal* | 0.0326 | 0.0267 | 0.0246 | 0.0228 | 0.0163 | 0.0301 | 0.0277 | 0.0350 | 0.0435 | 0.0247 |
| Basic Basket | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Non Basic | 0.0326 | 0.0267 | 0.0246 | 0.0228 | 0.0163 | 0.0301 | 0.0277 | 0.0350 | 0.0435 | 0.0247 |
| Sugar, confectionary and other | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Meals out | 0.6112 | 0.5838 | 0.6972 | 0.8107 | 0.8163 | 0.7536 | 0.6535 | 0.7764 | 0.7710 | 0.6982 |
| Non alcoholic beverages | 0.9723 | 0.8081 | 0.6691 | 0.5031 | 0.1912 | 0.9449 | 0.7069 | 0.6260 | 0.4093 | 0.1882 |
| *Alcoholic beverages subtotal* | 0.0927 | 0.0903 | 0.1040 | 0.1190 | 0.1172 | 0.0056 | 0.0136 | 0.0205 | 0.0233 | 0.0367 |
| Spirits | 0.0227 | 0.0048 | 0.0116 | 0.0115 | 0.0234 | 0.0000 | 0.0102 | 0.0078 | 0.0077 | 0.0104 |
| Wine | 0.0000 | 0.0000 | 0.0026 | 0.0000 | 0.0075 | 0.0000 | 0.0000 | 0.0000 | 0.0023 | 0.0055 |
| Beer | 0.0700 | 0.0855 | 0.0898 | 0.1076 | 0.0863 | 0.0056 | 0.0033 | 0.0127 | 0.0133 | 0.0208 |
| Tobacco | 0.1394 | 0.1592 | 0.1596 | 0.1615 | 0.1115 | 0.0845 | 0.0475 | 0.0623 | 0.0870 | 0.0558 |
| *Apparel and footwear subtotal* | 1.1542 | 0.8324 | 0.7718 | 0.7127 | 0.5384 | 1.2188 | 0.9685 | 0.8359 | 0.7520 | 0.6866 |
| Adult's clothing | 0.5121 | 0.3908 | 0.4379 | 0.4721 | 0.4105 | 0.4647 | 0.4891 | 0.4209 | 0.4814 | 0.5392 |
| Children's clothing | 0.6421 | 0.4416 | 0.3338 | 0.2406 | 0.1279 | 0.7540 | 0.4794 | 0.4149 | 0.2706 | 0.1474 |
| *Housing and utilities subtotal* | 0.8515 | 0.8363 | 0.7919 | 0.7158 | 0.5119 | 0.9824 | 0.9976 | 0.9264 | 0.7572 | 0.5615 |
| Utilities | 0.7317 | 0.7269 | 0.6939 | 0.6072 | 0.3842 | 0.8798 | 0.9314 | 0.8198 | 0.6405 | 0.4115 |
| Water | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Electricity | 0.4205 | 0.3905 | 0.3880 | 0.3617 | 0.2434 | 0.4973 | 0.4892 | 0.4337 | 0.3653 | 0.2314 |
| Gas | 0.3087 | 0.3316 | 0.3007 | 0.2347 | 0.1187 | 0.3800 | 0.4362 | 0.3775 | 0.2648 | 0.1480 |
| Others | 0.0024 | 0.0048 | 0.0052 | 0.0107 | 0.0221 | 0.0025 | 0.0059 | 0.0087 | 0.0104 | 0.0321 |
| Housing | 0.1198 | 0.1094 | 0.0980 | 0.1086 | 0.1277 | 0.1027 | 0.0662 | 0.1065 | 0.1167 | 0.1500 |
| Fuel for household use | 0.0542 | 0.0187 | 0.0120 | 0.0081 | 0.0030 | 0.0691 | 0.0331 | 0.0171 | 0.0090 | 0.0053 |
| Home equipment and maintenance | 0.9603 | 0.6840 | 0.6405 | 0.5403 | 0.3585 | 1.0610 | 0.7591 | 0.7073 | 0.6268 | 0.4123 |
| Domestic Services | 0.0080 | 0.0087 | 0.0110 | 0.0238 | 0.0672 | 0.0008 | 0.0099 | 0.0110 | 0.0233 | 0.0515 |
| Medical expenses | 0.0878 | 0.0938 | 0.1219 | 0.0747 | 0.0915 | 0.1758 | 0.0922 | 0.0972 | 0.0754 | 0.1127 |
| *Transportation subtotal* | 0.0462 | 0.1048 | 0.2826 | 0.4587 | 0.8606 | (0.0544) | (0.0340) | 0.0446 | 0.3041 | 0.8071 |
| Public transportation | (0.0556) | (0.0466) | (0.0379) | (0.0273) | (0.0097) | (0.0797) | (0.0722) | (0.0580) | (0.0419) | (0.0178) |
| Air transportation | 0.0000 | 0.0048 | 0.0145 | 0.0238 | 0.0719 | 0.0034 | 0.0000 | 0.0016 | 0.0122 | 0.0773 |
| Private transportation | 0.1019 | 0.1465 | 0.3061 | 0.4623 | 0.7984 | 0.0218 | 0.0382 | 0.1011 | 0.3338 | 0.7475 |
| Fuel for transports | 0.1854 | 0.2530 | 0.3246 | 0.3940 | 0.3496 | 0.0619 | 0.0917 | 0.1353 | 0.2349 | 0.2806 |
| Communications | 0.2285 | 0.3536 | 0.4721 | 0.5786 | 0.4776 | 0.4738 | 0.5245 | 0.6214 | 0.6970 | 0.5886 |
| Recreation | 0.2172 | 0.2209 | 0.3405 | 0.4923 | 0.7127 | 0.1261 | 0.2219 | 0.3100 | 0.3669 | 0.6394 |
| Education | 0.0206 | 0.0159 | 0.0105 | 0.0099 | 0.0096 | 0.0382 | 0.0320 | 0.0097 | 0.0150 | 0.0108 |
| *Personal care subtotal* | 0.9485 | 0.8104 | 0.6653 | 0.5519 | 0.3285 | 1.0919 | 0.8367 | 0.7574 | 0.6361 | 0.4815 |
| Personal care basics | 0.5557 | 0.4240 | 0.3443 | 0.2731 | 0.1387 | 0.6202 | 0.4601 | 0.3811 | 0.3168 | 0.1763 |
| Personal care for babies | 0.1627 | 0.1697 | 0.1057 | 0.0608 | 0.0139 | 0.1540 | 0.1033 | 0.0865 | 0.0365 | 0.0139 |
| Other | 0.2302 | 0.2167 | 0.2154 | 0.2180 | 0.1758 | 0.3176 | 0.2733 | 0.2898 | 0.2828 | 0.2914 |
| Miscellaneous | 0.1168 | 0.1127 | 0.1312 | 0.1692 | 0.1750 | 0.1679 | 0.1011 | 0.1290 | 0.1882 | 0.2165 |
| TOTAL | 6.7274 | 6.0133 | 6.2304 | 6.3471 | 5.7366 | 7.2319 | 6.0835 | 6.1224 | 6.0202 | 5.8580 |
| Number of households in quintile | 1945 | 1906 | 1537 | 1367 | 1464 | 562 | 519 | 538 | 577 | 642 |

Table 5.11 (Continued)

| Dual Breadwinner | | | | | No Employed | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| 0.0199 | 0.0215 | 0.0229 | 0.0239 | 0.0176 | 0.0616 | 0.0356 | 0.0523 | 0.0259 | 0.0204 |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 0.0199 | 0.0215 | 0.0229 | 0.0239 | 0.0176 | 0.0616 | 0.0356 | 0.0523 | 0.0259 | 0.0204 |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 0.6409 | 0.7050 | 0.6388 | 0.7272 | 0.6658 | 0.4838 | 0.6939 | 0.6477 | 0.6415 | 0.5279 |
| 0.8954 | 0.6902 | 0.5500 | 0.4268 | 0.1852 | 1.5503 | 0.9989 | 0.6922 | 0.4664 | 0.2353 |
| 0.0659 | 0.0723 | 0.0720 | 0.0634 | 0.0542 | 0.0468 | 0.0624 | 0.0211 | 0.0436 | 0.0969 |
| 0.0070 | 0.0043 | 0.0038 | 0.0130 | 0.0144 | 0.0376 | 0.0000 | 0.0000 | 0.0142 | 0.0376 |
| 0.0000 | 0.0000 | 0.0002 | 0.0012 | 0.0068 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0008 |
| 0.0590 | 0.0679 | 0.0680 | 0.0493 | 0.0331 | 0.0093 | 0.0624 | 0.0211 | 0.0294 | 0.0585 |
| 0.0877 | 0.1585 | 0.1493 | 0.1084 | 0.0755 | 0.0819 | 0.1360 | 0.2079 | 0.1980 | 0.1010 |
| 1.1060 | 0.8329 | 0.7820 | 0.7506 | 0.6393 | 1.0165 | 0.6755 | 0.6959 | 0.6705 | 0.3721 |
| 0.4979 | 0.4208 | 0.4484 | 0.4920 | 0.4806 | 0.4109 | 0.2817 | 0.3403 | 0.4615 | 0.3152 |
| 0.6081 | 0.4122 | 0.3336 | 0.2585 | 0.1588 | 0.6056 | 0.3938 | 0.3556 | 0.2090 | 0.0568 |
| 0.7766 | 0.7664 | 0.6988 | 0.6321 | 0.4824 | 1.3962 | 1.1879 | 1.0732 | 0.9877 | 0.8081 |
| 0.6820 | 0.6692 | 0.6063 | 0.4944 | 0.3525 | 1.2826 | 1.0750 | 0.9104 | 0.8812 | 0.5767 |
| 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 0.4042 | 0.3551 | 0.3368 | 0.2792 | 0.2212 | 0.6982 | 0.5640 | 0.4744 | 0.5090 | 0.3490 |
| 0.2756 | 0.3097 | 0.2647 | 0.2087 | 0.1159 | 0.5794 | 0.5050 | 0.4310 | 0.3450 | 0.1707 |
| 0.0022 | 0.0044 | 0.0047 | 0.0066 | 0.0154 | 0.0050 | 0.0060 | 0.0051 | 0.0272 | 0.0569 |
| 0.0946 | 0.0972 | 0.0926 | 0.1377 | 0.1299 | 0.1136 | 0.1129 | 0.1628 | 0.1065 | 0.2314 |
| 0.0524 | 0.0187 | 0.0110 | 0.0065 | 0.0030 | 0.0764 | 0.0312 | 0.0248 | 0.0146 | 0.0028 |
| 0.9110 | 0.6459 | 0.5851 | 0.5212 | 0.3723 | 1.0991 | 0.7914 | 0.7717 | 0.6582 | 0.5021 |
| 0.0013 | 0.0049 | 0.0105 | 0.0199 | 0.0370 | 0.0050 | 0.0154 | 0.0128 | 0.0308 | 0.0547 |
| 0.0714 | 0.0649 | 0.0807 | 0.0637 | 0.1010 | 0.1262 | 0.0861 | 0.0547 | 0.1091 | 0.2028 |
| 0.0052 | 0.0635 | 0.1346 | 0.3650 | 0.9298 | (0.0171) | 0.0110 | 0.0508 | 0.3741 | 0.6995 |
| (0.0624) | (0.0565) | (0.0486) | (0.0353) | (0.0102) | (0.0535) | (0.0409) | (0.0417) | (0.0354) | (0.0112) |
| 0.0000 | 0.0038 | 0.0012 | 0.0040 | 0.0630 | 0.0047 | 0.0000 | 0.0041 | 0.0274 | 0.0838 |
| 0.0676 | 0.1161 | 0.1820 | 0.3962 | 0.8770 | 0.0317 | 0.0519 | 0.0883 | 0.3821 | 0.6269 |
| 0.1126 | 0.1730 | 0.2327 | 0.3259 | 0.3501 | 0.1587 | 0.1275 | 0.1852 | 0.2701 | 0.3074 |
| 0.2987 | 0.3541 | 0.4670 | 0.5468 | 0.4671 | 0.4327 | 0.6783 | 0.6718 | 0.7865 | 0.4770 |
| 0.2000 | 0.2232 | 0.2938 | 0.4355 | 0.6423 | 0.1192 | 0.2360 | 0.2692 | 0.4721 | 0.5287 |
| 0.0242 | 0.0221 | 0.0135 | 0.0171 | 0.0185 | 0.0101 | 0.0355 | 0.0417 | 0.0082 | 0.0055 |
| 0.9074 | 0.7552 | 0.6706 | 0.5481 | 0.3675 | 1.0889 | 0.8242 | 0.7001 | 0.6239 | 0.3447 |
| 0.5303 | 0.4101 | 0.3373 | 0.2642 | 0.1445 | 0.6195 | 0.4654 | 0.3784 | 0.3242 | 0.1473 |
| 0.1358 | 0.1015 | 0.0904 | 0.0506 | 0.0217 | 0.2280 | 0.1096 | 0.0599 | 0.0453 | 0.0160 |
| 0.2412 | 0.2435 | 0.2429 | 0.2333 | 0.2013 | 0.2414 | 0.2493 | 0.2618 | 0.2544 | 0.1814 |
| 0.0954 | 0.1184 | 0.1322 | 0.1771 | 0.2077 | 0.0858 | 0.1125 | 0.1582 | 0.1040 | 0.3111 |
| 6.2722 | 5.6907 | 5.5456 | 5.7591 | 5.6165 | 7.8220 | 6.7391 | 6.3311 | 6.4853 | 5.5980 |
| 1279 | 1446 | 1790 | 1942 | 1702 | 380 | 295 | 301 | 280 | 359 |

To summarize, the pattern of tax incidence is similar between male- and dual-breadwinner households, and between female-breadwinner and unemployed households. Commodities with the lowest tax incidence include basic goods, some of which are exempt or zero-rated, such as public transport, basic foods and goods that are not heavily consumed such as wine and air transport, especially in low-income quintiles.

All income quintiles show roughly the same pattern for commodities with the lowest tax incidence. This is not the case for commodities that have the highest tax incidence. In low-income quintiles some of these high tax incidence commodities are necessities: non-alcoholic beverages, household equipment, basic personal care items, and clothing, both adult and children, as well as household utilities like gas and electricity. But other high tax incidence commodities are 'luxury' items consumed in greater proportion by the fourth and fifth quintiles. The last thing to note is that, contrary to initial expectations, meals out has a high tax incidence across all income quintiles, suggesting that this category is important to both high- and low-income groups.

## Policy simulations: VAT

This section turns to a set of policy simulations designed to make tax incidence less burdensome for both poor and female-type households. We ran three simulations to establish whether taxing some exempt goods and services would generate changes in tax incidence. For this purpose, we assumed an increase to 15 per cent in the VAT (from the current zero rate) in different categories of goods:

- Simulation 1: Non-basic foods and confectionary products
- Simulation 2: As above, plus medicines
- Simulation 3: As above, plus basic foodstuffs.

We calculated tax incidence using both household income and household expenditure, the latter in order to be consistent with the other studies in this volume.[4]

All changes in tax levies generate two opposing effects: on the one hand, an increase or decrease in total tax revenues; on the other, a shift in the tax incidence and its impact on different sectors of society. To measure both effects for each simulation, we calculated and analysed two types of results: the increase in total tax revenue and the variation in both the absolute level of tax incidence and its distribution.

To estimate the increase in the total collection of indirect taxes, we did the following:

1 We increased the tax to 15 per cent for each product under the categories listed.
2 We calculated the additional tax paid by households and by product based on the level of expenditure as determined by the ENIGH (INEGI 2006).
3 We calculated the total additional expense using the expansion factors provided by ENIGH 2006.

*Table 5.12* Estimate of additional tax revenue through the application of standard VAT rate to exempt or zero-rated products, Mexico (million of pesos)

| Assumptions | Base calculation | Simulation 1 | Simulation 2 | Simulation 3 |
|---|---|---|---|---|
| | Actual 2006 indirect tax scheme | Additional 15% tax on: Non-basic food, Sugar products | Additional 15% tax on: Non-basic food, Sugar products, Medicine | Additional 15% tax on: Non-basic food, Sugar products, Medicine, Basic food |
| Total calculated indirect tax revenue (sample * expansion factor) | 14,389.66 | 17,841.26 | 18,755.62 | 21,220.69 |
| Additional revenue | | 3,451.60 | 4,365.96 | 6,831.03 |
| % increase | | 23.9% | 30.3% | 47.4% |
| Actual 2006 indirect tax revenue | 380,576.10 | 380,576.10 | 380,576.10 | 380,576.10 |
| Calculated increase from simulation (actual revenue * % increase) | | 91,287.45 | 115,470.46 | 180,666.23 |

4  We totalled the additional tax expense and calculated the rate of increase over the original baseline tax revenue for indirect levies.
5  We applied this rate of increase to the total revenue actually generated by indirect taxes in 2006.

Table 5.12 shows the results of the simulations. In simulation 1, the application of VAT to the 173 products in the categories of 'non-basic foods' (e.g., popcorn, fried foods, pizzas, *carnitas*, T-bone steaks, shrimp, salmon and capers) and 'confectionary products' (pastries, potato crisps, etc.) increased revenue by 91,300 million pesos, an increase of 23.99 per cent over what was actually collected from indirect taxes in 2006. Although all of the products included in the simulations are widely consumed (which is why they are not currently taxed), these two food categories are the least important, since neither contains basic foods, and many items in both categories could be considered luxuries. It is also worth mentioning that this simulation generates the most additional tax revenue.

Simulation 2 taxes medicines (a total of 41 products). This produces the smallest increase in indirect tax revenue, 24,200 million pesos, or an extra 6.35 per cent.
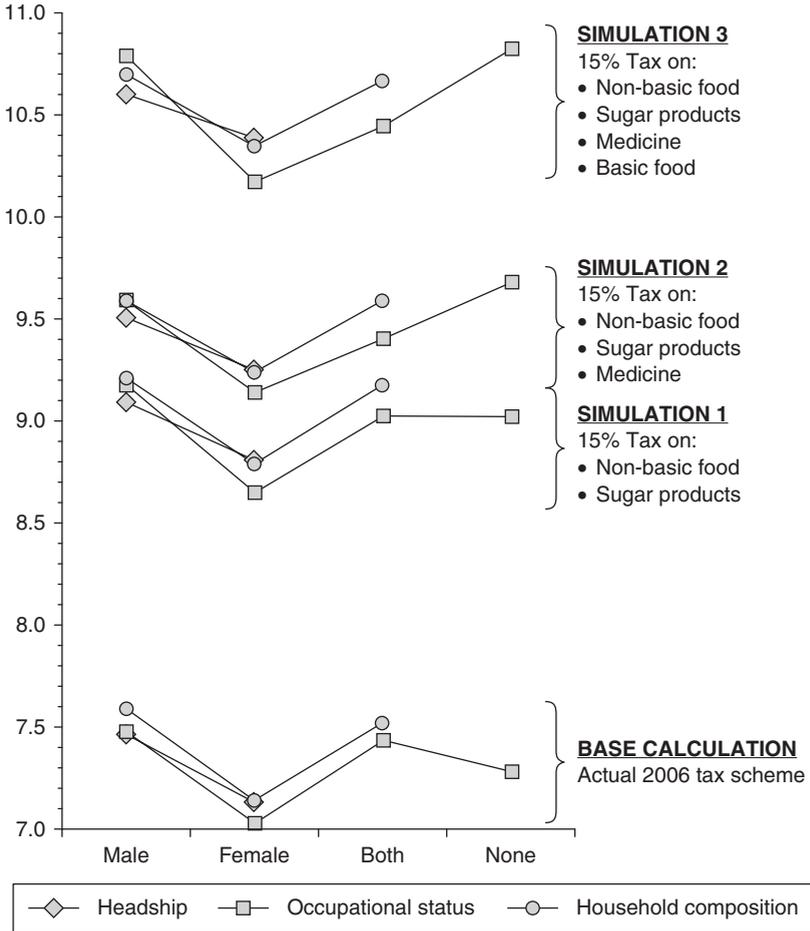
*Figure 5.7* Simulations: tax incidence on expenditure, Mexico.

Simulation 3 taxes 33 basic food items, including tortillas, bread, minced beef, steaks, milk, oil and margarine, tinned tuna, sugar and chilies. This generates an increase in total indirect tax revenue of 65,200 million pesos, or an extra 17.1 per cent. Although this is the product category with the fewest items, it has significant social importance: families with modest resources consume foods mainly from this group. An increase on a tax on this category would be difficult to justify.

To ascertain the change in indirect tax incidence based on the three VAT increases proposed, we simulated: (1) the change in tax incidence based on total household expenditure; and (2) the change in the incidence of indirect tax based on household income. Although tax incidence increases with the taxation of additional

SIMULATION 3
15% Tax on:
• Non-basic food
• Sugar products
• Medicine
• Basic food

SIMULATION 2
15% Tax on:
• Non-basic food
• Sugar products
• Medicine

SIMULATION 1
15% Tax on:
• Non-basic food
• Sugar products

BASE CALCULATION
Actual 2006
Tax scheme

Legend: —□— Male  —◇— Female  —○— Both  —△— None
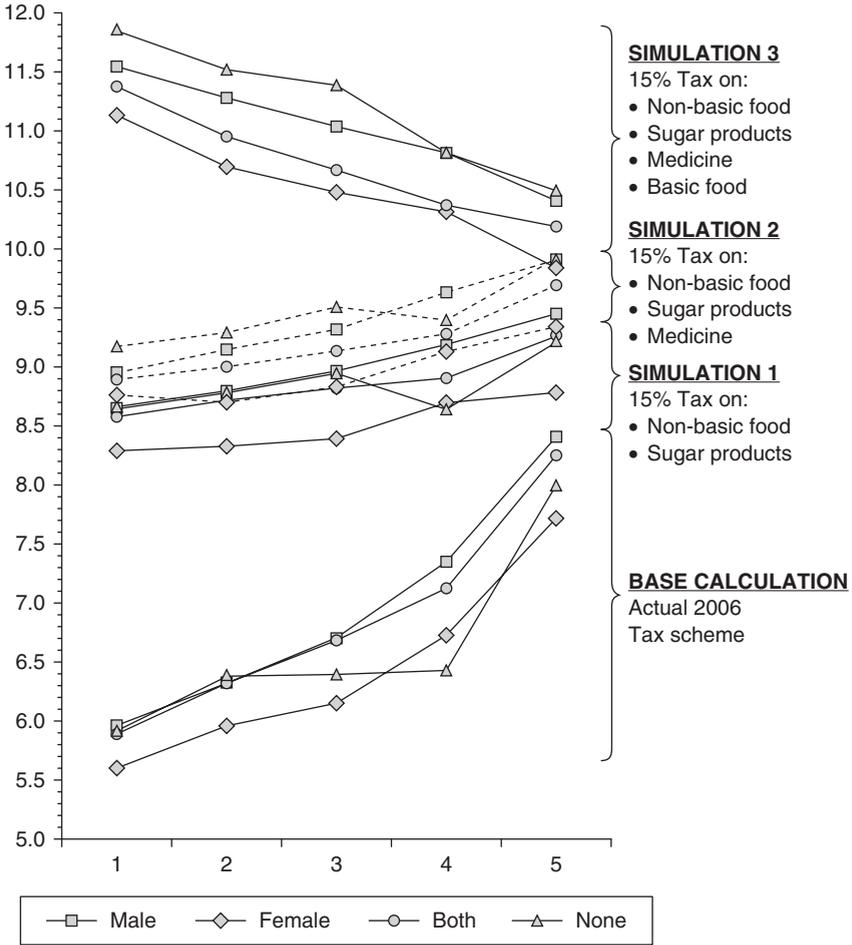
*Figure 5.8* Simulations: tax incidence on expenditure by quintile, Mexico.

products, as is evident in the figures, Figure 5.7 also demonstrates that its distri-
bution among household types remains practically unchanged. Female-type
households and those in which women are a majority still pay the lowest amount
proportionally, while male-earner and dual-earner households continue to shoul-
der a high tax burden. Hence, we cannot conclude, based on these simulations,
that this hypothetical increase in VAT would have any effect on the distribution
of the tax burden among household types.

On the other hand, if we look at the expenditure incidence by employment status,
it seems that most of the increase is borne by the lower quintiles (see Figure 5.8).
When the impact is broken down by gender composition, households composed of
a majority of women continue to have the lowest tax burden in all quintiles.

Finally, it is worth highlighting that even though imposing VAT on non-basic foods (simulation 1) and medicines (simulation 2) increases the tax burden disproportionately on the lower quintiles, households in these quintiles pay an even higher share of an indirect tax increase on basic foodstuffs (simulation 3). Thus, these simulations show two things: the incidence of indirect tax is currently quite progressive, and increasing the tax rate on basic goods would be a regressive move.

It is important to point out that these calculations were made under the assumption that the expenditure patterns of the different households and quintiles would not change as a consequence of the VAT increase. This means that we are underestimating the behavioural change effect of any tax burden redistribution since it is logical to assume that different households, according to their level of income, will react differently to a tax increase by adapting their patterns of spending.

Just as the tax incidence on expenditure increases when additional products are taxed, so does tax incidence on income, as we can observe in Figures 5.9 and 5.10. Using the household classification, by income generation, the simulations generate an absolute increase in the rate of tax incidence but its distribution among household types remains practically unchanged. However, the increase in incidence is greater in households where women are the main contributors of income than in male-maintained and joint-maintenance households, which have the lowest incidence among them, as in the baseline.

## Conclusion and policy implications

Five general policy recommendations emerge from this analysis:

1  *Incorporate a gender perspective in the design of tax policies, both direct and indirect taxes.* The gendered roles of men and women in society and the unequal distribution of power between them make it necessary to consider the differential impact of policies on each, in addition to considering women's contribution to the economy through non-remunerated domestic work. For example, in the simulations carried out, one can see that although the application of a VAT to all foods and medicines disproportionately burdens the poorer sectors of society, the incidence is even greater among households maintained by women.

2  *Increase research on gender in the economy.* The incorporation of a gender perspective in public policies implies carrying out research on the relationship between the labour market, spending patterns and the tax system, while at the same time taking into consideration women's contribution to the economy through non-remunerated domestic work.

3  *Reconsider recent tax reforms that benefit the wealthy.* The government could benefit women by increasing the direct tax rate for very wealthy individuals. This would generate funds needed to implement economic and social programmes that could mitigate the unequal distribution of income.

4  *Extend the VAT.* The government could consider increasing revenue through the taxation of less socially and politically popular items that are currently
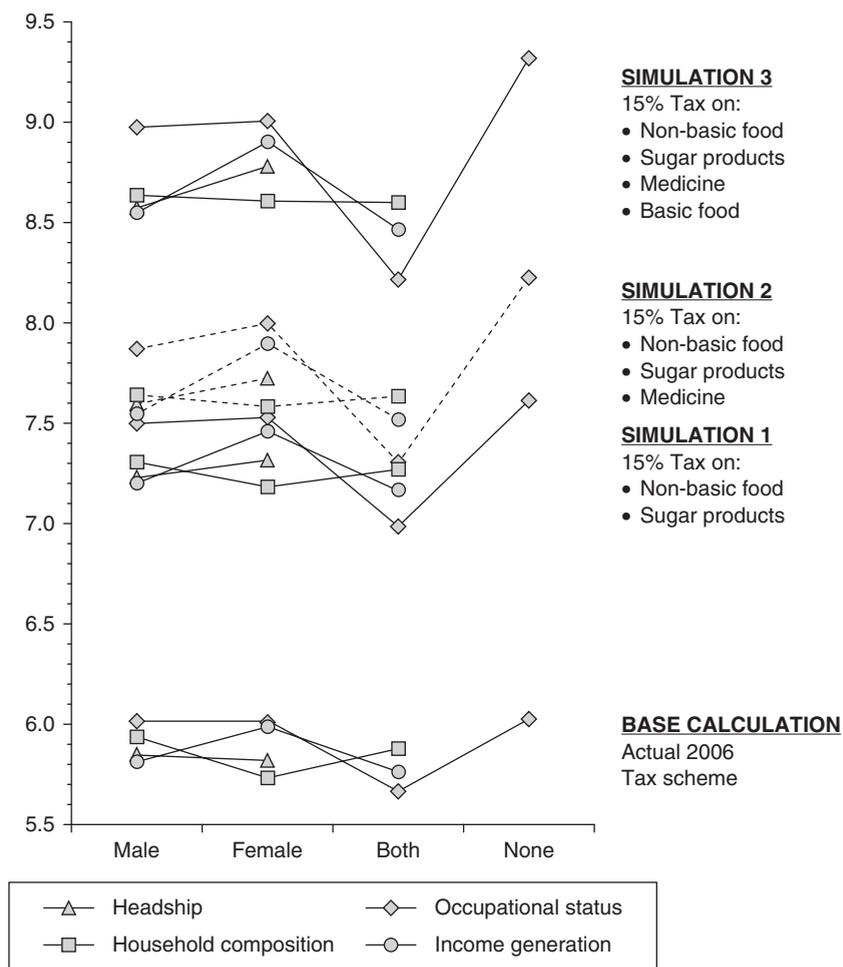
*Figure 5.9* Simulations: tax incidence on income, Mexico.

untaxed, such as most non-basic foods. Our analysis of indirect taxes indicates that with the current indirect tax system, households in which women make up a majority of earners have a higher income incidence. The policy simulations described above show that the current untaxed status of many non-basic food and sugar items keep VAT revenue roughly 25 per cent below what it could be. In order to generate revenue and not affect the lower-income population, attention should be given to a targeted tax on the non-essential foods such as specialty meats; lobster and other fresh and processed seafood; fine cheeses and processed snacks. Although the women-maintained households with and without dependants would be affected by this increase
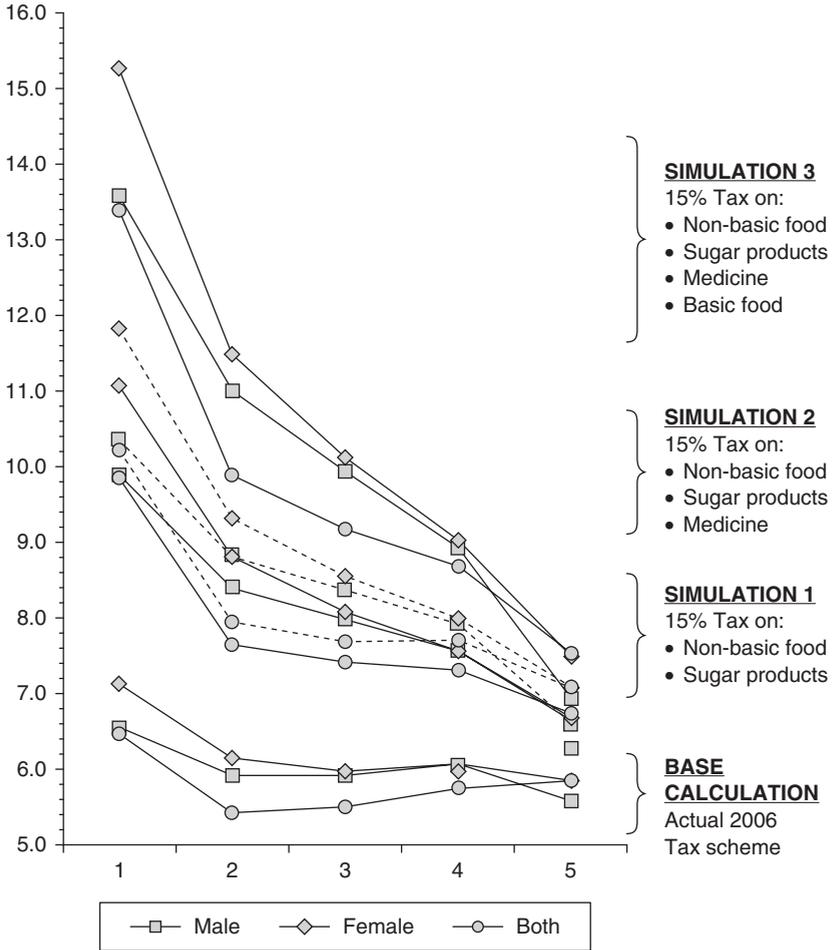
*Figure 5.10* Simulations: tax incidence on income by quintile, Mexico.

in VAT policy, the best option might be to enact expenditure policies that benefit women-maintained households with children.

5   *Target government spending*. Look for transparent and efficient mechanisms to reach the target population with economic programmes that combat poverty through the expenditure side of the budget.

In Mexico, the direct tax system, which includes an obligation to pay taxes and the right to exemptions, is limited to those who earn more than three times the minimum wage. This category excludes 64 per cent of the economically active population and 72 per cent of all women in the labour force, in addition to the vast number of women who perform non-remunerated domestic tasks. As long as

women are disadvantaged by the unequal distribution of income and limited government ability to generate formal employment, the proportion that would benefit from deductions and exemptions for dependants (child rebates) will remain small, and among these beneficiaries would be households with high incomes. Therefore, the capacity of the direct tax system to improve gender equality is limited.

Tax incidence analysis and simulations show that the current indirect tax schedule, which includes a zero rate for the basic food basket, has greater benefits for lower-income households. However, the higher tax incidence among female-earner households with dependants in every income group should alert policy-makers to the need to formulate fiscal policy with a gender perspective.

Given the inability of the direct tax system to have an impact on gender equality and contribute to a more equitable distribution of resources in the economy, as well as the limited ability of the indirect tax system to achieve these goals, a better policy approach would be to focus on the revenue-generating capacity of direct taxes and rely on government spending policies to promote gender equality. The challenge for Mexico is to develop policies that use both revenue generation and government expenditures to improve the distribution of wealth, promote economic growth and development and meet the needs of all of its citizens.

## Acknowledgements

## Notes

1 US$1.00 on average = $11.14 Mexican pesos in 2008.
2 In 2006, the minimum wage was 48 pesos per day. The average exchange rate was about 11 pesos per dollar. The poverty line (using the $2/day metric) was roughly half the minimum wage. In urban areas, 42.5 per cent of the Mexican population was considered to be living in poverty.
3 Incidence studies carried out by Hernández Trillo *et al*. (2001, 2002) point out that personal income that is freed up as a result of buying untaxed goods should be considered a subsidy that increases disposable income, and should be included when measuring tax incidence. This would imply additional calculations that are not considered here.
4 Our simulations assume that the VAT increase does not change expenditure patterns, even though it is likely that households at each income level would alter their spending patterns in different ways.

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# 6 An investigation into the gender dimensions of taxation in Ghana

*Ernest Aryeetey, Isaac Osei-Akoto, Abena D. Oduro and Robert Darko Osei*

## Introduction

Recent discussions on mobilizing domestic resources as part of the financing for development agenda have highlighted the fact that relatively little attention is paid to gender biases in taxation and the way in which reducing gender disparities in tax liability can help reduce household poverty in developing countries.

This chapter seeks to fill this gap by addressing three questions: (1) do the personal income tax laws in Ghana ensure formal and substantive equality for women and men? (2) who bears the burden of indirect taxes in Ghana? and (3) what can be learnt about the gender dimensions of tax burden in Ghana? More specifically, following a brief summary of the structure of the labour force, it analyses how tax policies and tax reforms are impacting differentially on women and men, and in particular on poor women. In so doing, it goes beyond the traditional approach to understanding gender, which is typically to group households by headship status. Rather, the approach is to group households not only by headship but by other characteristics such as employment and demographic structure, and to use a richer typology for tax incidence. The chapter then considers the impact of different policy scenarios in Ghana for different household types and proposes recommendations for change.

## The gendered structure of the labour force

Agriculture has traditionally played an important role in Ghana's economy. In 2006, the sector accounted for approximately 36 per cent of the gross domestic product (GDP). Next in importance is the services sector, which accounted for 30 per cent of GDP. The share of manufacturing is low and is estimated at 8.8 per cent of GDP. Industry has been the fastest-growing sector at 7.3 per cent per annum followed by the services sector at 6.5 per cent and agriculture at 5.7 per cent.

In 2005–06, it was estimated that about 67 per cent of women and 71 per cent of men aged 15 years and older were in the labour force. About 50 per cent of employed women and 55 per cent of employed men aged 15 years and above were working in agriculture, which is the single largest sector of the labour force.

About 27 per cent of men and fewer than 10 per cent of women are employed in regular paid work – that is, receiving a salary or wages from an employer. The

majority – including 61 per cent of women and 58 per cent of men – are self-employed, either in subsistence agriculture, or in informal work outside agriculture. Few self-employed workers employ others. With more than half of the adult working population engaged either in subsistence agriculture or in the informal non-agricultural sector, where few people keep records or accounts, it is difficult to assess the tax base, especially for personal income tax. In addition, the incidence of unpaid family labour among women is high, accounting for about 28 per cent of primary employment for working women compared to about 12 per cent of that for working men in 2005–06.

## Household structure in Ghana

The recent Ghana Living Standards Survey (2005–06) (Ghana Statistical Service 2007) shows that the average household size is about six, comprising three children and three adults. Male-headed households contain more people than female-headed households, and male-headed households contain nearly 77 per cent of the population in the country. Households with only male earners also contain more people than households with only female earners (5.8 vs. 4.6 persons, respectively), and there are more people in male-earner-only households (30.5 per cent) than in female-earner-only households (20.5 per cent).

Grouping households by adult sex composition shows that households with a majority of adult males are fewer (19.8 per cent) than households with a majority of adult females (36.4 per cent). The adult female-majority households also contain more people than do adult male-majority households, but the latter type of households is predominantly single member households.

## Tax structure in Ghana

The ratio of tax revenues to GDP dipped between 1994 and 1998 but since then has generally trended upwards (see Table 6.1). By 2006, tax revenue was about 21 per cent of GDP compared to the average of about 13 per cent that prevailed from the mid-1980s to the mid-1990s.

Changes in the composition of central government revenue since 1995 have been driven largely by the introduction of new taxes, such as the value-added tax (VAT), by increased efforts to generate revenue, and by changes in the inflow of foreign grants. The largest source of central government revenue in 1995 was

*Table 6.1* Tax revenue–GDP ratio, Ghana

| Year | 1994 | 1997 | 2000 | 2003 | 2006 |
|---|---|---|---|---|---|
| Tax revenue/GPD | 16.7 | 14.9 | 16.3 | 19.6 | 21.4 |

*Source*: Institute of Statistical, Social and Economic Research (ISSER), *State of the Ghanaian Economy*, various issues.
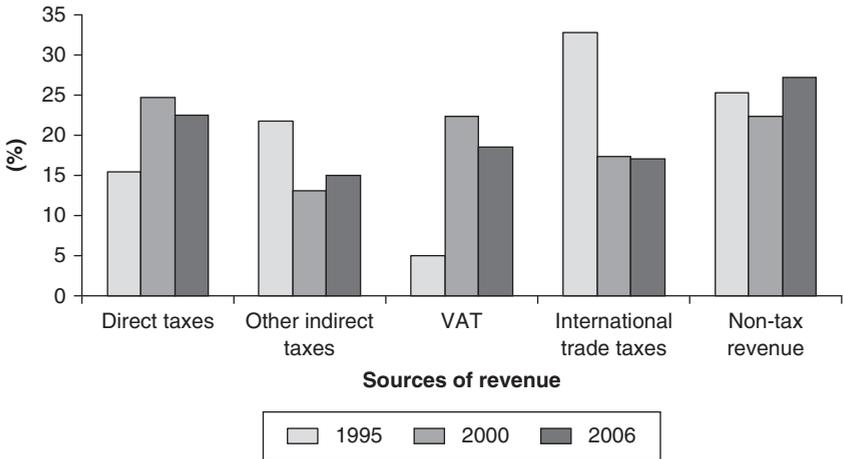
*Figure 6.1* Composition of central government revenue, Ghana.

*Source*: ISSER, *State of the Ghanaian Economy*, various issues.

international trade taxes, followed by non-tax revenue (comprised of income, fees and foreign assistance). Direct taxes came a distant third, accounting for 15 per cent of the total (see Figure 6.1). The share of direct taxes followed a cyclical but upwards trend until 2002 when it stood at 31 per cent of the total. In 2006, the revenue composition changed, with the largest share coming from non-tax revenue, followed by direct taxes. The contribution of the VAT increased significantly over the period from about 5 per cent to 18 per cent of central government revenue.

Focusing first on tax revenues, we see that the share of direct taxes in total central government tax revenue was about 21 per cent in 1994. It peaked at about 33 per cent in 2002 and declined to 29 per cent in 2006. As a share of GDP, direct taxes have risen almost continuously from 3.4 per cent in 1994 to 6.3 per cent in 2006.

The relatively low share of direct taxes in central government tax revenue is in part due to the large number of unpaid family workers and the large proportion of the workforce employed in agriculture and the informal urban and rural sectors. Only about 20 per cent of the adult workforce is in paid (salary or waged) employment and thus likely to fall within the pay-as-you-earn (PAYE) tax net. Tax from self-employment is very low, reflecting the difficulty of taxing the informal sector.

## *Tax structure reforms*

The Internal Revenue Act 592, adopted in 2000, amended and consolidated the laws relating to income tax, capital gains tax and the gift tax. In 2002, a number

of measures were taken to increase the efficiency and effectiveness of revenue collection. First, the Revenue Agencies Governing Board was established, tasked with coordinating the operations of the three revenue-collecting agencies (Internal Revenue Services, VAT Secretariat, and Customs Excise and Preventive Services), monitoring their performance and establishing a system for the exchange of information between them. The same year, a Non-tax Revenue Unit was established in the Ministry of Finance and Economic Planning to coordinate and monitor the activities of the non-tax revenue agencies. Finally, a system of uniform, computer-based clearing procedures was set up through the Ghana Customs Management System and the Ghana Community Network, designed to reduce revenue leakages and improve efficiency in clearing goods.

Since a small number of entities are responsible for more than 60 per cent of income tax revenue and about 90 per cent of VAT, the Large Taxpayers Unit was established in 2003 in an effort to monitor the bulk of tax receipts and to improve the efficiency of tax collection. The Taxpayers Identification Number Law was adopted in 2002.

### Changes in indirect taxes

A major reform was the replacement of the sales tax with the value-added tax in 1995. The initial introduction of the VAT was poorly implemented and was withdrawn three months later. It was re-introduced in 1998 at 10 per cent and increased to 12.5 per cent in 2002. A new VAT-related levy – the National Health Insurance Levy – was introduced at 2.5 per cent in August 2004. A Communications Service Tax ('talk tax') was introduced in 2008 to help finance social development programmes, such as the National Youth Employment Programme. The law charges 6 per cent of all expenses on the use of communication and related services, of which 20 per cent is devoted to youth employment programmes. To reduce the burden on consumers, some other import taxes were abolished, including those on mobile, cellular and satellite phones.

An additional measure to increase revenues was the introduction of the National Development Levy on top of the usual corporate tax in 2001. This initially ranged from 7.5 per cent to 10 per cent on company profits, but was reduced to 5.5 per cent and 2.5 per cent for some companies and abolished for others in 2006 and removed altogether in 2007.

### Personal income tax

Income tax is paid by residents and non-residents earning income derived from or accruing in Ghana and is charged on income received in or brought into Ghana. Individuals file taxes separately, and the tax code does not identify the individual by sex or by marital status. The tax system may be described as marriage neutral. If the income of an individual remains unchanged before and after marriage, the tax paid before marriage will remain the same after the person gets married. The income tax law does not explicitly discriminate against women. It can therefore

be concluded that Ghana's laws with respect to personal income tax pass the test of formal gender equality.

Although traditional norms and practices in some parts of the country may make it difficult for women to own land and other forms of property, there are no legal restrictions on their ownership. Property acquired through marriage does not automatically become the property of both the husband and wife. The Internal Revenue Act states that in order to ascertain income from a joint investment, inclusions and deductions with respect to the investment must be divided among the joint owners in proportion to their respective interests in the investment.

Ghana has adopted a schedular system of income taxation (by which tax rates vary according to source of income). Personal income from employment and from running a business is subject to a graduated set of income tax rates. Income from self-employment is subject to the graduated personal income tax schedule and not subject to the laws governing corporate tax. Investment income from dividends is subject to a different tax rate. Rental income either is subject to the graduated income tax rate schedule once deductions stated in the law have been applied, or in the absence of deductions, can be subject to a flat rate.

The income tax schedule is progressive, although rates have been reduced over the period 2000 to 2006 in order to encourage compliance. The tax-free brackets were raised by 100 per cent between 2000 and 2006, from GH¢120 to GH¢240 (about US$192 and $248[1]). Between 2000 and 2005, there were a total of six income brackets, starting from a provision of basic relief provided to all taxpayers irrespective of the size of total income, and moving up to tax rates of 5, 10, 15, 20 and 30 per cent, respectively (see Table 6.2). The tax rate in the top bracket was reduced from 30 per cent to 28 per cent in 2005, and to 25 per cent in 2006. In 2006, the fourth and fifth income brackets were merged, resulting in a lower tax rate on incomes in the fifth bracket and a higher rate on incomes in the fourth bracket, thus benefiting individuals earning higher incomes. However, taxes on those earning minimum wage were also abolished in 2006, and those with incomes only marginally above the minimum wage were charged a rate of only 2.5 per cent to ensure that disposable incomes stay above the minimum wage.

### Personal income tax deductions

Act 592 lists deductions that can be made from business, employment or investment income. Allowable deductions include interest on loans or mortgages, rent on land or building occupied by the business, repair and maintenance costs of equipment and utensils, bad debts, research and development expenditure, capital allowances, foreign exchange losses incurred with respect to business operations and carry-over losses.

Allowable deductions also include contributions to a retirement fund made either by the employee or by the employer on behalf of the employee (subject to conditions set out in Section 60(3) of Act 592). The Social Security and National Insurance Trust (SSNIT) is the largest pension scheme in the country.[2] Although

*Table 6.2* Personal income tax rates, Ghana, 2000–06

| | 2000 | | 2002 | | 2004 | | 2005 | | 2006 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Chargeable income GH¢* | *Rate (%)* | *Chargeable income GH¢* | *Rate (%)* | *Chargeable income GH¢* | *Rate (%)* | *Chargeable income GH¢* | *Rate (%)* | *Chargeable income GH¢* | *Rate (%)* |
| First | 120 | Free | 120 | Free | 150 | Free | 180 | Free | 240 | Free |
| Next | 120 | 5 | 120 | 5 | 150 | 5 | 180 | 5 | 240 | 5 |
| Next | 300 | 10 | 300 | 10 | 300 | 10 | 480 | 10 | 1,200 | 10 |
| Next | 1,860 | 15 | 1,860 | 15 | 2,100 | 15 | 2,760 | 15 | .. | .. |
| Next | 2,400 | 20 | 2,400 | 20 | 3,300 | 20 | 3,600 | 20 | 7,920 | 17.5 |
| Exceeding | 4,800 | 30 | 4,800 | 30 | 6,000 | 30 | 7,200 | 28 | 9,600 | 25 |

the proportion of female contributors to the SSNIT scheme rose between 1992 and 2006, women account for only 28.6 per cent of the contributors.

Personal relief, that is, reductions in taxable income by stipulated amounts, is provided on an individual basis. Act 592 provides for relief for taxpayers with dependent spouses or with at least two dependent children. Access to this type of relief is open to both men and women who have a dependent spouse and married and unmarried people with at least two dependent children. A dependent spouse or child is someone whose income was less than GH¢20 a year until 2007, when the income threshold was raised to less than GH¢35 a year. This current level is low enough to exclude low-income working spouses from the definition of dependent spouse. This is of not much value to middle- and high-income earners but is significant for low-income earners, especially those with incomes close to the minimum wage threshold. Where reference is made to a spouse, the sex of the spouse is not defined.

The education allowance, which can be claimed for up to three children or wards in registered educational institutions in Ghana, was also increased in 2007, from GH¢24 to GH¢30. This is of particular value to low-income households who send their children to public schools, which are tuition-free, as it covers a significant proportion of the direct costs of sending the child to school. Relief for education expenses is available to either parent/guardian of the child but not to both.

Allowances for dependent relatives 60 years or older are rather low, at GH¢25 per person, with a maximum number of two. This relief can be claimed by any one of the relatives responsible for older dependants. The income of a person aged 60 years and above from employment or business qualifies for old-age relief. The relief is GH¢35 or the total income if it is the lower of the two.

Section 57 of the Internal Revenue Act allows for life insurance premiums to be deducted from taxable income before taxes are charged, provided they do not exceed 10 per cent of the assured sum or 10 per cent of the individual's total taxable income, whichever is lower.

### Tax-exempt income

Exempt income includes interest paid to an individual by a resident financial institution, interest paid on bonds issued by the Ghanaian government, capital sums paid to a person as compensation or a gratuity in relation to personal injuries or death. Also exempt is interest, dividends or other income of an approved unit trust scheme or mutual fund or interest or dividends paid or credited to a person who has invested in a venture capital financing company. Scholarships, tuition grants, bursary or similar educational awards are exempt, along with income from a tax-exempt retirement funds and proceeds from life insurance.

Finally, the income of some categories of individuals is also exempt from personal income tax, such as salary, allowances, pension and gratuity of the country's president; and the income of a non-resident person from any business that operates ships or aircraft so far as an equivalent exemption is proven to be granted by that person's country of residence to persons resident in Ghana.

### The gender implications of personal income tax

The Ghana personal income tax system does not explicitly disadvantage either sex. Although a larger proportion of men than women are directly affected by the income tax laws and regulations, this is because men generally tend to earn higher incomes than do women. In the absence of data on the proportion of working men and women who pay income tax, pension contributions can be used as a proxy indicator. Of persons recorded as contributing to the SSNIT, less than 30 per cent are women, suggesting that a smaller number of women than men are subject to personal income tax. By the ability to pay principle, men's share of taxes should be higher than women's because they have a higher share of taxable income than do women. Women constitute a large proportion of unpaid family workers (78 per cent), the self-employed (60 per cent) and those engaged in informal microenterprises (57 per cent). Their lower level of education, skills and training, compared to men, deters entry into formal sector jobs. Norms and practices that disempower women result in their being unpaid family workers and not taxpayers.

One could also evaluate whether there are gender biases that arise in the way that different sources of income are taxed. In Ghana, the personal income tax system does not discriminate between wage and salaried workers (mostly men) and own-account workers (mostly women). The lower proportion of women who are wage or salaried workers is not a source of implicit gender bias as income earned from self-employment is subject to the same tax schedule, except when the business is incorporated.

Another form of gender bias could arise in the way that concessions on income tax are granted. Ghana has allowed concessions on income tax from farming. The choice of concessions for specific crops is informed by concerns about food security (e.g., cassava, maize and rice) as well as the need to promote non-traditional exports such as pineapple. Concessions to agro-processing fit neatly into the objective of promoting rural development as well as industrialization. These concessions do not formally discriminate against either sex. The wording of the tax code is such that it covers all categories of crops, regardless of whether they are tree crops or cash crops.

Because taxes are filed by individuals and tax rates do not explicitly discriminate between men and women or on the basis of marital status, the taxes paid by men and women with the same taxable income will not be different (see Table 6.3 on p. 159). The implication of the tax code for total household income depends not on how income is divided between the two sexes but on how it is distributed among all household income-earners and what proportion of income of any individual member falls in the higher tax brackets. The separate filing of taxes and the forms of personal relief do not discourage second earners among married couples (unlike in some other countries).

However, while there is formal gender equality in the Ghanaian personal income tax system, there is not always substantive gender equality, as can be seen in the following ways. Income tax brackets are not indexed, and nominal tax brackets are not always adjusted for inflation. Despite inflation rates of 15 per cent

*Table 6.3* Hypothetical annual income and tax paid by household with three children in school, Ghana

| Household income (GH¢) | 325.0 | 650.00 | 1,300.00 |
|---|---|---|---|
| Tax paid by household (GH¢): | 0.0 | 16.50 | 81.50 |
| Male earner only | | | |
| Female earner only | 0.0 | 16.50 | 81.50 |
| Male and female earners | 0.0 | 3.00 | 45.75 |
| | Salaried worker | Self-employed | |
| Household income (GH¢) | 650 | 650 | |
| Tax paid by household (GH¢) | 13.25 | 13.25 | |
| Male earner only | | | |
| Female earner only | 13.25 | 13.25 | |

*Note*: In a dual-earner household with total earned income of GH¢650, the distribution of income is GH¢450 and GH¢200. In a dual-earner household with total earned income of GH¢1,300, the distribution of income is GH¢825 and GH¢475.

in 2002 and 23 per cent in 2003, the tax brackets remained unchanged from 2000 until 2004, when they were adjusted by 25 per cent. This failure to adjust tax brackets resulted in an increase in the real value of taxes paid by households, a phenomenon known as fiscal drag. This is particularly burdensome for low-income earners, who find that an increasing proportion of their nominal income moves into a higher tax bracket. Estimates based on the 2005–06 household survey show that about 40 per cent of adult working women and 27 per cent of adult working men who reported earnings were in the tax-free bracket, suggesting that failure to adjust tax brackets for inflation results in a larger proportion of women compared to men being pushed into the higher tax bracket.

Income tax is progressive in Ghana, meaning that households with higher income must pay more tax. However, households with two earners pay lower tax than households with only a single earner. For example, a household with two earners and three children, with a combined yearly income of GH¢650, in which one worker earns GH¢450 and the second earns GH¢200 per year, will owe GH¢3 in tax, whereas a similar household with the same yearly income but only one earner will owe GH¢13.50 (see Table 6.3). The single-earner household is therefore being discriminated against (Smith 2000). Although it might be argued that the single-earner household benefits from the unpaid work of the home-maker, this assumes that the single earner has a spouse who provides such services. In Ghana, however, where about 34 per cent of single-earner households do not have an adult male and about 44 per cent of single-headed households are headed by women, the woman is both the earner and the homemaker. Alternatively the unpaid work may be done by a girl child.

Households headed by women constitute the largest proportion of households headed by separated, widowed or divorced individuals. Women heads of households who are divorced, separated or never married have on average more of their

own children aged 18 years or younger living with them than do households headed by men and are therefore more likely to qualify for marriage/responsibility relief for dependent children. This form of relief is currently only GH¢35, about 6 per cent of annual earnings from minimum wage employment. Thus for divorced, separated or widowed heads of low-income households – the large share of whom are women – it is of great value.

## The structure and incidence of indirect taxes

This section reviews three main types of indirect taxes: VAT, excise taxes and fuel taxes, and analyses their impact on different households from a gender equality perspective.

### *Value-added tax*

Ghana reintroduced the VAT to replace sales tax in 1998 after an earlier attempt in 1995 was abandoned owing to inadequate institutional capacity and other implementation difficulties (Addison and Osei 2001). In Ghana as elsewhere, VAT is consumption-based, uses the invoice credit method, and the tax is collected on a destination basis.

The VAT rate started at 10 per cent but was raised to 12.5 per cent in 1999 with the additional 2.5 per cent saved in a separate account (Ghana Education Trust Fund or GETFund) for the use of capital investment in the educational sector. In 2004, an additional 2.5 per cent was introduced to fund the National Health Insurance Scheme, which was introduced in the previous year. In 2007, an attempt to widen the tax base and improve collection led to the introduction of a different system (presumptive tax), mainly for small retailers, using a flat rate of 3 per cent. The VAT rates used to compute tax burden in this study exclude the 2007 change as the expenditure data used for this study are from 2005 to 2006.

Goods and services under VAT are taxed differently; some are taxed at almost full rates while other items entail no retail taxation. Items that attract zero tax rates under VAT are exports of taxable goods and services, goods shipped in storage by sea or air, locally produced textbooks and exercise books and locally manufactured agricultural machinery and implements. These items attract no payments from individuals.

Certain goods and services are exempt from VAT. Exempt goods differ from zero-rated goods in that the former are exempted only at the final stage in the value chain. These items include live animals and edible animal products such as meat and offal, goods for the disabled, educational items and services, medical supplies and financial services like the provision of insurance. Others are water, which excludes distilled and bottled; electricity supply up to a specified consumption level prescribed in regulations by the minister responsible for energy; and printed matter such as books and newspapers and postal services. It is worth noting that all items exempted from VAT are also exempted from the National Health Insurance Levy (NHIL).

*Table 6.4*  Excise tax rates, Ghana

| Item | Rate (%) |
| --- | --- |
| Beer | 50 |
| Spirits and wine | 25 |
| *Akpeteshie* (local distilled gin) | 20 |
| Mineral or aerated water | 20 |
| Malt | 5 |
| Tobacco | 140 |

*Table 6.5*  Tax as a percentage of ex-pump price, Ghana, January 2006

| Type | Excise | Fuel levies | Total fuel tax |
| --- | --- | --- | --- |
| Premium | 7.2 | 33.9 | 41.1 |
| Kerosene | 10.0 | 5.5 | 15.5 |
| Gasoil | 9.1 | 18.4 | 27.5 |
| Premix | 9.1 | 15.8 | 24.9 |
| LPG | 12.3 | −21.3 | −9.0 |

*Source*: Calculations are based on National Petroleum Authority data for January 2006.

*Note*: The ex-refinery prices, which are essentially the cost, insurance and freight (cif) at world prices, attract the ad valorem excise duties of 15 per cent. The different taxes and levies approved by law are added to the ex-refinery prices to get the ex-depot prices. Adding the margins for transporters, dealers and marketers to the ex-depot prices gives us the ex-pump prices, which are therefore the prices charged at the pumps.

Since the application of the VAT system uses the destination principle, imports are taxed in the same way as domestically produced goods. We therefore applied the full VAT rate to imported food items and to domestic goods which have significant competing imports in the domestic market. Other zero-rated and exempt items attracted zero VAT rate in the analysis.

### Excise and fuel taxes

Excise taxes are applied to certain commodities, including tobacco products, beer, table waters, malt drinks and spirits. Since 2007, calculation of excise duty rates has been based on the units or quantity and on branding. Other criteria include factors such as percentage of alcoholic content, volumetric measure in a litre, and numeric measure by number of sticks for cigarettes (tobacco products). However, at the time of the survey in 2005–06, excise taxes were collected mainly on specific ad valorem bases (see Table 6.4) as explained below. All alcoholic beverages and tobacco products are also subject to a VAT rate of 12.5 per cent and a NHIL rate of 2.5 per cent.

Even though petroleum products are exempt from VAT, Ghana levies a number of taxes on petroleum products in addition to the 15 per cent ad valorem excise duties on ex-refinery current prices that were reintroduced in 2006 (see Table 6.5). The fuel taxes are collected from oil marketing companies, which pass

them on to the final consumer. Expressed as a proportion of ex-pump prices, the total indirect levies involved translate to about 9.1 per cent and 18.4 per cent respectively for excise tax and other fuel levies for diesel (gasoil). The corresponding rates for other products are also presented in Table 6.5.

Transportation by public transport is VAT-exempt. However, we looked at tax incidence for the use of public transport because of the levels of fuel levies that are passed on to households. Osei-Akoto *et al*. (2009) estimate an excise tax rate of 5.1 per cent and other fuel levies at a rate of 16.5 per cent.

### Gender and incidence of indirect taxes

The analysis of incidence of indirect taxes relates VAT, excise taxes and fuel levies to total household expenditures, using expenditure data from the Ghana Living Standards Survey (GLSS 5), tax rate data from the Ministry of Finance and Economic Planning and additional tax data from the Valued-Added Tax Service (VAT), Internal Revenue Service (IRS) and Customs, Excise and Preventive Service (CEPS) (see Osei-Akoto *et al*. 2009, for details on the methodology).

The distribution of total indirect taxes by type of household suggests that relatively more female-type households pay lower indirect taxes than do male-type households. Since Ghana does not have differential indirect tax rates for women and men and also has no specific exemptions for female-specific expenditure items, it could be inferred that the social dimensions of indirect tax incidence really depend on the mix of consumer items families choose. The following analysis further tries to isolate commodities that potentially lead to such differences in the burden of indirect taxes.

A total of 8,637 households – 5,048 rural and 3,589 urban – of the 8,687 surveyed purchased at least one of the items reported in GLSS 5. For a number of the items, urban households reported a higher proportion of expenditures than rural households except on alcohol, tobacco, household fuel and medical care. The proportion of households reporting expenditures on clothing and footwear; housing, water and electricity; and house furnishing, equipment and routine maintenance are almost equally high for all male and for all female household types. However, more male-headed households (11.7 per cent) than female-headed households (1.6 per cent) reported expenditures on tobacco as well as on alcoholic beverages (42.9 per cent and 18.7 per cent, respectively).

### Incidence of indirect taxes by type of household

The results show that on average, households in Ghana lay out about 7.3 per cent of total expenses on indirect taxes. The tax incidence of VAT is higher than it is for excise duties and taxes on fuel. The overall incidence is higher for male-type households as compared to female-type households (see Table 6.6). The story is similar for all the components of taxes shown in Table 6.6, underlining the fact that, in general, Ghanaian households with a high concentration of males (as main

*Table 6.6* Overall indirect tax incidence by household type, Ghana (as % of expenditure)

| | Total tax | VAT | Excise tax | Fuel tax | Number of households |
|---|---|---|---|---|---|
| *Headship* | | | | | |
| Male-headed | 7.57 | 5.66 | 0.98 | 0.94 | 6,224 |
| Female-headed | 6.68 | 5.40 | 0.66 | 0.62 | 2,412 |
| *Employment categories* | | | | | |
| Male-breadwinner | 7.85 | 5.80 | 1.10 | 0.95 | 2,902 |
| Female-breadwinner | 6.79 | 5.45 | 0.70 | 0.65 | 1,935 |
| Dual-earner | 7.37 | 5.57 | 0.85 | 0.97 | 2,257 |
| None employed | 6.95 | 5.42 | 0.91 | 0.64 | 1,542 |
| *Household sex composition* | | | | | |
| Male-majority | 7.81 | 5.83 | 1.09 | 0.90 | 2,242 |
| Female-majority | 6.88 | 5.45 | 0.72 | 0.72 | 3,033 |
| Equal number of females and males | 7.47 | 5.59 | 0.94 | 0.95 | 3,361 |
| *All groups* | 7.34 | 5.60 | 0.90 | 0.86 | 8,636 |

*Source*: Calculations based on data from GLSS 2005–06.

income earners, as heads of families or those with more adult males than adult females) bear a higher burden of taxes.

The incidence of total indirect tax is higher for male-type households without children than it is for male-type households with children for all types of taxes considered (see Table 6.7). The same pattern of differences is also seen for households that have both employed males and employed females or have an equal number of adult males and females. The richest female-type households with no children have higher incidence rates than the richest female-type households with children, while the reverse is the case for the poorest female-type households.

The results show that total indirect taxes are generally proportional for male-breadwinner households, with the exception of the 3rd quintile for male-breadwinner households with children, which tend to have lower total indirect tax incidence than the others. On the other hand, total indirect tax incidence among female-breadwinner households (with or without children) is higher for those in quintiles 5 and 1 (for households with children) and 2 (for households without children), in other words, both the richest and poorest households.

Excise taxes are generally regressive for male-breadwinner households, irrespective of whether or not they have children, except for those without children in quintile 2. This is not surprising, since as noted earlier, male-type households are likely to spend more on goods such as alcoholic beverages and tobacco. Incidence rates for fuel taxes for this group are generally progressive, meaning that richer male-breadwinner households have higher incidence rates than do poorer ones.

The pattern for female-breadwinner households is not consistent for different levels of expenditures. Excise taxes for female-breadwinner households with

Table 6.7 Tax incidence, by employment status, presence of children and quintile, Ghana

| Quintile | Total tax | VAT | Excise tax | Fuel tax | No. of HHs | Quintile | Total tax | VAT | Excise tax | Fuel tax | No. of HHs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Male-breadwinner with children* | | | | | | *Male-breadwinner without children* | | | | | |
| 1 | 7.68 | 5.44 | 1.45 | 0.78 | 477 | 1 | 8.52 | 5.33 | 2.50 | 0.69 | 28 |
| 2 | 7.62 | 5.68 | 1.13 | 0.82 | 425 | 2 | 7.42 | 5.59 | 1.33 | 0.50 | 50 |
| 3 | 7.16 | 5.62 | 0.86 | 0.69 | 332 | 3 | 8.18 | 5.76 | 1.64 | 0.78 | 119 |
| 4 | 7.20 | 5.84 | 0.79 | 0.57 | 267 | 4 | 8.07 | 5.99 | 1.35 | 0.73 | 211 |
| 5 | 7.58 | 5.33 | 0.91 | 1.34 | 216 | 5 | 8.62 | 6.27 | 1.34 | 1.02 | 777 |
| Total | 7.43 | 5.56 | 0.95 | 0.93 | 1717 | Total | 8.54 | 6.21 | 1.35 | 0.98 | 1185 |
| *Female-breadwinner with children* | | | | | | *Female-breadwinner without children* | | | | | |
| 1 | 6.65 | 5.32 | 0.79 | 0.54 | 119 | 1 | 6.17 | 4.52 | 1.23 | 0.41 | 7 |
| 2 | 6.29 | 5.07 | 0.64 | 0.58 | 254 | 2 | 7.76 | 5.60 | 0.96 | 1.20 | 21 |
| 3 | 6.19 | 5.08 | 0.55 | 0.57 | 325 | 3 | 5.88 | 4.76 | 0.67 | 0.45 | 65 |
| 4 | 6.38 | 5.10 | 0.62 | 0.67 | 366 | 4 | 6.77 | 5.19 | 0.72 | 0.87 | 109 |
| 5 | 6.95 | 5.67 | 0.67 | 0.61 | 316 | 5 | 7.65 | 5.95 | 0.96 | 0.74 | 353 |
| Total | 6.59 | 5.35 | 0.63 | 0.62 | 1380 | Total | 7.47 | 5.80 | 0.92 | 0.75 | 555 |
| *Dual-employed with children* | | | | | | *Dual-employed without children* | | | | | |
| 1 | 8.51 | 6.06 | 1.59 | 0.86 | 296 | 1 | 6.01 | 4.62 | 0.84 | 0.56 | 6 |
| 2 | 7.34 | 5.67 | 0.98 | 0.69 | 390 | 2 | 8.18 | 6.04 | 1.49 | 0.64 | 25 |
| 3 | 7.13 | 5.48 | 0.86 | 0.80 | 420 | 3 | 8.29 | 5.99 | 1.55 | 0.76 | 33 |
| 4 | 6.61 | 5.30 | 0.67 | 0.64 | 466 | 4 | 7.09 | 5.47 | 0.87 | 0.75 | 71 |
| 5 | 7.63 | 5.63 | 0.81 | 1.20 | 416 | 5 | 8.22 | 5.82 | 1.02 | 1.41 | 134 |
| Total | 7.30 | 5.54 | 0.83 | 0.94 | 1988 | Total | 8.00 | 5.77 | 1.03 | 1.23 | 269 |
| *No-employed with children* | | | | | | *No-employed without children* | | | | | |
| 1 | 7.53 | 5.18 | 1.55 | 0.80 | 468 | 1 | 7.06 | 5.17 | 1.46 | 0.44 | 43 |
| 2 | 6.99 | 5.41 | 0.95 | 0.64 | 173 | 2 | 5.99 | 4.5 | 1.13 | 0.36 | 69 |
| 3 | 6.5 | 5.21 | 0.71 | 0.63 | 120 | 3 | 6.41 | 5.31 | 0.72 | 0.38 | 79 |
| 4 | 6.31 | 5.12 | 0.57 | 0.62 | 88 | 4 | 6.88 | 5.39 | 0.98 | 0.52 | 117 |
| 5 | 6.57 | 5.21 | 0.87 | 0.50 | 86 | 5 | 7.44 | 5.81 | 0.90 | 0.73 | 299 |
| Total | 6.72 | 5.22 | 0.90 | 0.61 | 935 | Total | 7.27 | 5.69 | 0.91 | 0.67 | 607 |

*Source*: Calculations based on data from GLSS 2005–06.

children are generally regressive but incidence rates for female-breadwinner households without children are generally proportional, with statistically significant lower rates for the 3rd and 4th quintiles (ibid.). Fuel taxes for female-breadwinner households (with or without children) are also generally progressive, with some degree of proportionality for the 1st and 3rd quintiles.

The amount of VAT paid generally rises with income for all sex-specific employment groups of households, except for male-breadwinner households, which were found to be U-shaped, meaning that the middle-expenditure quintiles have lower VAT incidence rates than the others.

### Incidence on selected commodity groups by type of household and expenditure quintile

Tables 6.8 and 6.9 on pp. 166–70 show the tax incidence for selected commodity groups. Commodity groups with relatively high tax incidence rates, which also depict interesting and clear differences among female-type and male-type households, have been selected to illustrate gender differences in the burden of taxes that households face. A review of these differences will enable us to look at policy considerations involved in changing the tax rates associated with these commodity groups.

#### Tax burden on fuel for transport and fuel for household use

Figure 6.2 shows that male-type households generally bear a higher burden of taxes on fuel for transport. Fuel taxes on female-type households are largely borne by the richer quintiles. In general, the incidence of tax on fuel for transport appears to fall largely on the middle and the richest households relative to the poorest-expenditure quintiles, and is highest for the middle male-majority households that operate private vehicles. The petroleum pricing policy assumes that people with private cars, in general, are richer than other people, so they can afford cross-subsidies embedded in premium fuel, which is the most popular fuel for private cars. This constitutes a heavy burden on non-target households which operate private vehicles, however, and efforts should be made to address this inequity.

Figure 6.3 shows that the incidence of taxes on fuel for household use is perfectly regressive, indicating that poorer households spend relatively higher proportions of their income on household fuel than do richer households, across all household groups. These results are consistent with those of a study on tax incidence in Ghana in the 1990s (Younger 1996). The regressive nature of the kerosene tax is largely due to the use of kerosene in poor households, in both urban and rural areas. Estimated tax incidence for household fuel is relatively low compared to other taxes but due to the highly regressive nature of this tax, policy reforms to minimize or completely remove its burden will impact quite strongly on the extreme poor, the majority of which are female.

#### Tax burden on clothing and footwear

Tax incidence rates for clothing in general are higher for male-type households, in particular for male-earner households, than for female-type households (see

Table 6.8 Tax incidence for main commodity groups by employment status and quintile (%), Ghana

| Category | Male-breadwinner household | | | | | | Female-breadwinner household | | | | | | Dual-earner household | | | | | | No-employed household | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total |
| Food subtotal | 1.90 | 2.08 | 2.27 | 2.19 | 1.91 | 2.02 | 2.36 | 2.31 | 2.30 | 2.41 | 2.40 | 2.38 | 1.93 | 2.31 | 2.21 | 2.27 | 1.95 | 2.09 | 1.75 | 2.07 | 2.38 | 2.27 | 2.26 | 2.21 |
| Basic unprocessed food | 0.97 | 1.15 | 1.15 | 1.02 | 0.76 | 0.90 | 1.35 | 1.29 | 1.19 | 1.14 | 1.01 | 1.09 | 0.91 | 1.04 | 1.06 | 1.03 | 0.80 | 0.92 | 0.79 | 0.97 | 1.16 | 1.10 | 0.99 | 1.01 |
| Basic processed food | 0.47 | 0.54 | 0.62 | 0.71 | 0.65 | 0.64 | 0.60 | 0.60 | 0.62 | 0.69 | 0.79 | 0.73 | 0.50 | 0.77 | 0.63 | 0.67 | 0.63 | 0.65 | 0.53 | 0.57 | 0.67 | 0.69 | 0.76 | 0.70 |
| Sugar/Confectionery | 0.26 | 0.18 | 0.16 | 0.14 | 0.16 | 0.17 | 0.18 | 0.14 | 0.15 | 0.15 | 0.16 | 0.16 | 0.21 | 0.17 | 0.15 | 0.14 | 0.13 | 0.14 | 0.25 | 0.18 | 0.17 | 0.15 | 0.17 | 0.17 |
| Other HH food items | 0.57 | 0.44 | 0.52 | 0.46 | 0.50 | 0.49 | 0.69 | 0.51 | 0.50 | 0.52 | 0.48 | 0.50 | 0.60 | 0.52 | 0.48 | 0.48 | 0.41 | 0.45 | 0.49 | 0.59 | 0.60 | 0.53 | 0.49 | 0.52 |
| Meals out | 0.24 | 0.24 | 0.33 | 0.39 | 0.63 | 0.50 | 0.27 | 0.35 | 0.37 | 0.33 | 0.30 | 0.32 | 0.29 | 0.21 | 0.30 | 0.25 | 0.22 | 0.24 | 0.37 | 0.36 | 0.51 | 0.61 | 0.62 | 0.57 |
| Non-alcoholic beverages | 0.26 | 0.25 | 0.30 | 0.38 | 0.55 | 0.47 | 0.19 | 0.23 | 0.27 | 0.37 | 0.55 | 0.46 | 0.21 | 0.28 | 0.31 | 0.37 | 0.45 | 0.40 | 0.29 | 0.24 | 0.31 | 0.39 | 0.60 | 0.49 |
| Alcoholic beverages | 0.89 | 1.12 | 1.03 | 1.03 | 1.28 | 1.17 | 0.46 | 0.71 | 0.66 | 0.65 | 0.83 | 0.76 | 1.19 | 1.03 | 0.76 | 0.69 | 0.59 | 0.70 | 0.91 | 0.87 | 0.73 | 1.03 | 1.36 | 1.09 |
| Beer | 0.67 | 0.86 | 0.92 | 0.61 | 1.12 | 1.05 | 0.73 | 0.96 | 0.79 | 0.85 | 0.88 | 0.87 | 1.64 | 1.37 | 0.67 | 0.69 | 0.64 | 0.68 | 0.00 | 0.75 | 0.46 | 0.74 | 1.16 | 1.05 |
| Spirits | 1.29 | 1.20 | 1.04 | 1.13 | 0.93 | 1.04 | 0.89 | 0.78 | 0.61 | 0.49 | 0.51 | 0.54 | 1.56 | 0.91 | 0.69 | 0.58 | 0.43 | 0.65 | 1.40 | 1.18 | 0.89 | 1.03 | 1.08 | 1.12 |
| Wine | | | | | 0.15 | 0.08 | 0.00 | 0.00 | 0.06 | 0.00 | 0.14 | 0.09 | 0.00 | 0.00 | 0.00 | 0.01 | 0.10 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.05 |
| Tobacco | 2.43 | 2.12 | 1.74 | 2.78 | 2.81 | 2.42 | 1.44 | 1.70 | 1.38 | 1.03 | 1.12 | 1.17 | 2.55 | 1.80 | 2.01 | 0.95 | 1.03 | 1.54 | 2.28 | 1.91 | 2.28 | 2.43 | 1.17 | 1.84 |

Table 6.8 (continued) Tax incidence for main commodity groups by employment status and quintile (%), Ghana

| Category | Male-breadwinner household | | | | | | Female-breadwinner household | | | | | | Dual-earner household | | | | | | No-employed household | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total |
| *Clothing and footwear subtotal* | 1.40 | 1.41 | 1.17 | 1.17 | 0.93 | 1.07 | 1.20 | 1.06 | 1.01 | 0.97 | 0.97 | 0.99 | 1.43 | 1.28 | 1.22 | 1.03 | 0.98 | 1.07 | 1.22 | 1.14 | 0.99 | 0.94 | 0.85 | 0.95 |
| Clothes and footwear – Adults | 1.09 | 1.09 | 0.90 | 0.94 | 0.83 | 0.90 | 0.78 | 0.75 | 0.72 | 0.74 | 0.82 | 0.78 | 1.09 | 0.98 | 0.94 | 0.80 | 0.81 | 0.85 | 0.93 | 0.87 | 0.80 | 0.79 | 0.77 | 0.80 |
| Clothes and footwear – Children | 0.34 | 0.34 | 0.30 | 0.29 | 0.19 | 0.26 | 0.45 | 0.34 | 0.33 | 0.27 | 0.22 | 0.27 | 0.36 | 0.33 | 0.29 | 0.25 | 0.20 | 0.24 | 0.33 | 0.31 | 0.25 | 0.25 | 0.22 | 0.26 |
| *Housing, water, electricity, gas, sub total* | 0.20 | 0.23 | 0.33 | 0.27 | 0.27 | 0.27 | 0.16 | 0.18 | 0.16 | 0.13 | 0.31 | 0.23 | 0.20 | 0.22 | 0.26 | 0.25 | 0.29 | 0.27 | 0.40 | 0.28 | 0.20 | 0.22 | 0.25 | 0.25 |
| Housing utilities | 0.04 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.02 | 0.04 | 0.03 | 0.04 | 0.03 | 0.03 | 0.04 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 | 0.04 | 0.05 | 0.05 | 0.05 |
| Housing general | 0.19 | 0.23 | 0.34 | 0.27 | 0.28 | 0.28 | 0.18 | 0.19 | 0.17 | 0.12 | 0.31 | 0.24 | 0.20 | 0.23 | 0.26 | 0.25 | 0.28 | 0.27 | 0.43 | 0.30 | 0.22 | 0.23 | 0.27 | 0.27 |
| Fuel for HH use | 1.06 | 0.68 | 0.49 | 0.33 | 0.29 | 0.40 | 0.91 | 0.64 | 0.51 | 0.38 | 0.20 | 0.33 | 0.97 | 0.62 | 0.46 | 0.25 | 0.11 | 0.27 | 0.94 | 0.71 | 0.53 | 0.44 | 0.23 | 0.43 |
| Furniture, HH Equipment and Maintenance | 0.25 | 0.25 | 0.24 | 0.27 | 0.28 | 0.27 | 0.22 | 0.23 | 0.26 | 0.22 | 0.28 | 0.26 | 0.25 | 0.24 | 0.26 | 0.24 | 0.23 | 0.24 | 0.24 | 0.27 | 0.24 | 0.23 | 0.26 | 0.25 |
| Domestic and household services | 0.08 | | | | 0.54 | 0.53 | 0.00 | 0.00 | 0.00 | 0.03 | 0.77 | 0.75 | 0.00 | 2.04 | 0.02 | 0.28 | 0.42 | 0.41 | 0.00 | 0.00 | 0.00 | 0.00 | 0.25 | 0.25 |
| Medical expenditure | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

*(Continued)*

*Table 6.8* (Continued) Tax incidence for main commodity groups by employment status and quintile (%), Ghana

| Category | Male-breadwinner household | | | | | | Female-breadwinner household | | | | | | Dual-earner household | | | | | | No-employed household | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *1* | *2* | *3* | *4* | *5* | *Total* | *1* | *2* | *3* | *4* | *5* | *Total* | *1* | *2* | *3* | *4* | *5* | *Total* | *1* | *2* | *3* | *4* | *5* | *Total* |
| *Transportation subtotal* | 0.78 | 0.89 | 0.79 | 0.91 | 0.96 | 0.92 | 0.72 | 0.77 | 0.69 | 0.81 | 0.76 | 0.77 | 0.63 | 0.75 | 0.75 | 0.86 | 0.88 | 0.84 | 0.68 | 0.89 | 0.72 | 0.79 | 0.89 | 0.84 |
| Transport – collective | 0.87 | 0.93 | 0.79 | 0.81 | 0.84 | 0.83 | 0.96 | 0.79 | 0.70 | 0.81 | 0.76 | 0.77 | 0.79 | 0.78 | 0.77 | 0.80 | 0.64 | 0.71 | 0.83 | 0.80 | 0.73 | 0.80 | 0.89 | 0.85 |
| Transport – private | 0.39 | 0.26 | 0.18 | 0.62 | 0.68 | 0.57 | 0.21 | 0.28 | 0.09 | 0.14 | 0.30 | 0.27 | 0.35 | 0.24 | 0.17 | 0.50 | 0.77 | 0.64 | 0.40 | 0.58 | 0.25 | 0.15 | 0.32 | 0.35 |
| Fuel for transport | 1.65 | 1.95 | 2.01 | 1.62 | 3.20 | 2.74 | 0.00 | 1.06 | 0.23 | 1.43 | 1.67 | 1.63 | 3.87 | 2.33 | 3.08 | 1.25 | 2.81 | 2.72 | 3.99 | 3.14 | 4.73 | 2.97 | 2.00 | 2.64 |
| Communication | 0.20 | 0.21 | 0.20 | 0.33 | 0.56 | 0.47 | 0.12 | 0.15 | 0.19 | 0.23 | 0.41 | 0.34 | 0.17 | 0.23 | 0.19 | 0.26 | 0.38 | 0.32 | 0.16 | 0.12 | 0.19 | 0.22 | 0.50 | 0.42 |
| Recreation | 0.59 | 0.56 | 0.58 | 0.49 | 0.48 | 0.51 | 0.57 | 0.45 | 0.38 | 0.38 | 0.42 | 0.41 | 1.01 | 0.56 | 0.53 | 0.41 | 0.51 | 0.51 | 0.56 | 0.45 | 0.45 | 0.38 | 0.34 | 0.39 |
| Education | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Personal care subtotal* | 0.54 | 0.45 | 0.37 | 0.31 | 0.25 | 0.31 | 0.55 | 0.41 | 0.37 | 0.31 | 0.24 | 0.29 | 0.57 | 0.41 | 0.34 | 0.27 | 0.19 | 0.27 | 0.62 | 0.46 | 0.38 | 0.35 | 0.30 | 0.36 |
| Miscellaneous | 0.16 | 0.18 | 0.12 | 0.24 | 0.23 | 0.21 | 0.14 | 0.10 | 0.09 | 0.11 | 0.15 | 0.13 | 0.12 | 0.20 | 0.13 | 0.13 | 0.33 | 0.23 | 0.09 | 0.16 | 0.10 | 0.11 | 0.12 | 0.12 |
| TOTAL | 6.39 | 6.17 | 5.69 | 5.73 | 6.60 | 6.28 | 5.09 | 4.95 | 4.67 | 4.87 | 5.34 | 5.10 | 7.10 | 5.65 | 5.62 | 4.95 | 6.05 | 5.72 | 6.18 | 5.37 | 5.07 | 5.08 | 5.52 | 5.43 |
| Number of HHs in quintile | 711 | 628 | 543 | 460 | 562 | 2903 | 156 | 357 | 447 | 512 | 464 | 1935 | 373 | 444 | 474 | 514 | 452 | 2257 | 585 | 300 | 233 | 182 | 243 | 1542 |

**Table 6.9** Tax incidence for main commodity groups by HH adult sex composition and quintile (%), Ghana

| Category | Male-majority household | | | | | | Female-majority household | | | | | | Household with equal number of males & females | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total |
| *Food subtotal* | 1.87 | 2.31 | 2.19 | 2.14 | 1.98 | 2.07 | 1.96 | 2.15 | 2.3 | 2.36 | 2.15 | 2.21 | 1.93 | 2.13 | 2.32 | 2.38 | 2.08 | 2.18 |
| Basic – unprocessed food | 0.93 | 1.12 | 1.08 | 0.99 | 0.78 | 0.90 | 0.96 | 1.11 | 1.14 | 1.09 | 0.91 | 1.00 | 0.96 | 1.12 | 1.18 | 1.12 | 0.85 | 0.98 |
| Basic – processed food | 0.49 | 0.76 | 0.62 | 0.64 | 0.68 | 0.66 | 0.52 | 0.57 | 0.64 | 0.71 | 0.69 | 0.67 | 0.50 | 0.57 | 0.63 | 0.73 | 0.67 | 0.66 |
| Sugar/ Confectionery | 0.24 | 0.17 | 0.15 | 0.14 | 0.16 | 0.16 | 0.21 | 0.17 | 0.15 | 0.15 | 0.15 | 0.15 | 0.27 | 0.16 | 0.17 | 0.14 | 0.14 | 0.15 |
| Other HH food items | 0.54 | 0.48 | 0.48 | 0.48 | 0.48 | 0.49 | 0.61 | 0.51 | 0.50 | 0.49 | 0.44 | 0.47 | 0.54 | 0.52 | 0.55 | 0.50 | 0.47 | 0.49 |
| Meals out | 0.34 | 0.29 | 0.36 | 0.39 | 0.65 | 0.51 | 0.22 | 0.26 | 0.35 | 0.27 | 0.24 | 0.27 | 0.29 | 0.25 | 0.30 | 0.34 | 0.27 | 0.29 |
| Non-alcoholic beverages | 0.23 | 0.26 | 0.30 | 0.35 | 0.59 | 0.48 | 0.25 | 0.27 | 0.30 | 0.37 | 0.50 | 0.43 | 0.27 | 0.20 | 0.30 | 0.40 | 0.45 | 0.41 |
| Alcoholic beverages | 1.06 | 1.07 | 0.88 | 0.88 | 1.24 | 1.10 | 0.96 | 0.97 | 0.81 | 0.65 | 0.66 | 0.73 | 0.84 | 0.97 | 0.83 | 0.95 | 0.79 | 0.84 |
| Alcoholic – Beer | 1.08 | 1.21 | 0.77 | 0.66 | 1.05 | 0.98 | 0.49 | 1.16 | 0.78 | 0.74 | 0.72 | 0.75 | 0.61 | 0.71 | 0.69 | 0.74 | 0.84 | 0.81 |
| Alcoholic – Spirits | 1.54 | 1.07 | 0.89 | 0.89 | 0.91 | 0.96 | 1.36 | 0.95 | 0.74 | 0.53 | 0.46 | 0.67 | 1.23 | 1.15 | 0.83 | 1.01 | 0.58 | 0.80 |
| Alcoholic – Wine | 0.00 | 0.00 | 0.00 | 0.02 | 0.15 | 0.07 | 0.00 | 0.00 | 0.01 | 0.00 | 0.09 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.14 | 0.09 |
| Tobacco | 2.62 | 1.92 | 1.71 | 1.57 | 2.15 | 2.04 | 2.35 | 1.56 | 1.92 | 0.92 | 0.80 | 1.42 | 1.76 | 2.87 | 2.36 | 2.48 | 2.15 | 2.34 |
| *Clothing and footwear subtotal* | 1.45 | 1.25 | 1.14 | 1.06 | 0.97 | 1.06 | 1.33 | 1.27 | 1.15 | 1.03 | 0.93 | 1.02 | 1.21 | 1.28 | 1.12 | 1.05 | 0.97 | 1.04 |
| Clothes and footwear – Adults | 1.11 | 0.96 | 0.89 | 0.84 | 0.85 | 0.88 | 1.01 | 0.95 | 0.85 | 0.79 | 0.77 | 0.81 | 0.90 | 0.98 | 0.86 | 0.85 | 0.85 | 0.86 |
| Clothes and footwear – Children | 0.36 | 0.32 | 0.28 | 0.26 | 0.20 | 0.25 | 0.35 | 0.34 | 0.32 | 0.27 | 0.21 | 0.26 | 0.34 | 0.33 | 0.29 | 0.25 | 0.20 | 0.24 |
| *Housing, water, electricity, gas subtotal* | 0.21 | 0.21 | 0.31 | 0.23 | 0.35 | 0.30 | 0.21 | 0.25 | 0.19 | 0.23 | 0.26 | 0.24 | 0.31 | 0.18 | 0.26 | 0.19 | 0.24 | 0.23 |
| Housing utilities | 0.04 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.04 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.02 | 0.03 | 0.04 | 0.04 | 0.03 | 0.03 |
| Housing general | 0.21 | 0.22 | 0.33 | 0.24 | 0.37 | 0.32 | 0.21 | 0.26 | 0.20 | 0.23 | 0.24 | 0.24 | 0.33 | 0.18 | 0.27 | 0.18 | 0.24 | 0.23 |

(*Continued*)

Table 6.9 (Continued) Tax incidence for main commodity groups by HH adult sex composition and quintile (%), Ghana

| Category | Male-majority household | | | | | | Female-majority household | | | | | | Households with equal number of males & females | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total |
| Fuel for HH use | 1.00 | 0.62 | 0.50 | 0.28 | 0.27 | 0.37 | 0.98 | 0.62 | 0.45 | 0.31 | 0.16 | 0.30 | 1.03 | 0.81 | 0.55 | 0.40 | 0.15 | 0.34 |
| Furniture, HH Equipment and Maintenance | 0.24 | 0.25 | 0.25 | 0.25 | 0.29 | 0.27 | 0.25 | 0.24 | 0.26 | 0.24 | 0.24 | 0.24 | 0.23 | 0.25 | 0.25 | 0.23 | 0.25 | 0.25 |
| Domestic and household services | 0.11 | 0.00 | 0.00 | 0.32 | 0.32 | 0.30 | 0.01 | 0.00 | 0.20 | 0.00 | 0.41 | 0.41 | 0.25 | 2.04 | 0.00 | 0.10 | 0.69 | 0.68 |
| Medical expenditure | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Transportation subtotal* | 0.64 | 0.82 | 0.77 | 0.85 | 0.93 | 0.88 | 0.7 | 0.77 | 0.69 | 0.85 | 0.82 | 0.8 | 0.87 | 0.9 | 0.8 | 0.88 | 0.91 | 0.89 |
| Transport – collective | 0.75 | 0.86 | 0.79 | 0.80 | 0.88 | 0.85 | 0.85 | 0.77 | 0.70 | 0.79 | 0.66 | 0.71 | 1.07 | 0.95 | 0.81 | 0.87 | 0.70 | 0.77 |
| Transport – private | 0.36 | 0.28 | 0.19 | 0.48 | 0.48 | 0.42 | 0.36 | 0.35 | 0.17 | 0.54 | 0.76 | 0.63 | 0.42 | 0.28 | 0.17 | 0.35 | 0.83 | 0.67 |
| Fuel for transport | 1.63 | 2.84 | 3.67 | 1.69 | 2.75 | 2.63 | 1.29 | 1.31 | 2.02 | 1.32 | 2.88 | 2.68 | 1.58 | 2.57 | 1.17 | 1.10 | 2.61 | 2.48 |
| Communication | 0.22 | 0.17 | 0.20 | 0.28 | 0.55 | 0.44 | 0.16 | 0.23 | 0.19 | 0.25 | 0.38 | 0.33 | 0.13 | 0.21 | 0.19 | 0.26 | 0.42 | 0.36 |
| Recreation | 0.78 | 0.48 | 0.54 | 0.44 | 0.45 | 0.47 | 0.71 | 0.57 | 0.47 | 0.42 | 0.51 | 0.50 | 0.64 | 0.55 | 0.52 | 0.39 | 0.42 | 0.44 |
| Education | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| *Personal care subtotal* | 0.55 | 0.43 | 0.35 | 0.29 | 0.25 | 0.30 | 0.59 | 0.43 | 0.36 | 0.30 | 0.22 | 0.29 | 0.52 | 0.42 | 0.37 | 0.30 | 0.22 | 0.29 |
| Miscellaneous | 0.13 | 0.15 | 0.11 | 0.16 | 0.24 | 0.19 | 0.11 | 0.17 | 0.12 | 0.15 | 0.21 | 0.18 | 0.20 | 0.20 | 0.12 | 0.13 | 0.28 | 0.21 |
| TOTAL | 6.64 | 5.70 | 5.53 | 5.23 | 6.57 | 6.07 | 6.46 | 5.50 | 5.18 | 4.99 | 5.60 | 5.43 | 6.01 | 5.94 | 5.50 | 5.26 | 5.83 | 5.67 |
| Number of HHs in quintile | 741 | 733 | 682 | 651 | 679 | 3,485 | 688 | 691 | 680 | 728 | 708 | 3,495 | 277 | 306 | 370 | 355 | 348 | 1,657 |
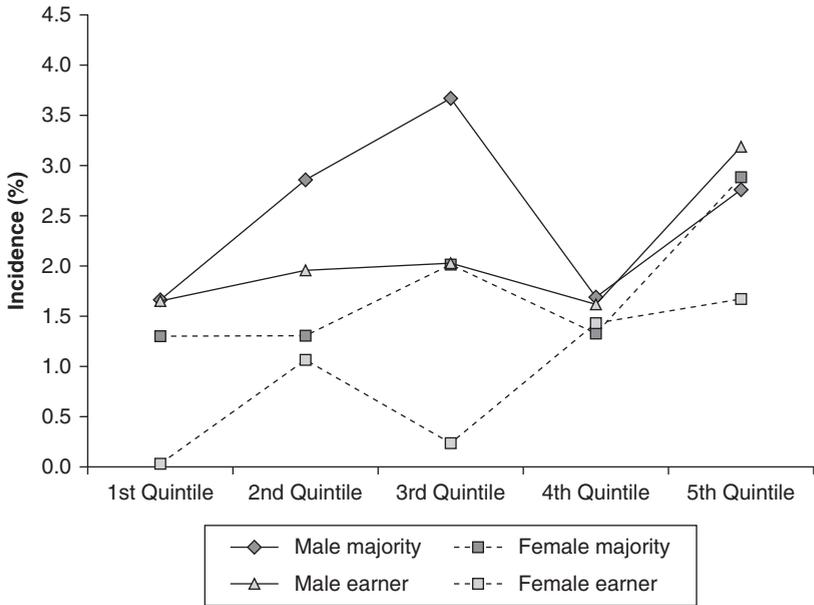
*Figure 6.2* Incidence of indirect tax on fuel for transport by household type and expenditure quintile (%), Ghana.
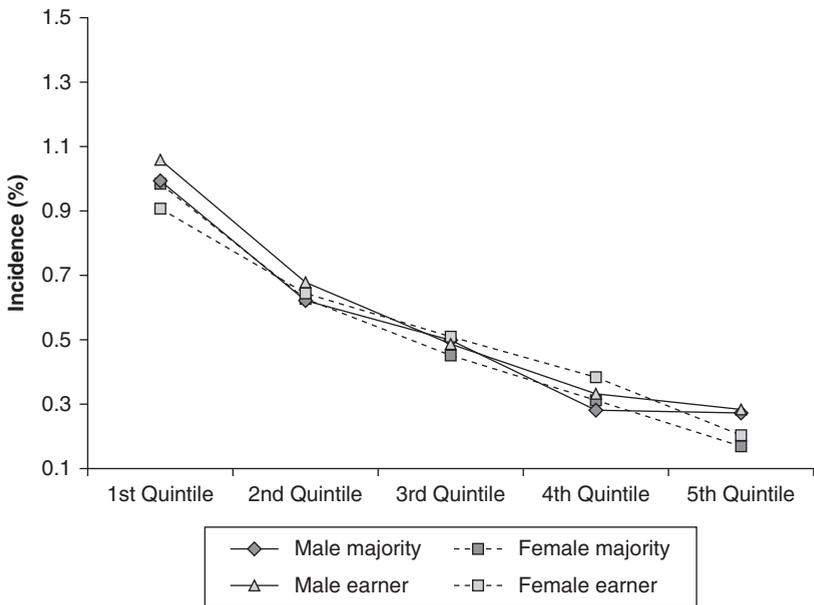


*Figure 6.3* Incidence of indirect tax on household fuel by household type and expenditure quintile (%), Ghana.
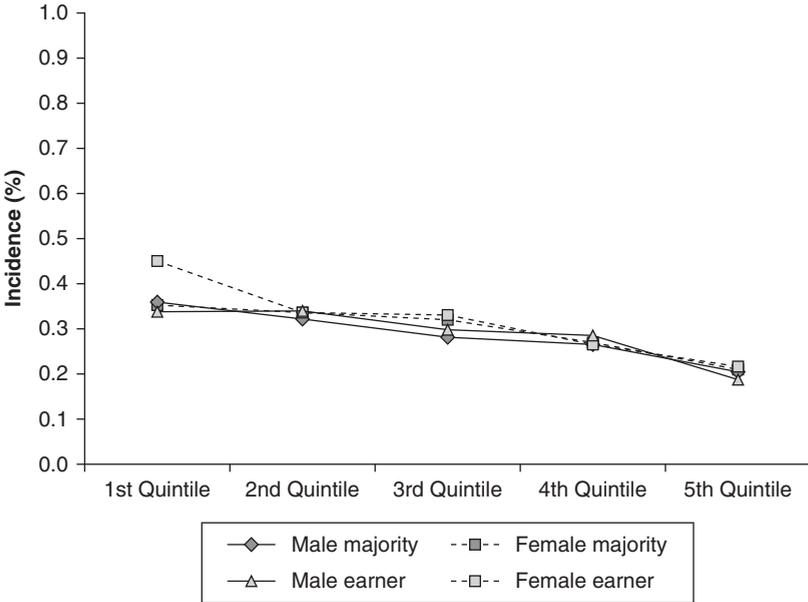
*Figure 6.4* Incidence of indirect tax on clothing and footwear by household type and expenditure quintile (%), Ghana.

Figure 6.4). The rates for children's clothes are the same for most households, except the poorest female-earner households, which bear the highest burden of taxes on children's clothing and footwear. Policy change in this area will impact these households more positively than the others.

*Tax burden on tobacco, alcoholic beverages and communication*

With the exception of male-earner households, the incidence of taxes on tobacco products generally falls on poorer households. It can also be seen in Figure 6.5 that tobacco tax incidence for a male-type household is significantly higher than the incidence for a female-type household. With respect to the tax burden of alcoholic beverages for households, Figure 6.6 shows that the incidence tends to be generally higher for the households in the richest quintiles, except for households that have more adult females than adult males, for which the tax incidence tends to be higher for the poorest households and lower for the richest.

## Simulations: shifting tax rates for selected commodity groups

In light of the results discussed above, the following analysis considers various policy reforms designed to reduce the burden of indirect taxes on the poor and female-type households identified in the preceding section that bear a relatively high incidence, as well as experiments to increase taxes on goods consumed
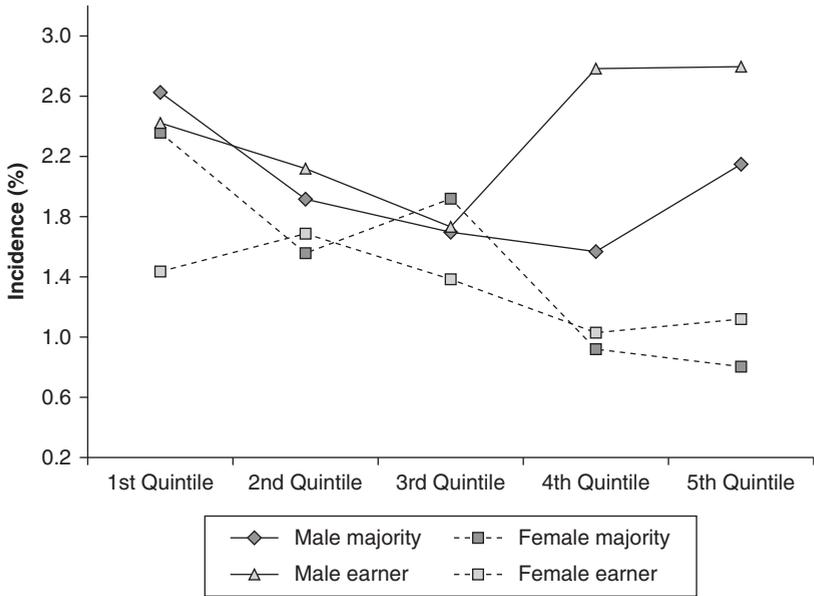
*Figure 6.5* Incidence of indirect tax on tobacco by household type and expenditure quintile (%), Ghana.
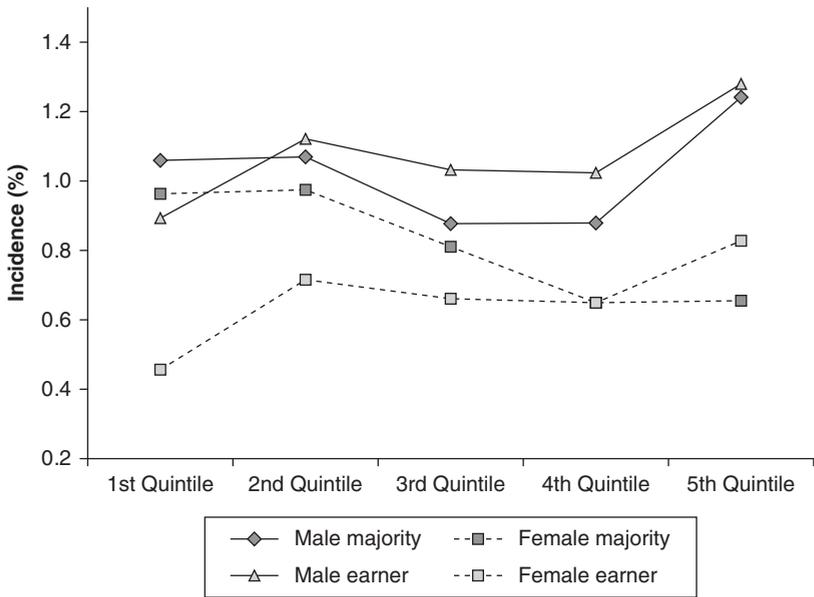


*Figure 6.6* Incidence of indirect tax on alcoholic beverages by household type and expenditure quintile (%), Ghana.
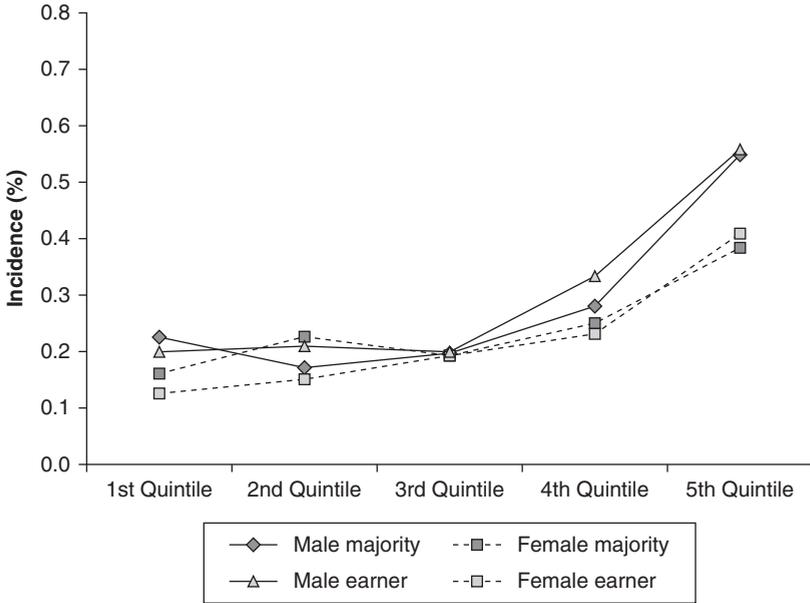
*Figure 6.7* Incidence of indirect tax on communication by household type and expenditure
quintile (%), Ghana.

primarily by higher-income and male-type households so as to offset potential
revenue declines. We simulate two policy options for reducing the tax burden on
poor and female-type households: (1) complete removal of VAT on children's
clothes and footwear; and (2) a 50 per cent reduction in kerosene tax rates.

The analysis also evaluates the possibility of raising resources from tax revenue
to finance these tax cuts. One obvious set of candidates for policy reforms to raise
revenue is tobacco and alcohol products, both because of the 'negative' externali-
ties they produce, in terms of their adverse health and environmental effects, and
the fact that male-type households will pay disproportionately more. There is a
strong case in public finance theory for taxing *demerit* goods at a higher rate than
*merit* goods. The idea is appealing, especially if excise tax increases on these com-
modities could be used to offset tax cuts on commodities (merit goods) that are
consumed more by female-type households than male-type households.

However, in Ghana, the tax incidence for these consumption items is higher
for poor and for some female-type households than it is for other households.
Moreover, the nature of household gender inequality could defeat the purpose of
this kind of policy reform, because men who have strong control of household
resources could reduce consumption of essential commodities in order to finance
purchase of these demerit goods, a shift that could reduce household welfare.
Although this analysis could not consider the intra-household impacts of tax
reform, this is an important area for further study.

Another area for policy consideration is an increase in indirect taxes on communication. Tax incidence is generally low but highly progressive (see Figure 6.7). With the increasing trend in the use of mobile phones (GLSS 2007), more revenue could be raised from an increase in the tax rates to offset revenue loss resulting from tax cuts. In that sense, the new Communication Service Tax law passed in 2008 may be a step in the right direction.

Thus, two options for financing are considered. Despite the caveats noted above, the first is a combined increase of tax rates on two categories, tobacco and alcoholic beverages, by 100 per cent, and the second is the recent introduction of a communication service tax of 6 per cent, popularly known as the 'talk tax'. The analysis of both options relied heavily on conservative assumptions, particularly the assumption that affected households will maintain the same pattern of consumption for the short-to-medium term after the introduction of the proposed reform(s). Also, since the partial nature of the analysis makes it impossible to predict the impact of such policy shifts on other sectors of the economy, it assumes that there will be no immediate repercussions in other areas of the economy that would wipe out the anticipated effects.

### *Effects of proposed policy changes on tax incidence*

Table 6.10 shows that zero-rating taxes on children's clothes and footwear will reduce the incidence of total indirect taxes for all gender household types by less than 3 per cent, but will reduce incidence rates for poorer households relatively more than for richer households. Differences in the impact on male-headed and female-headed households are negligible. However, households with more adult females than adult males or households in which females are the only breadwinners will benefit more than their comparable male-type households.

The reduction of kerosene taxes will have less effect on tax incidence. The average expected reduction in tax incidence is about 1.9 per cent with little or no significant gender differences. This policy will, however, have a higher relative benefit for the poor. On average, tax incidence for the poorest quintile will be nearly 6 per cent (5.8 per cent), while that for the 5th quintile will be about 1 per cent.

On the financing side, as expected, doubling tax rates on tobacco and alcoholic beverages will affect male types of household more than female types. Since it will also affect poorer households more than richer ones, it would be necessary to devise other transfer packages for the poor if the policy is to be fair. Moreover, it may not be equitable to double the tax rates on tobacco and alcoholic beverages to finance the elimination of taxes on children's clothes and footwear, since the increase in tax incidence resulting from the former will more than offset the benefits derived from the latter.

Table 6.10 also shows that the introduction of the 6 per cent across-the-board communication service charge has little effect on total indirect tax incidence, as it constitutes a relatively small share of total indirect taxes in Ghana. There are no marked gender differences in expected tax incidence increase, which will be felt most among the 4th and 5th expenditure quintiles.

*Table 6.10* Effects of changes in indirect tax rates on tax incidence by household type and expenditure quintile, Ghana

| Household category | Base scenario | | Effects on tax incidence (% change) | | |
|---|---|---|---|---|---|
| | Average tax incidence (%) | Zero-rate children clothes and footwear | Reduce kerosene rates by 50% | Double alcohol and tobacco rates | Increase communication service rates by 6% |
| Male-breadwinner | 7.9 | −2.2 | −2.2 | 3.3 | 1.3 |
| Female-breadwinner | 6.8 | −3.1 | −2.1 | 1.3 | 1.0 |
| Dual-earner | 7.4 | −2.8 | −1.5 | 2.3 | 1.1 |
| None employed | 7.0 | −2.2 | −2.4 | 3.0 | 1.2 |
| Male-majority | 7.8 | −1.7 | −1.5 | 3.5 | 1.5 |
| Female-majority | 6.9 | −2.9 | −2.0 | 1.5 | 1.0 |
| Equal number of males and females | 7.5 | −3.1 | −2.1 | 2.5 | 0.9 |
| Male-headed | 7.6 | −2.6 | −1.8 | 2.9 | 1.2 |
| Female-headed | 6.7 | −2.8 | −2.2 | 1.0 | 1.2 |
| Lower 20% | 7.8 | −4.2 | −5.8 | 5.0 | 0.1 |
| Next 20% | 7.2 | −4.2 | −3.9 | 3.5 | 0.3 |
| Next 20% | 6.9 | −3.8 | −3.0 | 2.6 | 0.4 |
| Next 20% | 6.8 | −3.3 | −1.9 | 2.2 | 0.9 |
| Upper 20% | 7.7 | −1.8 | −1.0 | 2.1 | 1.6 |
| Total | 7.3 | −2.6 | −1.9 | 2.5 | 1.1 |

*Source*: Calculations based on data from GLSS 2005–06.

### Effects of proposed policy changes on household disposable incomes and tax revenues

The results indicate that all the policy options are attractive in terms of reducing poverty and gender inequality. This is because the ratio of the gain in disposable income due to tax cuts for the group that appeared to be disadvantaged by the tax system (adult female-majority households) to the gain for the advantaged group (adult male-majority households) is higher than similar ratios derived from their expenditure shares. Also, the ratios of the gains for the first four expenditure quintiles to that for the 5th quintile are higher than the ratios of their respective expenditure shares.

Projections from the data show that the government would have transferred about GH¢1,084.1 billion (US$117 million) to households if the government had implemented the policy change on zero-rating children clothes and footwear in 2005–06. This is about 0.9 per cent of GDP or 3.4 per cent of projected indirect tax revenue for 2005–06. The expected fall in government revenue from the other options is relatively smaller, GH¢664 billion or US$71.4 million.

The expected gain for the tax authority from the alcohol and tobacco tax increase or communication tax increase would be GH¢734.4 billion (US$79 million) or GH¢314.7 billion (US$33.8 million) respectively, amounting to about 2.3 per cent or 1 per cent of projected indirect tax revenue, respectively, in 2005–06. On revenue grounds, therefore, the government can finance a policy shift to

zero-rating children's clothing and footwear by doubling the tax rates for tobacco and alcohol and continuing the communication service tax. The communication service tax alone cannot finance any of the proposed tax cuts unless the rate is increased considerably.

## Conclusion and policy recommendations

Broad-based consumption taxation is increasingly becoming a key strategy to finance development programmes in Ghana and elsewhere in Africa. Despite its importance, however, little attention has been paid to how governments can use tax policies to reduce inequalities in income and well-being by minimizing existing gender differences (both explicit and implicit) in tax liabilities. This chapter has explored the differential gender impact of both the personal income tax system and the incidence of indirect taxes in Ghana in an effort to highlight the gender dimensions of taxation, showing how tax policies and tax reforms can impact differentially on men and women, especially on poor women.

The results show that on average, households in Ghana pay about 7.3 per cent of total expenses on indirect taxes. Using current expenditure as a proxy for permanent income, the study shows that the incidence of indirect taxes for the nation as a whole in 2005–06 decreases from 7.8 per cent for the 1st quintile of households to 6.8 per cent for the 4th quintile and rises again to about 7.7 per cent for the top quintile. The degree of progressiveness differs across localities and across male and female types of households.

The analysis suggests that on equity grounds, policy reforms are needed to lessen the burden of taxation on poor households that have more children. Such reforms could target dual earner households within the middle-income group to finance this tax cut. The analysis also suggests that tax reform policies should target and reduce the burden of taxes on commodities such as fuel for household use, since such taxes are disproportionately regressive for female-majority households.

The simulations of policy options points to the fact that shifting different tax rates has various gender- and poverty-related effects. Examples which are feasible in terms of reducing the disparities in tax burden without reducing revenue include the removal of taxes on children's clothes and footwear, and a 50 per cent reduction in kerosene tax. Possible sources of funding within the indirect tax system include doubling of tax rates for tobacco and alcoholic beverages (although the degree of intra-household shifting needs further study) and the continued use of the newly introduced communication service tax.

A review of the personal income structure shows considerable formal equality. Tax laws do not explicitly differentiate between men and women and tax rates are the same for both sexes. There is no reference to marital status except with regard to relief provided to married dependent spouses. In terms of substantive equality, the evidence shows that the tax system discriminates against single-earner households, many of which are headed by women. On the other hand, the marriage/responsibility allowance provides valuable relief to households headed by widowed, separated and divorced persons, the majority of whom are women. These households on average tend to contain more children than similar households

headed by widowed, divorced or separated men. It is recommended that the value of the responsibility relief should be increased as well as graduated for different income groups, declining as the income of the individual increases above a threshold level. Such targeting would increase relief to low-income households without burdening the budget.

The negative effects of fiscal drag on low-income persons negatively impacts a higher proportion of women in the tax net compared to men. This is because a larger proportion of women have incomes in the first income tax bracket. It is recommended that income tax brackets be adjusted more frequently to protect the real disposable income of low-income taxpayers. Fiscal drag when it occurs is a source of revenue for the central government. It is therefore recommended that government strengthens its tax collection mechanisms to reduce tax evasion as a means of maintaining, if not increasing its tax revenues, and eliminate incentives to ignore fiscal drag.

Finally, missing from this study is information on the sex profile of personal income taxpayers. It is recommended that the Internal Revenue Service should collect information on the sex of personal income taxpayers. This will make possible more detailed analysis on the gender dimensions of income tax policies.

## Notes

1   In 2008 Purchasing Power Parity values.
2   All employers, with the exception of judges, lecturers and security institution personnel, are required to register employees.

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# 7 Gender equality and taxation in Morocco

*Ahmed El Bouazzaoui, Abdessalam Fazouane, Hind Jalal and Salama Saidi*

## Introduction

Morocco has taken significant steps in the past 15 years towards achieving greater gender equality. It ratified CEDAW in 1993 and in December 2008 announced the forthcoming withdrawal of its reservations.[1] The government is also committed to achieving the Millennium Development Goals (MDGs), including Goal 3 – to promote gender equality and empower women (see High Commission for Planning, 2005, 2007). The new Family Code, adopted in 2004, and the Nationality Code of 2007 should also be considered major gender equality reforms. Among other things, these reforms give women greater autonomy with regard to divorce and citizenship rights.

Government efforts to implement gender-responsive budgeting began in 2002, under the direction of the Ministry of Finance. The first positive impacts are already evident, especially with regard to expenditure on education, health, basic infrastructure and justice. However a gender perspective has yet to be applied on the revenue side of the budget.

This chapter investigates the gender dimensions of taxation in Morocco.[2] It first provides a brief summary of the country's income and employment structure from a gender perspective and reviews the overall tax structure, highlighting major trends and current policy debates. It then examines personal income tax (PIT) in detail, pointing out explicit and implicit gender biases and illustrating how it affects different types of households, and reviews the way in which indirect taxes, primarily value-added tax (VAT), excise tax and fuel tax, affect different gender groups. The chapter concludes with a discussion of the results of several policy simulations and offers policy recommendations.

## A gendered picture of employment and income[3]

The economically active population in Morocco aged 15 years and older was 11.1 million in 2007. Women's labour force participation rate was 27.1 per cent, much lower than the rate for men. In urban areas, 71.5 per cent of men were in the labour force, compared to 19.6 per cent of women. In rural areas, the rates were 84.6 per cent in 2007 for men and 37.7 per cent for women.
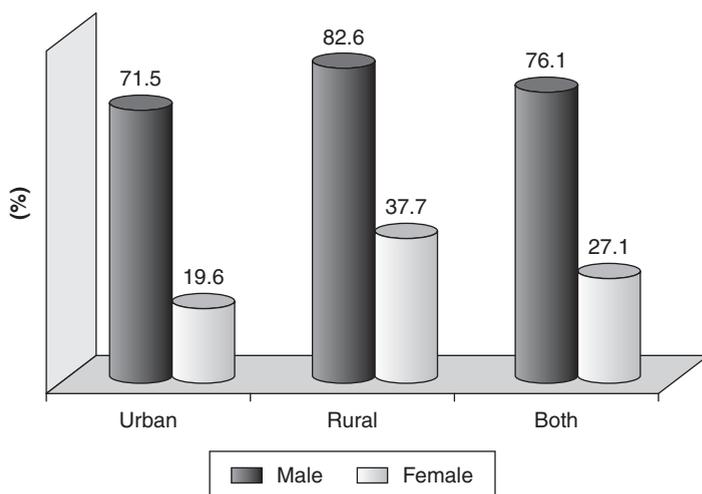
*Figure 7.1* Economically active rate by sex and residence area in 2007, Morocco.

*Source*: Employment Survey, High Commission for Planning (HCP) 2008.

Most women in the labour force work in agriculture, forestry and fisheries, industry and handicrafts. In rural areas, 92 per cent of women work in agriculture, while in urban areas, the majority have jobs in manufacturing and services. Women also play a significant role in the textile and food industries, despite unfavourable working conditions. Men are frequently employed in trade, construction, public works, mining and industry. In the informal sector, although 86.7 per cent of the workers are men, women form a clear majority of those who do work at home (69.9 per cent), in crafts, embroidery, sewing and weaving carpets.

### The public and private sectors

As household income data are not available, this profile is based on data related to wages in the public and private sectors.[4] In 2007, women represented 31.2 per cent of private-sector employees and 36.1 per cent of civil servants (see Table 7.1). Female civil servants received 32 per cent of the total payroll in 2007, versus 28 per cent in 1999. In the private sector, women received only 27 per cent of the total payroll in 2007, up from 24 per cent in 1999.[5]

Female civil servants are better paid than female employees in the private sector. The average monthly salary in the public sector climbed from 4618 dirham in 1999 to 7518 in 2007 (US$543.30 to US$884.50),[6] a total increase of 62.8 per cent. The average monthly wage of women in this sector is 18.7 per cent below that of men, and the gender wage gap varies between 17.6 and 20.2 per cent, although it closed slightly between 1999 and 2007. By contrast, the average salary in the private sector increased from 2845 dirham in 1999 to 3617 dirham

*Table 7.1*  Women's payroll share by sector and year, Morocco, (%)

| Sector | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|--------|------|------|------|------|------|------|------|------|------|
| Public | 28 | 29 | 29 | 29 | 30 | 30 | 31 | 31 | 32 |
| Private | 24 | 24 | 25 | 24 | 27 | 27 | 27 | 27 | 27 |
| Both | 25 | 26 | 26 | 26 | 28 | 28 | 28 | 28 | 29 |

*Source:* Authors' calculations based on data from National Social Security Fund (CNSS), *Statistical Yearbook of Morocco.*

*Table 7.2*  Household classification, Morocco

| Total | Headship | | Household employment categories composition | | | | Household sex | | |
|-------|----------|--------|------------------|------------------|------------------|-----------------|-----|-----|-----|
| | Male | Female | Male-breadwinner | Female-breadwinner | Dual-breadwinner | No one employed | M>F | F>M | M=F |
| 14,243 | 11,819 | 2,424 | 8,726 | 1,114 | 2,742 | 1,661 | 3,392 | 4,980 | 5,871 |
| 100% | 83% | 17% | 61% | 8% | 19% | 12% | 24% | 35% | 41% |

*Source:* Authors' calculations from National Household Consumption and Expenditure Survey, 2001.

in 2007, an overall increase of only 27.1 per cent. Wage gaps are higher in the private than in the public sector. Women's average monthly wages are 25.8 per cent less than men's monthly wages, and the gender wage gap ranges from 19 to 32.1 per cent, although it narrowed much more than did the public wage gap between 1999 and 2007 (for a disaggregated picture, see El Bouazzaoui *et al.* 2009).

### Household structure

Similar to the other studies in this volume, we defined households in terms of headship (male-headed versus female-headed), employment status (male-breadwinner households, female-breadwinner households, dual-earner households and households with no employed person) as well as in terms of their gender composition: adult male-majority households (M > F), adult female-majority households (F > M), and households with an equal number of male and female adults (M = F).

Looking at the gendered typology of households in Morocco (see Table 7.2), 17 per cent of households are female-headed, 7.8 per cent had female breadwinners and 35 per cent had a larger share of adult females than adult males (High Commission for Planning, 2001).

Table 7.3 shows the cross-tabulations of employment status and sex composition. Of the female-breadwinner households, 80 per cent are adult female majority households, while of the male-breadwinner households, only 28.8 per cent are adult male-majority. A relatively small proportion of male-breadwinner households are households in which there are a majority of adult females, which corresponds to the traditional pattern of the Moroccan family. It is important to note

*Table 7.3* Cross-tabulation of household categories by employment status and sex composition, Morocco (%)

| Household classification | Household sex composition | | | Total |
|---|---|---|---|---|
| | *Adult male majority* | *Adult female majority* | *Equal number of females and males* | |
| Dual-earner | 19.30 | 41.30 | 39.40 | 100 |
| Female-breadwinner | 4.90 | 79.90 | 15.20 | 100 |
| Male-breadwinner | 28.80 | 23.30 | 47.90 | 100 |
| No-one emplyed | 13.30 | 53.00 | 33.70 | 100 |
| Total | 23.20 | 34.70 | 42.00 | 100 |

*Source*: Author's calculations from National Household Consumption and Expenditure Survey, 2001.
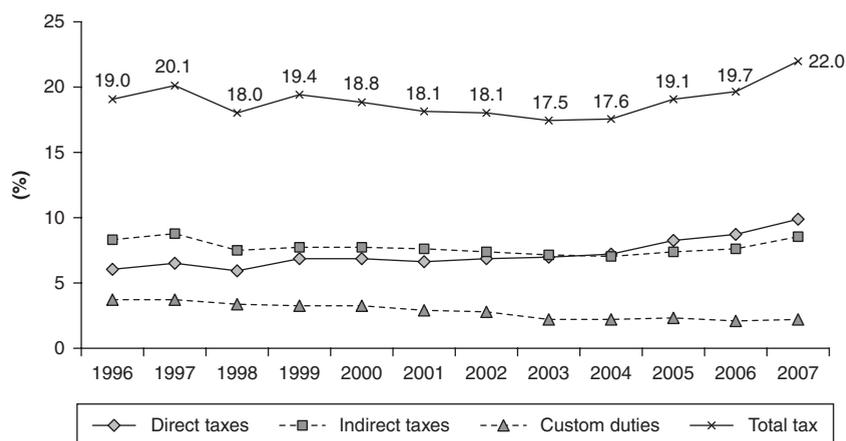


*Figure 7.2* Evolution of tax revenue, Morocco, 1996–2007 (as % of GDP).

*Source*: Authors' calculations based on Ministry of Finance data.

that 53 per cent of households with no one employed are female-majority households. On the other hand, three-quarters of adult male-majority households are made up of male-breadwinner households (ibid.).

## Tax structure in Morocco

As a proportion of GDP, tax revenues increased from 17 per cent in 1996 to 22.5 per cent in 2007. During this period, direct taxes climbed most sharply, from 5.4 per cent to 10.1 per cent, while indirect taxes edged up from 7.4 per cent to 8.7 per cent (see Figure 7.2). Consequently, as a percentage of GDP, the share of total tax revenue from customs duties slipped from 3.3 per cent to 2.2 per cent (Economics and Finance Ministry, 2008).
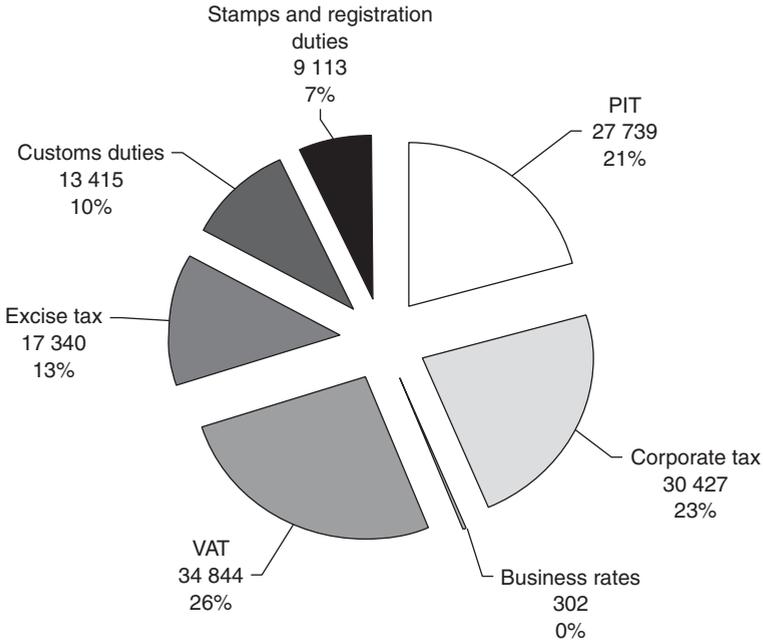
*Figure 7.3* Structure of tax revenue in 2007, Morocco.

*Source*: Authors' calculations based on Ministry of Finance data.

As a proportion of GDP, VAT revenues increased from 3.5 per cent in 1996 to 5.8 per cent in 2007. Corporate tax revenues went up most steeply during the same period, from 2 per cent to 5.1 per cent, while PIT revenues rose from 2.4 per cent to 4.6 per cent. In 2006, corporate tax revenue exceeded PIT revenue for the first time. The share of GDP from excise duties dipped from 3.9 per cent to 2.9 per cent.

### Tax revenue structure

Tax revenues represented about 87 per cent of total government receipts in 2007. Tax revenues climbed 15 per cent in 2007 to 135 billion dirham, compared to 113.5 billion a year earlier. This increase is generally attributed to improved tax administration and more accurate taxpayer declarations and control. It could also be explained by expansion of the tax base and the global impact of increased economic activity.

Direct taxes made up 44 per cent (60.4 billion dirham) of government taxation in 2007, while indirect taxes made up 39 per cent (52.1 billion dirham) (see Figure 7.3).

The decline in the share of customs duties over the past 10 years is primarily due to tariff reductions following free trade agreements concluded with the European Union (EU), the United States, Turkey, the European Free Trade
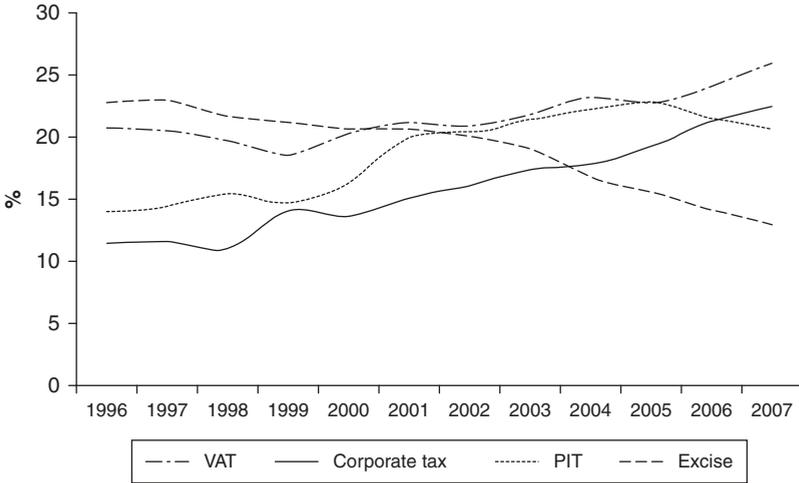
*Figure 7.4* Evolution of tax revenue structure, 1996–2007, Morocco.

*Source*: Authors' calculations based on Ministry of Finance data.

Association and Arab countries. Over the next decade these treaties will virtually eliminate customs receipts from import duties. Stamp and registration duties remained globally stable, rising slightly beginning in 2005 due to the boom in the property market (see Figure 7.4).

The increase in VAT revenues was due primarily to higher revenues from the VAT on imports and to a moderate increase in the domestic VAT. The strong performance of the import VAT stemmed from the overall growth of imports, more rigorous customs controls and a campaign against the undervaluation of imports, along with high prices for imported oil.

The jump in corporate tax revenues reflects the dynamism of economic activity, rising company profits and improved tax collection and fiscal controls. The growth in PIT revenues can be ascribed to various reforms to upgrade and increase the salaries of state employees and to widen the overall tax base. Globally, the challenge for Morocco's tax policy will be to maintain the current level of public resources by compensating for the drastic reduction in trade tariffs through an increase in domestic tax revenues.

### *Tax reform strategy*

The overall goal of the government's proposed tax reforms is to widen the tax base and reinforce transparency, simplicity and rationality. This is meant to be achieved primarily through the following strategies:

- freezing tax deductions and exemptions at current levels and gradually eliminating them entirely;

- introducing in-depth reform of the VAT, mainly by reducing progressively tax preferences, harmonizing tax thresholds, and taxing the agriculture sector by 2014;
- implementing a PIT reform based mainly based on rates reductions and exemption threshold increases;
- pursuing the modernization of the tax administration.

The success of tax policy reform will largely depend on the modernization of the tax administration system to ensure revenue generation and collection while improving the quality of services to taxpayers. The major political obstacle to these reforms is likely to be the resistance of lobbies wishing to preserve their current fiscal privileges. Greater transparency in the tax system and the development of a targeted communication policy would play an important role in overcoming this resistance (see Akesbi 2008).

### Personal income tax

Personal income tax (PIT) was introduced in 1990 to replace the system of schedular taxes on professional income, wages, and income on capital, land and other sources. This new system was introduced primarily to reduce distortions and inequities in the distribution of the tax burden between individuals and corporations and applies a single tax with a single scale to total income.

PIT is based on individual filing. Self-employed individuals are liable to file a return. Employers have the responsibility to file a return on behalf of their employees. They deduct the PIT directly from employee wages or salaries and pay it over to the tax authority. Deductions from the source make up 89 per cent of PIT revenue. The low share of non-salary revenues shows the necessity for improving PIT revenue collection. Taxpayers with farm income from a single property and those whose only income is wages paid by a single employer resident or established in Morocco who is required to deduct withholding tax are not required to provide a statement of total income, unless they believe they were overcharged or want to claim deductions (for details on liabilities and exemptions, see Akesi 2008).

In Morocco, PIT is levied on five different types of income, each of which is subject to different tax rules: professional income; agricultural income (exempt from the PIT until the end of 2013); salary income; land profits and income; and capital gains and profits. This study focuses only on the income tax applied on salaries, owing to the lack of available data on the other types of income.

For tax purposes, in addition to income derived directly from wages, the salary category includes income allowances and pay; special allowances, reimbursement of standard fees and other remuneration to the directors of corporations; pensions; and benefits in money or in kind awarded in excess of these payments. Income and profits subject to tax at a lower rate are excluded.

According to Article 2-II of the general tax code, corporations and limited liability corporations created in Morocco and including only individuals (physical

persons) can choose to file corporate tax rather than PIT, as long as the revenue service is notified (Economics and Finance Ministry, 2009). Taxes on wages make up the bulk of PIT revenue, about 71.6 per cent in 2007. Revenue from other types of income, such as professional income, is low because of benefits from exemptions and deductions. This inequity has increased over time. Box 7.1 shows the range of exemptions that reduce taxable income.

*Box 7.1* Exemptions that reduce total taxable income, Morocco

1   Function indemnities
2   Family allowances
3   Pension increases for family size
4   Disability pensions allocated to army members and their legal claimants
5   Temporary life annuities allocated to work accident victims
6   Payments for sick leave, accident, maternity and death
7   Lay-off and voluntary resignation indemnities
8   Alimony
9   Complementary pensions
10   Life insurance contracts of at least 10 years
11   Employer social security contributions
12   Employer insurance subsidies for illness, maternity, invalidity and death
13   Meal subsidies by employers
14   Salaries paid to employees by the Islamic Development Bank
16   Monthly trainee subsidies for workers recruited by the private sector
17   Student tuition
18   Training subsidies for university graduates recruited by the private sector
19   Rent revenues from new construction
20   Donations of assets between progenitors, descendants, spouses and siblings
21   Interest earned by individuals from an account in the National Savings Fund.

### Rate structure and tax preferences

Several reforms have altered both tax rates and exemption thresholds. The marginal tax rate has been gradually reduced to encourage investment and harmonize

Table 7.4 Normal PIT rates on salary revenues in 2009, Morocco

| Gross annual salary brackets | Rate (%) | Fixed deduction |
|---|---|---|
| 0–28,000 | 0 | 0 |
| 28,001–40,000 | 12 | 3,360 |
| 40,001–50,000 | 24 | 8,160 |
| 50,001–60,000 | 34 | 13,160 |
| 60,001–150,000 | 38 | 15,560 |
| 150,001–and more | 40 | 18,560 |

the PIT rate with the corporate tax rate, which has been fixed at 35 per cent. The number of PIT brackets were reduced from eight to five, including the zero rate. In addition, the threshold for income exempt from taxes has been raised to give low-income earners more purchasing power.

Between 1989 and 2009, the top marginal rate was reduced in stages from 60 per cent to 40 per cent (Table 7.4). The rates in other brackets have also been cut. The exemption threshold, set initially at 8,400 dirham per year in 1989, has been lifted several times, and rose to 28,000 dirham in 2009. Tax brackets are usually adjusted upward in relationship to increases in the private sector legal minimum wage to address fiscal drag.

Morocco's tax preferences are extremely complex and are found in all types of taxes (corporate, PIT, VAT, registration fees and stamp, licence and urban taxes). They are still increasing, with the enactment of specific new preferences. In response to this situation, in 2005, the government, with support from the European Union, initiated its first evaluation of tax preferences and their budgetary consequences. Several reports showing the cost of these tax preferences were published and annexed to the financial law.

Morocco's tax code, like those in many other countries, contains a number of deductions that reduce total income (such as donations or interest payments on loans) and deductions for professional expenses (Economics and Finance Ministry, 2009).

### Explicit and implicit biases in the PIT code

A review of the tax code reveals both an implicit and explicit gender bias (see Stotsky 1997; Elson 2006). First, an implicit gender bias may be present in the way that deductions for professional expenses are structured. Certain groups of employees – casino workers, night workers and selected other professions – can claim deductions of up to 28,000 dirham per year according to specific formulas. Males predominate in these professions; those in which women predominate are not subject to deductions for professional expenses. More broadly, deductions for certain types of expenses that may enable women to participate in paid employment – such as child care – are not available.

Second, there is an explicit bias in the way that Article 74 of the PIT code considers dependants of the taxpayer (male). These dependants include his wife; his own

*Table 7.5* Distribution of employed people across tax brackets by sex, Morocco, 2007

| Gross annual tax brackets | PIT rate 1999 to 2006 (%) | % of employees – 2007 | | | | | |
|---|---|---|---|---|---|---|---|
| | | Public sector | | | Private sector | | |
| | | M | F | MF | M | F | MF |
| 0 to 20,000 | 0 | 0.3 | 1.6 | 0.7 | 25.5 | 34.8 | 28.4 |
| 20001 to 24,000 | 13 | 0.8 | 1.1 | 0.9 | 14.5 | 16.0 | 15.0 |
| 24,001 to 36,000 | 21 | 11.7 | 12.3 | 11.9 | 30.9 | 28.0 | 30.0 |
| 36,001 to 60,000 | 35 | 24.7 | 34.7 | 28.3 | 14.4 | 9.8 | 13.0 |
| 60,001 and up | 44 | 62.5 | 50.4 | 58.1 | 14.7 | 11.5 | 13.7 |
| Total | | 100 | 100 | 100 | 100 | 100 | 100 |

*Source*: Authors' calculations from *Statistical Yearbook of Morocco*, CNSS.

children and other children for whom he has legal responsibility. Women receive reductions for dependants only if they are able to prove legally that their husbands and children are financially dependent on them. This provision in Article 74 should be removed from the tax code. It conflicts with the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), as well as Article 4 of the 2004 Moroccan Family Code, which specifies that both spouses are responsible for a family. CEDAW Article 5 mandates signatory states to take all appropriate measures (to modify the social and cultural patterns of conduct of men and women) required to achieve substantive equality (Elson 2006). This suggests that the design of the income tax system not only should give males and females the same taxpayer status with equal entitlements but also might consider additional deductions aimed at alleviating inequalities in the labour market and in unpaid work.

Table 7.5 shows the distribution of employed people across tax brackets by sex. It is calculated from data on public and private sector employees in 2007. This table shows that women are more likely to be found in the lower salary brackets exempt from PIT: 34.8 per cent in the private sector and 1.6 per cent in the public sector. The table also shows that more women in the upper revenue brackets work in the public sector (50.4 per cent) than in the private sector (11.5 per cent), however, the percentage of men in the upper brackets is higher in both sectors.

### Hypothetical PIT scenarios

Three hypothetical cases depicting PIT treatment of individuals in different households with two children illustrate the biases that exist in PIT by detailing the wide variation in the burden it places on each household type due to the way deductions are structured. The households in each of the three cases have the same total income (half the median; median; and twice the median). In all scenarios, all households except the single-breadwinner household include dependants (spouse + two children).

*Table 7.6* Comparison of effective average individual tax rates, Morocco (%)

| Category of taxpayer | ½ median income | Median income 2 times | Median income |
|---|---|---|---|
| Single-breadwinner HH (no children) | 2.1 | 13.2 | 23.1 |
| Male-breadwinner HH | 0.6 | 12.4 | 22.7 |
| Female-breadwinner HH | 0.6 | 12.4 | 22.7 |
| Dual-breadwinner egalitarian M | 0.0 | 0.6 | 12.4 |
| Dual-breadwinner egalitarian F | 0.0 | 2.1 | 13.2 |
| Dual-breadwinner (M earn > F) M | 0.0 | 4.4 | 16.4 |
| Dual-breadwinner (M earn > F) F | 0.0 | 0.0 | 8.2 |
| Dual-breadwinner (F earn > M) M | 0.0 | 0.0 | 7.1 |
| Dual-breadwinner (F earn > M) F | 0.0 | 5.6 | 17.1 |

*Source:* E1 Bouazzaoui *et al*. (2009).

### Case 1: Half the median income

In Case 1, all households earn the same total income, 2912 dirham. Couples with a spouse and two children in either male-/female-breadwinner or dual-earner households earning half the median are below the exemption ceiling and pay no tax. On the other hand, single breadwinners with or without adult dependants (mother, father, brothers or sisters) pay the heaviest effective average tax rate. This applies to all scenarios (see Table 7.6).

### Case 2: Median income

In Case 2, each household earns 5825 dirham. Globally, single-breadwinner households at the median income pay more taxes than other types of households. Deductions for dependants lower the tax burden on both male- and female-breadwinner households with children. In addition, households with dual breadwinners who have equal incomes pay less tax than other households with the same total earnings. However, an implicit gender bias shows up in dual-earner households where the woman's income is higher than the man's; those households pay more tax than those where the man earns a higher income, because the tax reduction for dependants favours male breadwinners as noted above. This bias was not evident in Case 1, where most households have incomes under the exemption threshold and therefore pay zero tax (see Table 7.6).

### Case 3: Twice the median income

Each household in this case earns 11,649 dirham. Globally, single-breadwinner households that earn twice the median income pay more taxes than other types of household. On the other hand, the reduction for dependants slightly eases the tax burden on male- and female-breadwinner households with dependants. Dual-earner households where the two earners have equal incomes pay less tax than the

other categories. Just as in Case 2, dual-breadwinner households where the woman earns a higher income than the man pay more tax than those where the man's income is higher, due to the tax reduction for dependants that systematically favours male breadwinners (see Table 7.6).

It is also noteworthy that child allowances (200 dirham for each of the first three children and 30 dirham for each of the next three) are granted based on the same criteria as dependants for male and female taxpayers. This systematic bias widens the differing net tax burdens among male and female dual-earner households, with the least tax owed by households in which the man and woman have equal incomes. This bias occurs in all three income categories.

## Indirect taxes

This section analyses the incidence of the VAT, excise taxes, the fuel tax and the incidence of the total of these three indirect taxes. The data are drawn from the Morocco National Household Consumption Expenditure Survey of 2000–01. We compared the tax revenue estimate from the year 2000 household survey used for this study with the tax revenue reported in Morocco's official accounting system for the same year. The household survey data report a lower estimate of total tax (16,014 billion dirhams) than Morocco's national accounts (30,216 billion dirhams); the difference is 14,202 billion dirhams. The greatest discrepancy is found in fuel taxes followed by excise taxes. For fuel taxes, this discrepancy can be explained by the fact that the national accounts reflect two categories of fuel consumers: households and the industrial sector; most fuel is consumed by Moroccan industry. For excise taxes, the gap could be explained by the inclusion of consumption by non-residents (tourists) in government revenues; their alcohol consumption is significantly higher than that of Moroccans. Furthermore, many people may underreport their consumption in the survey of alcohol consumption and expenditures.

Given the nature of the data, which collects expenditure by households, the analysis is done at the household level. Nonetheless, using the typology described above, we attempt to explore incidence across households with different gender characteristics. Following the incidence analysis, we present a set of simulations to highlight how different policy reforms would affect tax incidence. We then use the results of the simulations to suggest some potential reforms in the country's tax policies that make them more gender-aware.

Morocco has four VAT rates: a standard rate of 20 per cent and three reduced rates of 14, 10 and 7 per cent. The Moroccan VAT system also includes both zero-rating and exemptions. With zero-rating, a VAT of 0 per cent is levied on sales, but VAT incurred in producing the good or service can be claimed on a tax return. With exemptions, no VAT is levied and no input costs can be claimed (see Box 7.2).

*Box 7.2* VAT rate structure, Morocco

| | |
|---|---|
| Exemptions | • All basic foods (cereals, bread, milk, fish, meat, fruits and vegetables, etc.). unprocessed food, sugar, salt<br>• Paraffin and candles<br>• Books and newspapers<br>• Medicine<br>• Self-construction of main home less than 300 m²<br>• Health care acts, dental and nursing services<br>• Education<br>• Handicrafts<br>• Agriculture products and services<br>• Tools and machinery for handicapped persons<br>• Micro credit |
| Zero-rating | • Exports<br>• Fertilizers<br>• Agriculture tools<br>• Acquisition of vehicles for taxi usage<br>• Residential building construction<br>• International passenger transport and services<br>• Acquisition of busses and lorries for transport by international transport enterprises<br>• Goods and services for movies production by foreign companies<br>• Purchases of goods and services by diplomats<br>• Products and equipment for haemodialysis and medicine against cardiovascular diseases, diabetes, asthma and AIDS<br>• Donations<br>• Purchase of equipment for NGO |
| 7% | In the case of a VAT rate of 7%, it is possible to claim VAT for the following:<br>• Mass consumption products (water, gas and petroleum oils, pharmaceuticals, school supplies, etc.)<br>• Refined sugar<br>• Animal feed<br>• Economical car and all products and materials used in its manufacture, and the benefits of assembling the car<br>• The toll due on the highways |
| 10% | In the case of a VAT rate of 10%, it is possible to claim VAT incurred in producing goods or services related to:<br>• Hotel and tourist services<br>• Restaurant services<br>• Catering services to employees<br>• Comestible oil<br>• Rice, pasta and salt<br>• Financial and banking services<br>• Lawyers, interpreters, veterinarians ... etc. |

*Box 7.2* (Continued) VAT rate structure, Morocco

| 14% | In the case of VAT rate of 14%, it is possible to claim VAT incurred in producing the following: construction work, tea, butter, transport, electricity, economical commercial vehicle, economical moped, etc. But no VAT can be claimed for insurance services provided by broker-dealers |
| --- | --- |
| Specific VAT rates | • 100 DH per hectolitre of wine applied to wine and alcoholic beverages sales for take away<br>• 4 DH per gram of gold<br>• 0.05 DH per gram of silver |

The VAT is computed according to the following formula:

$$\tau_2 = t_2 \frac{P\pi c}{(1 + t_2)}$$

Where the tax paid ($\tau_2$) = expenditure ($P\pi c$) × tax rate ($t_2$)/ (1 + tax rate) and incidence is defined by the ratio of tax paid divided by expenditure.

Excise tax is computed on the basis of the tax paid on the per unit price (i.e., dirhams per hectolitre of wine, beer and liquors sold). Added to that is a specific VAT of 100 dirhams/Hl+ other fiscal items. Fuel and energy taxes are computed on the basis of import duties plus 7 per cent of VAT rates on all components of energy products (petroleum, butane, kerosene, etc.). The tax on imported tobacco is computed according to basic import duties on each specific product (i.e., unprocessed and raw tobacco, cigarettes, cigars, snuff and other raw products), to which an ad valorem rate of 65 per cent and supplementary taxes are applied. The tax on domestic tobacco products is based on the amount of sales of finished products and is 65 per cent of the retail price.

### *Indirect tax incidence analysis*

The incidence of indirect taxes is computed for each type of tax as well as specific categories of goods consumed. Beginning first with type of tax and considering household employment categories, the data in Table 7.7 and Figure 7.5 show that dual-earner households bear the highest tax incidence across total indirect taxes and each type of tax – VAT, excise and fuel. They have a higher overall tax incidence than either male- or female-breadwinner households. Male-breadwinner households bear a higher overall tax incidence than do female-breadwinner households.

Table 7.8 indicates how the pattern of indirect tax incidence can vary across quintiles and be affected by the presence of children, who shift household expenditure patterns. Generally, households with children bear a higher burden of total of indirect taxes across quintiles than households without children. The highest total tax incidence falls on the richest (5th) quintile of the dual-earner category with children; the pattern is similar for VAT and fuel taxes. The pattern is different for

*Table 7.7* Overall incidence by household type, Morocco

|  | Total tax | VAT | Excise tax | Fuel tax | Number of households |
|---|---|---|---|---|---|
| *Head of household* | | | | | |
| Male-headed | 0.05565 | 0.04468 | 0.00807 | 0.0029 | 11,819 |
| Female-headed | 0.05336 | 0.04538 | 0.00649 | 0.001748 | 2,424 |
| *Employment categories* | | | | | |
| Dual-earner | 0.05954 | 0.04774 | 0.00871 | 0.00309 | 2,742 |
| Female-breadwinner | 0.05108 | 0.04516 | 0.0045 | 0.00141 | 1,114 |
| Male-breadwinner | 0.05494 | 0.04387 | 0.00826 | 0.0028 | 8,726 |
| No one employed | 0.05071 | 0.04371 | 0.00498 | 0.00201 | 1,661 |
| *Household composition by gender* | | | | | |
| Adult male-majority household (HH) | 0.05695 | 0.04454 | 0.00961 | 0.00279 | 3,392 |
| Adult female-majority HH | 0.05376 | 0.04556 | 0.00574 | 0.00246 | 4,980 |
| Equal number of females and males | 0.05575 | 0.04418 | 0.00865 | 0.00291 | 5,871 |
| Total | 0.05535 | 0.04477 | 0.00786 | 0.00271 | 14,243 |
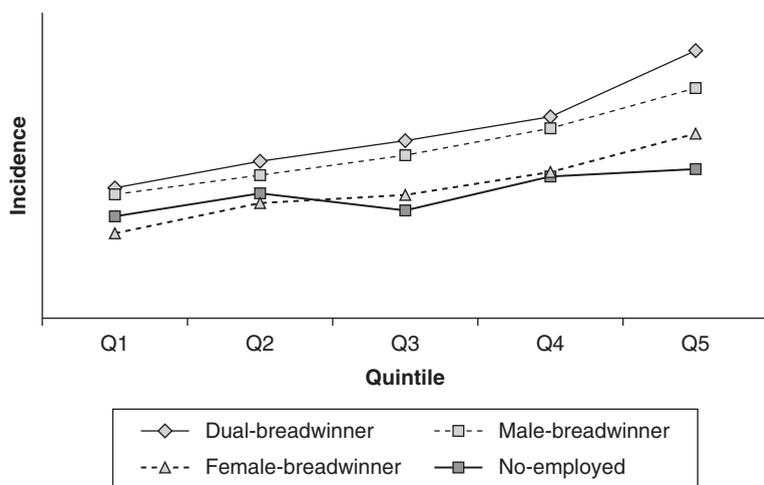


*Figure 7.5* Tax incidence by gender, employment status and quintile (as % of tax expenditure), Morocco.

excise taxes: dual earners without children in the second and third quintiles bear the highest burden of those taxes.

Further examination shows the VAT is progressive for all household categories, with and without children, increasing steadily from across households in the first to the last expenditure quintiles. Tax incidence is roughly the same for
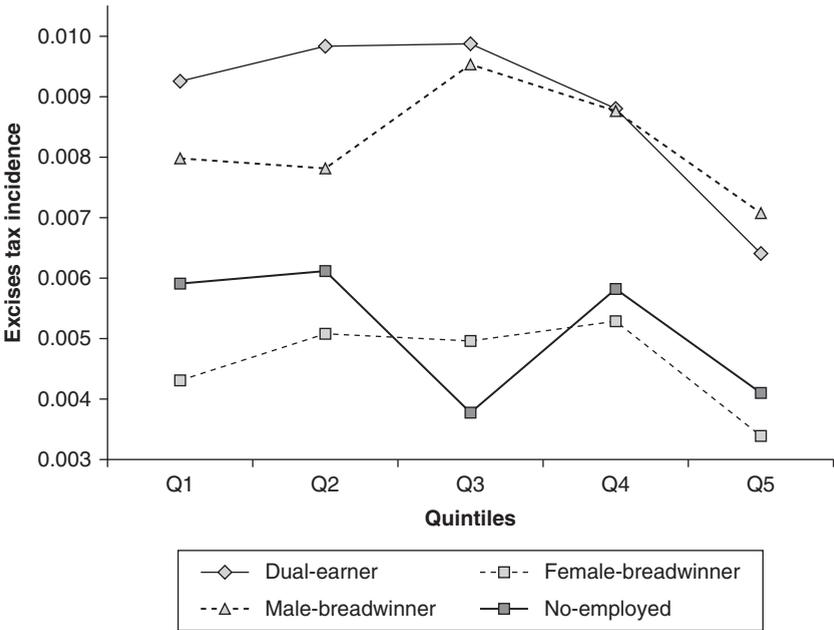
*Figure 7.6* Excise tax incidence by gender, employment status and quintile (as % of expenditures), Morocco.

female- and male-breadwinner households, while households with no employed individuals bear the lowest incidence.

Excise taxes show a less consistent pattern, falling most heavily on dual-earner and male-breadwinner households (see Figure 7.6). Among dual-earner households, the 2nd and 3rd quintiles bear the largest incidence, while the 3rd quintile of male-breadwinner households bears the largest incidence. Female-breadwinner households bear the smallest incidence of excise taxes.

What do we make of these results? It is reassuring that the incidence both of total indirect taxes and of the VAT specifically is progressive. At the same time, the system contains horizontal inequities between households with one adult earner and a financially dependent spouse and households with two adult earners who have the same income. The elimination of this type of horizontal inequity may be a subject of consideration for future to reforms of the Moroccan personal income tax system.

### *Tax incidence by consumption patterns*

The gendered pattern of consumption affects the way tax incidence will be felt among different household types. Female-type households purchase different baskets of goods than do male-type households, which will directly affect the tax burden each bears (see Table 7.9). We highlight first the commodities that have

*Table 7.8* Tax incidence by gender and employment status, presence of children and quintile, Morocco

| Quintiles | Total tax | VAT | Excise tax | Fuel tax | Number HH | Total tax | VAT | Excise tax | Fuel tax | Number HH | Total tax | VAT | Excise tax | Fuel tax | Number HH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Dual-earner with children* | | | | | *Dual-earner without children* | | | | | *Dual-earner Total* | | | | |
| Q1 | 4.72 | 3.68 | 0.95 | 0.09 | 402 | 3.97 | 3.73 | 0.19 | 0.05 | 18 | 4.69 | 3.68 | 0.92 | 0.09 | 420 |
| Q2 | 5.16 | 4.07 | 0.94 | 0.15 | 440 | 5.40 | 3.89 | 1.36 | 0.16 | 61 | 5.18 | 4.05 | 0.98 | 0.15 | 501 |
| Q3 | 5.66 | 4.52 | 0.96 | 0.19 | 446 | 5.32 | 4.02 | 1.19 | 0.11 | 95 | 5.62 | 4.45 | 0.99 | 0.18 | 541 |
| Q4 | 6.31 | 5.09 | 0.89 | 0.34 | 419 | 5.56 | 4.48 | 0.84 | 0.24 | 138 | 6.18 | 4.98 | 0.88 | 0.32 | 557 |
| Q5 | 7.57 | 6.26 | 0.60 | 0.71 | 530 | 7.54 | 6.10 | 0.81 | 0.63 | 193 | 7.57 | 6.23 | 0.65 | 0.69 | 723 |
| Total | 5.92 | 4.76 | 0.86 | 0.30 | 2237 | 6.16 | 4.88 | 0.94 | 0.34 | 505 | 5.95 | 4.77 | 0.87 | 0.31 | 2,742 |
| | *Female-breadwinner with children* | | | | | *Female-breadwinner without children* | | | | | *Female-breadwinner Total* | | | | |
| Q1 | 4.14 | 3.58 | 0.45 | 0.11 | 130 | 3.45 | 3.37 | 0.00 | 0.08 | 13 | 4.07 | 3.48 | 0.47 | 0.11 | 34 |
| Q2 | 4.61 | 3.95 | 0.51 | 0.15 | 130 | 4.07 | 3.48 | 0.47 | 0.11 | 34 | 4.09 | 3.73 | 0.32 | 0.05 | 65 |
| Q3 | 4.87 | 4.24 | 0.54 | 0.10 | 151 | 4.09 | 3.73 | 0.32 | 0.05 | 65 | 4.65 | 4.11 | 0.45 | 0.08 | 103 |
| Q4 | 5.53 | 4.88 | 0.56 | 0.09 | 131 | 4.65 | 4.11 | 0.45 | 0.08 | 103 | 6.20 | 5.56 | 0.35 | 0.29 | 198 |
| Q5 | 6.27 | 5.74 | 0.33 | 0.21 | 159 | 6.20 | 5.56 | 0.35 | 0.29 | 198 | 5.19 | 4.65 | 0.37 | 0.18 | 413 |
| Total | 5.08 | 4.48 | 0.48 | 0.13 | 701 | 5.19 | 4.65 | 0.37 | 0.18 | 413 | 4.14 | 3.58 | 0.45 | 0.11 | 130 |
| | *Male-breadwinner with children* | | | | | *Male-breadwinner without children* | | | | | *Male-breadwinner Total* | | | | |
| Q1 | 4.62 | 3.69 | 0.81 | 0.12 | 1568 | 4.04 | 3.44 | 0.48 | 0.12 | 64 | 4.87 | 4.24 | 0.54 | 0.10 | 151 |
| Q2 | 4.96 | 3.99 | 0.77 | 0.19 | 1609 | 4.40 | 3.42 | 0.87 | 0.12 | 132 | 5.53 | 4.88 | 0.56 | 0.09 | 131 |
| Q3 | 5.50 | 4.28 | 0.96 | 0.25 | 1504 | 4.59 | 3.64 | 0.87 | 0.08 | 258 | 6.27 | 5.74 | 0.33 | 0.21 | 159 |
| Q4 | 6.04 | 4.81 | 0.85 | 0.38 | 1398 | 5.35 | 4.10 | 1.03 | 0.21 | 381 | 5.08 | 4.48 | 0.48 | 0.13 | 701 |
| Q5 | 7.04 | 5.82 | 0.62 | 0.60 | 1190 | 6.66 | 5.20 | 0.98 | 0.47 | 622 | 4.10 | 3.57 | 0.43 | 0.11 | 143 |
| Total | 5.49 | 4.39 | 0.81 | 0.28 | 7269 | 5.54 | 4.33 | 0.94 | 0.27 | 1457 | 4.54 | 3.88 | 0.51 | 0.15 | 164 |
| | *No-employed with children* | | | | | *No-employed without children* | | | | | *No-employed Total* | | | | |
| Q1 | 4.39 | 3.68 | 0.59 | 0.12 | 135 | 3.83 | 3.19 | 0.57 | 0.06 | 39 | 5.27 | 4.65 | 0.53 | 0.09 | 234 |
| Q2 | 4.74 | 4.05 | 0.56 | 0.13 | 135 | 4.52 | 3.55 | 0.92 | 0.05 | 46 | 6.24 | 5.66 | 0.34 | 0.24 | 357 |
| Q3 | 4.62 | 4.08 | 0.42 | 0.12 | 176 | 4.01 | 3.69 | 0.16 | 0.17 | 72 | 5.11 | 4.52 | 0.45 | 0.14 | 1,114 |
| Q4 | 5.53 | 4.68 | 0.60 | 0.25 | 245 | 4.37 | 3.71 | 0.53 | 0.12 | 177 | 4.04 | 3.44 | 0.48 | 0.12 | 64 |
| Q5 | 5.92 | 5.22 | 0.39 | 0.31 | 255 | 5.47 | 4.75 | 0.42 | 0.31 | 381 | 4.40 | 3.42 | 0.87 | 0.12 | 132 |
| Total | 5.14 | 4.43 | 0.51 | 0.20 | 946 | 4.87 | 4.19 | 0.47 | 0.21 | 715 | 4.59 | 3.64 | 0.87 | 0.08 | 258 |

*Table 7.9* Expenditure on basic services and commodities by household type, Morocco (%)

|  | Dual-earner | Female-breadwinner | Male-breadwinner | No-employed | Total |
|---|---|---|---|---|---|
| Total Food | 22.7 | 6.8 | 60.2 | 10.2 | 100.0 |
| Food: Basic unprocessed | 22.2 | 6.7 | 60.8 | 10.2 | 100.0 |
| Food: Basic processed | 22.3 | 7.0 | 60.0 | 10.7 | 100.0 |
| Children's clothing and footwear | 24.0 | 5.7 | 60.9 | 9.3 | 100.0 |
| Alcohol | 43.5 | 2.1 | 46.7 | 7.6 | 100.0 |
| Tobacco | 25.7 | 3.9 | 64.0 | 6.4 | 100.0 |
| Medical Expenditure | 24.2 | 9.4 | 53.0 | 13.4 | 100.0 |
| Fuel for transport | 34.2 | 3.9 | 54.8 | 7.1 | 100.0 |
| Fuel for household use | 17.0 | 6.0 | 66.1 | 10.8 | 100.0 |
| Housing | 23.3 | 7.6 | 56.8 | 12.3 | 100.0 |
| Water electricity and gas (*) | 25.4 | 7.6 | 57.2 | 9.8 | 100.0 |

the highest incidence and then examine which households bear the highest incidence of different goods. We focus especially on goods that are essential to household well-being as well as those that affect the amount of unpaid work and, therefore, the gender division of labour in households.

All basic unprocessed food products, as well as airline travel, education and personal hygiene products are zero-rated in Morocco. These items were omitted from Table 7.10, which presents tax incidence by product and by quintile. Examining the data in this table, it appears that the commodity with the highest incidence is basic processed goods, followed by furniture, equipment, maintenance and by tobacco. The commodity category with the lowest incidence is non-alcoholic drinks. However, the incidence of tobacco is small, and both tobacco and alcoholic beverages have no tax incidence in most quintiles, with the exception of wealthier male-breadwinner and dual-earner households. Taxes for meals out are progressive for male-breadwinner, female-breadwinner and dual-earner households, and regressive for households with no earners in quintiles 2 through 5.

Across the income distribution, one might ask the question: which household types bear the highest tax incidence and on what commodities? All household types in the 1st (poorest) quintile bear the largest burden, compared to the richest households, of taxes on basic processed food. Compared to households in the richest quintile and to female-breadwinner households, the poorest male-breadwinner and dual-earner households bear a higher incidence of tax on

*Table 7.10*  Tax incidence of commodities, by household employment status and quintile (%)

| Categories | Male-breadwinner | | | | | | Female-breadwinner | | | | | | Dual-earner | | | | | | No-employed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | 05 | Total |
| Basic processed | 1.104 | 0.965 | 0.892 | 0.823 | 0.730 | 0.914 | 1.150 | 1.043 | 0.957 | 0.849 | 0.776 | 0.933 | 1.058 | 0.920 | 0.850 | 0.769 | 0.660 | 0.838 | 1.191 | 1.033 | 0.869 | 0.902 | 0.822 | 0.098 |
| Sugar/confectionery and others | 0.235 | 0.174 | 0.139 | 0.110 | 0.080 | 0.152 | 0.224 | 0.194 | 0.155 | 0.131 | 0.086 | 0.149 | 0.228 | 0.164 | 0.134 | 0.110 | 0.073 | 0.137 | 0.232 | 0.162 | 0.142 | 0.119 | 0.092 | 0.136 |
| Meals out | 0.109 | 0.155 | 0.171 | 0.189 | 0.194 | 0.161 | 0.045 | 0.053 | 0.096 | 0.100 | 0.142 | 0.094 | 0.115 | 0.168 | 0.204 | 0.242 | 0.212 | 0.191 | 0.068 | 0.095 | 0.082 | 0.080 | 0.079 | 0.081 |
| Non-alcoholic beverages | 0.016 | 0.025 | 0.42 | 0.055 | 0.088 | 0.043 | 0.004 | 0.028 | 0.054 | 0.059 | 0.108 | 0.057 | 0.013 | 0.030 | 0.055 | 0.063 | 0.099 | 0.055 | 0.012 | 0.016 | 0.049 | 0.064 | 0.088 | 0.055 |
| Alcoholic beverages | 0.000 | 0.000 | 0.002 | 0.000 | 0.003 | 0.001 | 0.003 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.007 | 0.001 | 0.000 | 0.000 | 0.000 | 0.008 | 0.000 | 0.002 |
| Tobacco | 0.817 | 0.792 | 0.963 | 0.880 | 0.700 | 0.834 | 0.431 | 0.503 | 0.496 | 0.523 | 0.337 | 0.449 | 0.929 | 0.996 | 0.991 | 0.887 | 0.630 | 0.873 | 0.594 | 0.630 | 0.376 | 0.578 | 0.402 | 0.499 |
| Adult clothing | 0.174 | 0.242 | 0.299 | 0.365 | 0.478 | 0.302 | 0.170 | 0.221 | 0.345 | 0.361 | 0.548 | 0.354 | 0.187 | 0.279 | 0.371 | 0.477 | 0.581 | 0.393 | 0.123 | 0.248 | 0.224 | 0.291 | 0.412 | 0.287 |
| Children's clothing | 0.274 | 0.278 | 0.289 | 0.308 | 0.259 | 0.282 | 0.288 | 0.298 | 0.236 | 0.249 | 0.205 | 0.249 | 0.242 | 0.277 | 0.275 | 0.281 | 0.244 | 0.263 | 0.241 | 0.321 | 0.266 | 0.282 | 0.245 | 0.268 |
| Utilities | 0.192 | 0.230 | 0.254 | 0.260 | 0.226 | 0.232 | 0.208 | 0.223 | 0.309 | 0.319 | 0.265 | 0.268 | 0.224 | 0.265 | 0.244 | 0.269 | 0.216 | 0.243 | 0.268 | 0.278 | 0.309 | 0.309 | 0.294 | 0.294 |
| Housing | 0.078 | 0.126 | 0.149 | 0.156 | 0.201 | 0.138 | 0.075 | 0154 | 0.105 | 0.209 | 0.139 | 0.138 | 0.108 | 0.128 | 0.169 | 0.201 | 0.209 | 0.167 | 0.063 | 0.084 | 0.121 | 0.183 | 0.183 | 0.142 |
| Fuel for HH use | 0.314 | 0.324 | 0.296 | 0.260 | 0.171 | 0.278 | 0.292 | 0.261 | 0.236 | 0.220 | 0.164 | 0.227 | 0.302 | 0.263 | 0.212 | 0.156 | 0.108 | 0.201 | 0.344 | 0.282 | 0.297 | 0.239 | 0.207 | 0.259 |
| Furniture, equipment & maintenance | 0.506 | 0.507 | 0.503 | 0.561 | 0.679 | 0.545 | 0.500 | 0.567 | 0.481 | 0.596 | 0.695 | 0.579 | 0.487 | 0.516 | 0585 | 0.556 | 0.664 | 0.568 | 0.385 | 0.479 | 0.432 | 0.542 | 0.644 | 0.524 |
| Medical expenditure | 0.140 | 0.204 | 0.209 | 0.257 | 0.286 | 0.215 | 0.185 | 0.183 | 0.226 | 0.322 | 0.443 | 0.290 | 0.139 | 0.222 | 0.249 | 0.277 | 0.278 | 0.237 | 0.165 | 0.175 | 0.319 | 0.265 | 0.383 | 0.284 |
| Collective forms of transport | 0.080 | 0.082 | 0.099 | 0.123 | 0.141 | 0.103 | 0.058 | 0.122 | 0.184 | 0.159 | 0.212 | 0.156 | 0.089 | 0.123 | 0.160 | 0.213 | 0.148 | 0.148 | 0.083 | 0.077 | 0.102 | 0.128 | 0.113 | 0.106 |
| Private Transport | 0.024 | 0.042 | 0.066 | 0.123 | 0.433 | 0.124 | 0.010 | 0.009 | 0.018 | 0.074 | 0.252 | 0.090 | 0.038 | 0.038 | 0.070 | 0.102 | 0.588 | 0.190 | 0.015 | 0.100 | 0.021 | 0.046 | 0.187 | 0.088 |
| Fuel for transport | 0.071 | 0.156 | 0.220 | 0.369 | 0.640 | 0.273 | 0.065 | 0.119 | 0.053 | 0.058 | 0.248 | 0.119 | 0.040 | 0.121 | 0.167 | 0.344 | 0.793 | 0.322 | 0.068 | 0.078 | 0.093 | 0.204 | 0.321 | 0.184 |
| Communication | 0.065 | 0.104 | 0.192 | 0.291 | 0.419 | 0.202 | 0.060 | 0.092 | 0.267 | 0.318 | 0.500 | 0.277 | 0.069 | 0.152 | 0.202 | 0.369 | 0.487 | 0.271 | 0.073 | 0.167 | 0.267 | 0.326 | 0.397 | 0.282 |
| Recreation | 0.086 | 0.123 | 0.143 | 0.205 | 0.282 | 0.162 | 0.089 | 0.134 | 0.143 | 0.147 | 0.263 | 0.166 | 0.102 | 0.148 | 0.158 | 0.204 | 0.341 | 0.200 | 0.070 | 0.149 | 0.129 | 0.209 | 0.214 | 0.170 |
| Health care products | 0.119 | 0.133 | 0.142 | 0.146 | 0.162 | 0.139 | 0.106 | 0.159 | 0.164 | 0.178 | 0.242 | 0.177 | 0.122 | 0.157 | 0.166 | 0.188 | 0.220 | 0.174 | 0.108 | 0.139 | 0.113 | 0.128 | 0.139 | 0.127 |
| Baby products | 0.004 | 0.005 | 0.005 | 0.007 | 0.008 | 0.006 | 0.009 | 0.003 | 0.002 | 0.004 | 0.001 | 0.003 | 0.002 | 0.003 | 0.004 | 0.005 | 0.006 | 0.004 | 0.003 | 0.003 | 0.013 | 0.007 | 0.003 | 0.006 |
| Miscellaneous | 0.187 | 0.257 | 0.328 | 0.451 | 0.762 | 0.378 | 0.117 | 0.162 | 0.191 | 0.380 | 0.606 | 0.324 | 0.189 | 0.202 | 0.343 | 0.454 | 0.994 | 0.469 | 0.224 | 0.187 | 0.289 | 0.326 | 0.505 | 0.340 |
| Number of households | 1632 | 1741 | 1762 | 1779 | 1812 | 8726 | 143 | 164 | 216 | 234 | 357 | 1114 | 420 | 501 | 541 | 557 | 723 | 2742 | 174 | 181 | 248 | 422 | 636 | 1661 |

tobacco products and on fuel for household use. Male breadwinner households, female-breadwinner households and dual-earner households in the richest (5th) quintile bear the highest tax incidence on fuel for transport, medical expenditure, housing, and alcohol, compared to households in the poorest quintiles and to female-breadwinner households (the exception is medical expenditure, which is higher among female-breadwinner households). The richest female-breadwinner households have the highest incidence of all households on collective forms of transport.

For *male-breadwinner* households, the tax incidence is increasing with level of expenditure for meals out and private transport, and this trend is reversed for basic processed food, tobacco and housing. For *female-breadwinner households*, the tax incidence is felt more by the higher bracket of household expenditure on collective forms of transport and health care products. For both dual-earner and no-earner households, taxes are increasing as the level of expenditures decreases on basic foods and this pattern is reversed for fuel transport, communication, and recreation and baby products. Tax incidence remains nearly proportional for children's clothing (see El Bouazzaoui *et al*. 2009).

In conclusion, the poorest brackets of consumers bear the highest tax incidence on the basic goods, and the richest bracket bears the highest tax on alcoholic drinks. Female breadwinners bear a higher tax incidence on basic processed foods and collective forms of transport, while male breadwinners bear a higher tax incidence on meals out, tobacco, private transport and fuel for transport, and this shows that the male-earner household are better off economically as compared to female households.

## Policy simulations

Government revenue from current tax rates is estimated at 16,014 billion dirham. The losses or gains on this revenue due to the various scenarios in our simulations will be computed with reference to this current value.

We simulated two policy experiments. The first simulates changes in rates for selected household goods, namely food, leisure and recreation. Between 2000 (the year of our data) and 2009, the Moroccan government made a number of changes to the VAT rates on these items. VAT rates were increased on a number of basic food items, a number of tobacco products and leisure goods (especially computer games, which were previously exempt from VAT and are now taxed at the top VAT rate of 20 per cent). The first scenario applies the new 2009 rates to the 2000 expenditure data. The objective was to see the impact on tax incidence if the prevailing tax rates of 2009 were applied to the consumption pattern of the year 2000–01. The second scenario reduces tax rates on three staple products – tea, coffee and edible oil – and balances that by an increase of tax rates on tobacco and leisure. This scenario maintains revenue neutrality by applying the maximum VAT rate on these two items. Box 7.3 shows the VAT rates on 19 items in 2000, along with the rates in 2009 and in the two simulations.

*Box 7.3* VAT rates for 19 expenditures in 2000, 2009 and policy simulation, Morocco

| Item code | Expenditure item | VAT rate (2000) | VAT rate (2009) | Simulation |
|---|---|---|---|---|
| DAMP016 | 016 Pasta | 7 | 10 | 7 |
| DAMP031 | 031 Butter | Exemption | 14 | Exemption |
| DAMP032 | 032 Edible oil | 7 | 10 | 0 |
| DAMP111 | 111 Tea | 14 | 14 | 7 |
| DAMP112 | 112 Coffee | 14 | 20 | 7 |
| DAMP121 | 121 Salt | Exemption | 10 | Exemption |
| DAMP161 | 161 Cigarettes and Cigars | Exemption | 20 | 20 |
| DAMP162 | 162 Tobacco (including cigarettes) | Exemption | 20 | 20 |
| DAMP163 | 163 Other smoked products | Exemption | 20 | 20 |
| DAMP715 | 715 Computer and video games appliances | Exemption | 20 | 20 |
| DAMP724 | 724 Pets | Exemption | Exemption | 20 |
| DAMP731 | 731 Cinema, theatre, music performances, shows and assimilated activities | 0 | 0 | 20 |
| DAMP732 | 732 Sports shows | Exemption | Exemption | 20 |
| DAMP733 | 733 Other common entertainment activities | Exemption | Exemption | 20 |
| DAMP735 | 735 Books (excl. school textbooks), newspapers and assimilated | Exemption | Exemption | 20 |
| DAMP736 | 736 Photos and films | 0 | Exemption | 20 |
| DAMP737 | 737 Gambling games | Exemption | 20 | 20 |
| DAMP738 | 738 Audiovisual subscriptions | 7 | 7 | 20 |
| DAMP741 | 741 Expenditure related to holidays spent abroad (4 days minimum) | 10 | 10 | 20 |
| DAMP742 | 742 Expenditure related to holidays spent in Morocco (4 days minimum) | 10 | 10 | 20 |
| DAMP743 | 743 Expenditure related to weekend leisure activities or short trips abroad | 10 | 10 | 20 |
| DAMP744 | 744 Expenditure related to weekend leisure activities | 10 | 10 | 20 |

*Impact on government revenue*

As noted above, based on the consumption survey of 2000–01, total government tax revenue amounted to somewhat more than 16 billion dirham. Our first scenario, which applies the 2009 rate to selected items based on the 2000 consumption pattern, raises government revenue to 17.5 billon dirham, Our second scenario, which cuts the tax rate on tea from 14 per cent to 7 per cent and on edible oil from 7 per cent to 0 per cent while increasing the tax rate on tobacco from 0 to 20 per cent and boosting the rates of the entire recreation category to 20 per cent, generates a slight increase in total revenue, to 16.5 billion dirham.

Globally, the first scenario increases government revenue by 9 per cent and the second by 3 per cent. The gain in government revenue generated by increasing tax rates has differential effects on tax incidence across the various categories of households.

In the first scenario, 40 per cent of the 1.5 billion dirham increase in government revenue comes from households in the richest (5th) quintile, 24 per cent is paid by the 4th quintile and 28 per cent by the middle (2nd and 3rd) quintiles. The poorest (1st) quintile contributes only 8 per cent (see El Bouazzaoui *et al*. 2009, Table 21).

Similarly, in the second simulation, the 4th and 5th quintiles pay 20 per cent and 68 per cent, respectively, of the increase in the government revenue. The 2nd and 3rd quintiles contribute about 12.5 per cent, while the poorest quintile is barely affected (see ibid.).

*Impact on household employment categories*

Table 7.11 shows the variation between the suggested new tax rates and the tax rates of 2000 by quintile, household employment category and presence of children in the household. The results of simulating the 2009 rates to selected expenditures in 2000 show that tax incidence on all households increases but, regardless of the presence of children in the household, male-breadwinner households experience the largest increase – about 12 per cent – in tax incidence among all household types. Dual-earner households bear the second highest increase in overall incidence, 11.3 per cent, but the distribution varies by quintile and presence of children. Dual-earner households with children in the poorest quintile and dual-earner households without children in quintiles two and three experience a 16 per cent increase, and these contributions are larger than those experienced by male-breadwinner households. Female-breadwinner households without children in the second quintile, and the poorest households with no employed adults also bear about 13 per cent of the increase in tax incidence, but as noted, this is less than either male-breadwinner or dual-earner households. Broadly, these results show that the 2009 rates have disproportionately increased the incidence of VAT on poorer households. The gender results show that: male breadwinners with/without children in the poorest bracket (Q2–Q4) bear a higher tax incidence than females, and this pattern remains valid across most quintiles.

*Table 7.11* Simulation 1: Tax incidence using 2009 tax rates applied to yr 2000 expenditure (by quintile, household employment category and children), Morocco (%)

|  | Quintile | Dual-earner | Female-breadwinner | Male-breadwinner | No-employed | Total |
|---|---|---|---|---|---|---|
| Without children | Q1 | 9.2 | 6.7 | 11.4 | 14.6 | 11.1 |
|  | Q2 | 16.9 | 14.7 | 16.5 | 16.4 | 16.5 |
|  | Q3 | 16.0 | 9.9 | 15.3 | 8.7 | 14.4 |
|  | Q4 | 11.9 | 10.5 | 14.7 | 11.7 | 13.2 |
|  | Q5 | 7.8 | 5.8 | 10.5 | 7.7 | 8.8 |
|  | Total | 11.2 | 8.0 | 12.9 | 9.6 | 11.5 |
| With children | Q1 | 15.9 | 11.9 | 14.9 | 13.5 | 14.9 |
|  | Q2 | 14.2 | 12.5 | 13.1 | 10.9 | 13.2 |
|  | Q3 | 12.9 | 11.2 | 13.2 | 9.7 | 12.9 |
|  | Q4 | 10.6 | 9.4 | 11.1 | 9.8 | 10.8 |
|  | Q5 | 6.6 | 5.9 | 7.4 | 6.8 | 7.0 |
|  | Total | 11.4 | 9.8 | 12.0 | 9.6 | 11.6 |
| Total | Q1 | 15.7 | 11.6 | 14.9 | 13.6 | 14.8 |
|  | Q2 | 14.4 | 12.8 | 13.2 | 11.6 | 13.4 |
|  | Q3 | 13.3 | 11.0 | 13.4 | 9.6 | 13.0 |
|  | Q4 | 10.8 | 9.7 | 11.5 | 10.2 | 11.1 |
|  | Q5 | 6.9 | 5.9 | 8.1 | 7.2 | 7.5 |
|  | Total | 11.3 | 9.4 | 12.1 | 9.6 | 11.6 |

Table 7.12 shows the results of simulating rate reductions on tea, coffee and edible oil and rate increases on leisure and recreation goods by quintile, presence of children in the household and employment category. The gender pattern is mixed: tax incidence declines among some household types, such as total incidence for female-breadwinner households and households with no one employed, but increases among others, such as dual-earner households.

Regardless of the presence of children in the household, the data suggest that female-breadwinner households in the lowest three quintiles benefit most from the decrease in tax incidence; the pattern is similar for households with no employed adults (except for households without children in the second quintile). In contrast, male-breadwinner and dual-earner households generally experience the heaviest tax incidence increase in this exercise, except for the poorest male-breadwinner and dual-earner households who also experience reductions in tax incidence but by less than female-breadwinner households. Comparing the households with and without children, we note that, in general, households that bear the largest burden of the changes in tax rates are those without children. The results of this simulation suggest that these changes are both pro-poor and gender-sensitive.

## Conclusion and policy recommendations

Our review of the personal income tax code in Morocco reveals the existence of both implicit and explicit gender bias. Implicit gender bias arises from the manner in which tax deductions are structured. Certain groups of employees – casino

*Table 7.12* Simulation 2: Tax incidence with selective rate increases and decreases applied to yr. 2000 expenditure (by quintile, presence of children and employment category), Morocco (%)

|  | Quintile | Dual-earner | Female-breadwinner | Male-breadwinner | No-employed | Total |
|---|---|---|---|---|---|---|
| Without children | Q1 | −8.3 | −11.6 | −6.3 | −4.0 | −6.7 |
| | Q2 | 6.9 | −5.1 | 1.1 | 2.6 | 2.6 |
| | Q3 | 7.1 | −5.9 | 1.8 | −6.7 | 1.8 |
| | Q4 | 4.4 | −2.2 | 4.7 | −2.3 | 3.0 |
| | Q5 | 5.3 | 0.4 | 5.5 | 0.0 | 3.9 |
| | Total | 5.2 | −1.6 | 3.9 | −1.1 | 2.9 |
| With children | Q1 | 1.7 | −5.0 | −0.9 | −3.6 | −0.7 |
| | Q2 | 3.0 | −2.9 | 0.5 | −1.9 | 0.7 |
| | Q3 | 4.1 | −0.8 | 3.2 | −2.2 | 2.9 |
| | Q4 | 4.4 | 1.4 | 3.5 | 1.3 | 3.4 |
| | Q5 | 4.6 | 1.8 | 3.5 | 0.9 | 3.5 |
| | Total | 3.7 | −0.7 | 1.9 | −0.6 | 2.1 |
| Total | Q1 | 1.4 | −5.3 | −1.0 | −3.6 | −0.8 |
| | Q2 | 3.4 | −3.2 | 0.5 | −1.3 | 0.8 |
| | Q3 | 4.5 | −1.6 | 3.1 | −2.8 | 2.8 |
| | Q4 | 4.4 | 0.4 | 3.6 | 0.6 | 3.4 |
| | Q5 | 4.7 | 1.2 | 3.9 | 0.5 | 3.6 |
| | Total | 3.9 | −1.0 | 2.1 | −0.7 | 2.2 |

workers, night workers and selected other professions – can claim deductions of up to 28,000 dirham per year according to specific formulas. Males predominate in these professions. More broadly, deductions for certain types of expenses that may enable women to participate in paid employment – such as child care – are not available.

Explicit bias exists in the way that the PIT code defines dependants. A male is permitted to claim allowances for his wife, his own children and other children for whom he has his legal responsibility, while a female can claim these only if she is able to prove that her husband and children are legally dependent on her.

Our analysis of the incidence of indirect tax suggests that male-type households and higher-income households bear a higher incidence of indirect taxes, which conforms to the principles of vertical equity. However, the analysis shows that dual-earner households bear the highest tax incidence across all types of taxes: total, VAT, excise and fuel. As noted above, this seems to provide reinforcement to the male-breadwinner model of the household.

The analysis of tax incidence by consumption shows that because the expenditure patterns of women and men differ, the impact of indirect taxes differs as well. The analysis reveals that female-breadwinner households have a higher tax incidence on basic processed foods, collective forms of transport and on health care products, while male-breadwinner households have a higher tax incidence on meals out, tobacco, private transport and fuel for transport. Across quintiles, the tax incidence on basic processed foods is steadily benefiting to the lowest bracket of expenditure. Tax incidence on basic foods is second highest, after tobacco

products, for dual-earner households, and highest of all for households with no employed persons.

Following this analysis, we ran two tax policy simulations to determine how tax rate changes would affect the tax burden on households with a variety of employment and consumption characteristics. The first simulation focused on three major categories of expenditure, namely *food*, *leisure* and *recreation* in order to see what would happen if the prevailing tax rates of 2009 were applied to the consumption pattern of the year 2000–01. The second scenario attempted to determine the effect of reducing the tax rate on tea, coffee and edible oil, three staples in Morocco, based on consumption patterns in the 2000–01 survey and increasing tax rates on tobacco and recreation to compensate for revenue losses caused by reducing the other rates.

The main finding of this exercise was that the first scenario increases government revenue by 9 per cent and the second scenario increases revenues by 3 per cent, a difference of 1.5 billion dirham. In the first simulation the wealthiest quintile pays 40 per cent of the increase, while 24 per cent of the burden falls on the 4th quintile, and 28 per cent on the 2nd and 3rd quintiles. The poorest quintile pays for only 8 per cent of the growth in government revenue. Looking at the results by household employment category, male-breadwinner households bear the largest burden of the tax increase, regardless of whether their household has children. The impact is greatest in the lowest three quintiles. Dual-earner households have the second highest increase.

In the second simulation, the two wealthiest quintiles pay nearly all of the revenue increase, 20 per cent and 68 per cent, respectively. The middle quintiles contribute only 12.5 per cent and the tax burden of the poorest quintile stays virtually the same.

### Policy recommendations: personal income tax

The findings on gender biases and gender discrimination in the Moroccan tax code lead to several policy recommendations designed to promote greater equality and fairness:

- *Data and information systems*. The Tax Administration must release taxpayer data disaggregated by sex.
- *Reductions for family loads*. Our review of the PIT code reveals that Article 74 has an explicit gender bias, treating women as dependants of men. This provision should be removed. CEDAW General Recommendation No. 21 bars discrimination against women ('Women must be treated as equal to men in tax laws; as individual, autonomous, citizens, rather than as dependants of men'). To be in compliance, the tax code must grant separate tax reductions for male and female breadwinners. Another option would be to provide direct transfers to families outside the tax code (see Chapter 1).
- *Deductions*. The tax code allows a deduction for professional expenses of 20 per cent of the normal rate for both women and men. However, when we take into account the greater burden imposed on women for unpaid work, their

narrower access to the formal labour market (they made up 27.3 per cent of that workforce in 2007), and the cost of paying others to perform household tasks in their absence, it would be more equitable to give them a larger deduction than men. This would also encourage them stay in the labour market.

- *Efficiency*. Criteria such as transparency, clarity, ease of use, durability and efficiency should be established to ensure that tax preferences are designed and drafted in a manner that ensures their effectiveness. In judging tax reforms, those responsible for monitoring and post-evaluation of performance and results should pay particular attention to their success in promoting gender equality.

## Policy recommendations: indirect taxes

The results of our indirect tax incidence analysis lead to several additional policy recommendations:

- Any future changes in VAT should recognize that female-breadwinner households already bear the highest VAT tax incidence and cannot afford to be taxed more than other households.
- Tax reform should avoid the adverse effect of further tax incidence on some basic goods that put a heavy burden on the poorest Moroccan consumers. This is vital, for example, regarding fuel for household use, and for tobacco, even if this last item is a demerit product.
- A combination of tax rate changes should be considered, with the goal of increasing the government revenue without burdening the poorest households excessively. The second simulation presented here is an example of how this might be done, since it simultaneously reduces tax rates on some goods (tea, coffee, edible oil) and balances that by increasing the VAT rate on other expenditures. This approach could generate a slight increase in total government revenue without burdening the poorest quintiles, since the tax incidence increase would fall primarily on the wealthiest category of consumers.
- However, it has to be recognized that the VAT system is Morocco is very complex – with four rates being applied at present. The system needs to be overhauled. Our analysis suggests that this reform process should pay particular attention to issues of gender.

This study of the Moroccan tax system highlights the manner in which tax systems can reinforce gender inequalities. The personal income tax system is based very much on a male-breadwinner conceptualization of the household. Equally, the system of indirect taxes in Morocco needs some policy attention. One of the key issues here is the complexity of the system. Our simulations suggest that the 2009 reforms are not appropriate for Morocco – and our analysis reveals that poor households bear a disproportionate burden for these reforms. While reform is clearly needed, more careful attention to their impacts on poverty and gender inequality are required.

## Notes

1 Royal letter addressed to the 'Conseil Consultatif des Droits de l'Homme à l'occasion du 60ème anniversaire de la Déclaration Universelle des Droits de l'Homme'.
2 This chapter is based on the Moroccan Country Study by Ahmed El Bouazzaoui, Abdessalam Fazouane, Hind Jalal and Salama Saidi, 2009. Available online at: www://sds.ukzn.ac.za/default.php?7,12,85,4,0.
3 This section is based on data from the employment survey of the High Commission for Planning (2007).
4 For the public sector, calculations are based on data from the *Statistical Yearbook of Morocco*, 1996 to 2007. For the private sector, calculations are based on statistics on payroll provided by CNSS (National Social Security Fund), 1996 to 2008.
5 Authors' calculations based on *Statistical Yearbook of Morocco* and CNSS data.
6 Based on the rate of 8.5 dirham to US$1.

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# 8 Gender equality and taxation in South Africa

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## Introduction

South Africa is a particularly interesting case study for understanding the gendered impacts of taxation. One of the major victories of the democratic transition in South Africa was the commitment to gender equality, outlined in the new Constitution adopted after the political transition in 1994. This commitment has been translated into a broad range of gender-related institutions, including the Commission on Gender Equality, as well as the numerous gender units that have been established within government departments. At a more global level, the South African government has ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and agreed to a number of international instruments, including the Beijing Declaration and Platform for Action, aimed at improving the status and condition of women.

Women in South Africa are also much better represented at the highest levels of politics and the economy than they are in many other countries. Nevertheless, the majority of women continue to be economically marginalized (see Casale and Posel 2005; Hassim 2006). While there are some notable exceptions, for the most part, the political commitment to gender equality has not been matched at the level of policy implementation, and progress has been slow and concentrated among women at the top of the income distribution.

One of the many ways in which these gender disparities are perpetuated, despite government commitments, is through the differential impact of the national budget on men and women, including not only expenditures, but also taxation. The first publication of the South African Women's Budget Initiative (1996) therefore included not only several chapters on public expenditure from a gender perspective, but also the first study of taxation from a gender perspective (Hartzenburg 1996). Based on research done in 1995, one year after the first democratic elections in the country, the chapter reviewed, among other things, some of the changes in personal income taxes, pensions and retirement funds, unemployment insurance and medical aid contributions, company taxes and value-added tax (VAT) in South Africa after 1994. The overall conclusion of the research was that while the new government had quickly addressed the explicit bias in the tax system which existed prior to 1994, government needed to collect sex-disaggregated data on taxes and consider the more subtle gender implications of its taxation policies.

In the fifth year of the Women's Budget Initiative, Smith (2002) conducted a second study, which updated and expanded upon Hartzenburg's work, particularly with regard to capital transfer taxes, taxation of non-profit organizations, transfer duties, the fuel levy and the then recently set up national lottery. Smith's study also examined changes in the status of the South African Revenue Service (SARS). As part of the same series, Goldman examined customs and excise from a gender perspective (Goldman 2002), while Coopoo (2002) did the same with regard to local government taxation. For the most part, these studies reached similar conclusions with regard to the impact of taxation on gender equality, specifically, that although tax policies no longer explicitly discriminated against women, government needed to do much more to consider the gender impacts of its policies.

This chapter extends this work by updating previous studies of personal income taxes (PIT) and indirect taxes, in order to determine which households bear the incidence of these different types of taxes and whether there are implicit or explicit gender biases. Following a review of the overall structure of taxation in South Africa, including tax reforms over the last few decades, it looks both at the PIT and at the incidence of indirect taxes. It then presents some simulations for alternative taxation policies and concludes with recommendations for policy change.

## Tax structure, trends and reform in South Africa

The structure of taxes in South Africa in the past two decades is shown in Table 8.1. In the most recent period, direct taxes have comprised 61 per cent of total revenue, with personal income taxes and corporate taxes the two largest contributors (30 per cent and 27 per cent, respectively). Indirect taxes make up 39 per cent of total revenue, with the value added tax (VAT), the main component, contributing 26 per cent of total revenue. The indirect taxes considered here – VAT, excises and fuel taxes – jointly make up 33 per cent of total revenue. Unlike other developing countries, South Africa does not rely very heavily on trade taxes for government revenues.

Some important changes can be seen over the past decade, especially the shift away from indirect taxes to direct taxes. While this shift is in line with government policy (see below), it has resulted less from active government policy than from increased corporate tax revenues and more effective tax collection on the part of SARS. Profit rates fell after the transition in 1994 but rose significantly in the economic boom that took place after 1999. Although as a proportion of total revenue individual personal income taxes have fallen, collection of PIT has increased and SARS has been able to extend the PIT net.

Since the political transition, the African National Congress government has been able to increase the tax/gross domestic product (GDP) ratio from 23 per cent in 1993 to 28 per cent in 2007–08 (see Figure 8.1), thereby creating the fiscal space needed for increased expenditure. This ratio is above the government's target of 25 per cent for 2002 and beyond (National Treasury 1999). It is worth noting also that actual tax collections by SARS have up until very recently consistently exceeded budget projections, and significant progress has been made in widening the tax net and improving tax compliance.

*Table 8.1* Tax structure, South Africa, 1988–2008

| Tax/source of revenue | 1988–89 | | 1998–99 | | 2007–08 | |
|---|---|---|---|---|---|---|
| | Revenue raised in R'm | % of total tax revenue | Revenue raised in R'm | % of total tax revenue | Revenue raised in R'm | % of total tax revenue |
| Individuals | 14,910 | 30 | 76,400 | 42 | 191,046 | 30 |
| Companies | 11,244 | 22 | 23,330 | 13 | 176,471 | 27 |
| Other | 657 | 1 | 5,558 | 3 | 23,978 | 4 |
| Total – direct taxes | 26,811 | 53 | 105,288 | 58 | 391,495 | 61 |
| VAT[a] | 13,123 | 26 | 43,600 | 24 | 167,028 | 26 |
| Excise duties | 2,508 | 5 | 8,338 | 5 | 22,083 | 3 |
| Fuel levy | 2,555 | 5 | 13,600 | 8 | 26,434 | 4 |
| Customs duties | 2,466 | 5 | 6,200 | 3 | 31,473 | 5 |
| Other | 3,054 | 6 | 40,441 | 2 | 3,755 | 1 |
| Total – indirect taxes | 23,707 | 47 | 75,782 | 42 | 250,773 | 39 |
| Total tax revenue | 50,518 | 100 | 181,070 | 100 | 642,268 | 100 |

*Source*: Authors' calculations from National Revenue Account, National Treasury, South Africa.

*Note*: a South Africa levied a general sales tax prior to the introduction of VAT in 1991.
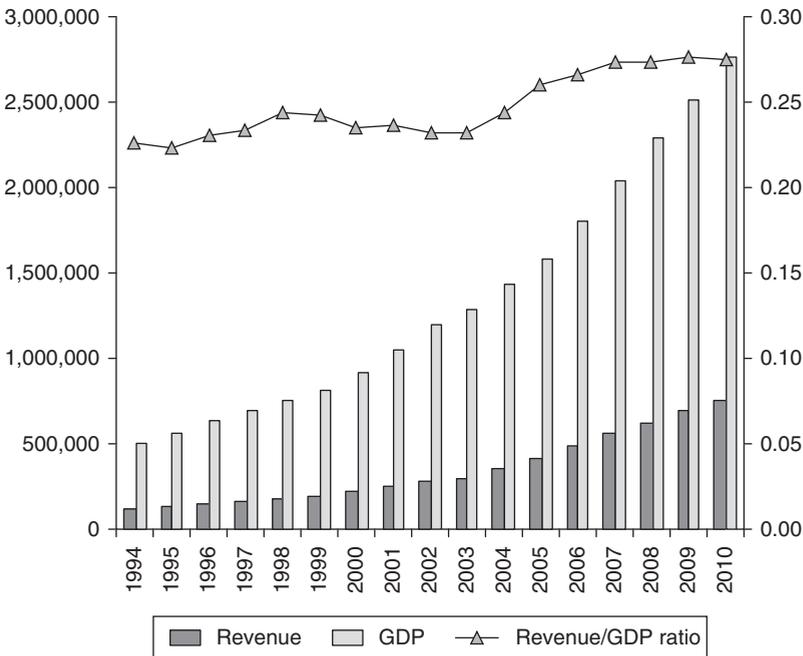


*Figure 8.1* Tax/GDP ratio: South Africa 1994–2010.

*Source*: National Treasury (2008). Figures for 2009 and 2010 are projections.

The current process of reforming South Africa's tax system began in 1986 with the Margo Commission of Inquiry into the Tax Structure of the Republic of South Africa. The Margo Commission was an important component of a more extensive reform programme of the then-apartheid government, which sought both to shift the economy onto more market-based principles and to incorporate segments of the black population into the economic mainstream (Morris and Padayachee 1988). One of the main recommendations of the Margo Commission, of specific importance to women, was that the unit of taxation for PIT be changed from the couple to the individual. The Commission also recommended a move towards a simpler income tax structure with fewer, broader income brackets and lower marginal rates. Many of the Commission's recommendations were accepted, but married couples continued to be taxed jointly.

In 1994, the new government appointed the Commission of Enquiry into Certain Aspects of the Tax Structure of South Africa, known as the Katz Commission, to undertake a comprehensive review of the tax system. This appointment was part of the attempt by the new state to adopt a more developmental approach to economic policy, and to link taxation with issues of income distribution and poverty relief.

In line with the recommendations of the Katz Commission, the South African government has introduced a number of tax policy changes since 1994. Some of the changes that relate broadly to gender equality include: the amendment of various tax laws in order to comply with the new Constitution, including the elimination of formal discrimination based on gender; the introduction of a unified income tax rate structure for individuals (i.e., eliminating the distinction between married and unmarried people, with its related difference in treatment of women and men in respect of marital status); and the introduction of tax relief for low- and middle-income taxpayers through adjustments to tax rates and income tax brackets. Since 1994, the most significant change in the tax structure has been the reversal of the emphasis on direct taxation, established by the Margo Commission in the mid-1980s, in favour of indirect taxation.

### Personal income taxes

In 1999, as a result of pressure from the Women's Budget Initiative among others, SARS for the first time reported separately on the number of individual taxpayers. As of October 1998, the total number of taxpayers was 2,263,079, of whom only 746,816 (33 per cent) were women (see Smith 2002). The much smaller number of women than men is expected given that more men than women are employed, and employed men are more likely than employed women to earn above the tax threshold. This is borne out by Table 8.2, based on Labour Force Survey (LFS) data from September 2005, which suggests that nearly three-quarters (73 per cent) of employed women would not have had to pay PIT, as compared to 65 per cent of men.

Table 8.3 gives the PIT tax rates for the financial year 2007–08. It shows that PIT in South Africa is progressive, in that the percentage of income paid in tax

*Table 8.2* Distribution of employed people across tax brackets by sex, South Africa (September 2005) (%)

| Tax bracket | Male | Female | Total |
|---|---|---|---|
| No tax | 65 | 73 | 68 |
| <R80,000 | 20 | 16 | 19 |
| R80,000–130,000 | 8 | 7 | 8 |
| R130,001–180,000 | 3 | 2 | 3 |
| R180,001–230,000 | 1 | 0 | 1 |
| R230,001–R300,000 | 1 | 1 | 1 |
| R30,001 plus | 2 | 1 | 1 |
| Total | 100 | 100 | 100 |

*Source*: Authors' calculations from LFS, September 2005.

*Table 8.3* Personal income tax rates, South Africa, 2007–08

| Taxable income (R) | Rates of tax (R) |
|---|---|
| 1–100,000 | 18% of each rand |
| 100,001–180,000 | 20,250 + 25% of the amount above 112,500 |
| 180,001–250,000 | 37,125 + 30% of the amount above 180,000 |
| 250,001–350,000 | 58,125 + 35% of the amount above 250,000 |
| 350,001–45,000 | 93,125 + 38% of the amount above 350,000 |
| 450,001 and above | 131,125 + 40% of the amount above 450,000 |
| Rebates (individuals only) | |
| Under 65 years | 7,740 |
| 65 years and older | 12,420 |
| Tax thresholds | |
| Under 65 years | 43,000 |
| 65 years and older | 69,000 |

*Source*: National Treasury (2007: 197).

increases with increases in taxable income. In 2007–08, given the level of the primary tax rebate, taxation was imposed only when personal income reached a level of R40,000 per annum (US$ 5,670)[1] for those under 65 years and R65,000 (US$ 9,214) for the elderly. Above this threshold, tax was charged at 18 cents in every rand. For the highest income group, any amount over R450,000 per year was taxed at 40 cents in the rand.

In many respects, the PIT structure in 2007 is similar to that in 1994. Similarities include age-differentiated thresholds and rebates (although at different levels) as well as the progressive structure of the tax. However, there also have been some significant changes.

One of the changes introduced during the early post-apartheid years was a reduction in the number of tax brackets. Thus Hartzenburg (1996: 223) lists ten PIT brackets, as opposed to the six that are now in place. Smith (2002) observes that this change helped reduce the impact of 'bracket creep' whereby inflation-linked increases in earnings push people into a bracket that is taxed at a steeper

rate than previously. Alongside this change, tax thresholds also increased. Some of this increase reflected adjustment for inflation, but the adjustment went beyond this. Thus the top of the lowest bracket was R60,000 per annum in 1995–96 as against R100,000 in 2007–08, with the value of R60,000 in 2007 about R87,000 in 1995/96 terms.

The PIT system is global in that the assessment is made on total income, irrespective of source. Income from investments, limited to a maximum, for the tax year 2007–08, of R19,000 for those under the age of 65 years and R27,500 for those aged 65 years and older, is exempt. Certain deductions, including contributions to medical insurance, retirement funds, subsistence and entertainment allowances, travel expenses and donations to charities are allowed. There are no child or dependant allowances. For those earning their income through trading, normal expenditure and losses incurred in the production of income are allowed as deductions before taxable income is determined. All of these deductions are subject to limits.

### Explicit and implicit biases in personal income taxes

During the apartheid years, the tax system contained several explicit elements of gender discrimination. At the time of the first democratic elections, for example, the tax schedules defined a 'married person' as male, with a separate category provided for 'married women'. Married persons (male) were taxed at a lower rate than unmarried persons (who could be male or female). Unmarried persons were, in turn, taxed at a lower rate than married women. Allowances for dependants accrued only to married men. There were also different primary rebates for the three categories, and different provisions regarding deductions for contributions to retirement annuity funds when calculating taxable income.

The distinction between married men and women was based on the assumptions that married couples would enjoy economies of scale; that a married women's income would be an 'extra' that could therefore be taxed at a higher rate; and that married couples would share their income equitably so that the higher rate on the woman's income would be offset by the lower rate on the man's income. To cater for atypical or 'unusual' families, provision was made for a married woman who was the main earner to have herself declared a 'married person'. These provisions clearly constituted direct formal discrimination in terms of both gender and marital status, both of which were explicitly outlawed by the new Constitution. Thus, from March 1995, in line with both the Constitution and the first report of the Katz Commission, a single tax structure was imposed on all individuals irrespective of gender or marital status, a single primary rebate (for those under 65 years) was introduced, and the differential retirement annuity deductions were removed. The rebates for dependants were also removed. Since 1995, no rebates are allowed for children or other dependants.

While theses changes eliminated explicit formal gender discrimination in the tax system, Smith (2002) argues that they have in fact introduced a new form of inequity into the system. Smith questions whether removing discriminatory

gender and marital provisions resulted in a more equitable system. He compares two hypothetical households, both containing two adults and two children. The first household consists of a husband who earns R2,000 per month, a wife who earns R1,000 per month and their two children. The second household consists of an employed woman who earns R3,000 per month, her two children, and her non-earning mother. He shows that the earlier tax regime placed these two households in more or less equal positions given their equal needs, but with some reduction in tax for the married couple so as not to discourage women's employment. The taxes that the households would have owed in 1994–95 were R3,435 and R5,055 respectively, the married couple paying less tax than the single-income house-hold. After removing the discriminatory provisions, however, and using the 1999–2000 tax tables, the first household pays R850, while the second pays R3,460, more than four times as much.

Although formal discrimination on the basis of gender and marital status has been removed, it seems to have been replaced by a more severe, indirect form of discrimination against the non-nuclear family. The issue is not insignificant in a country where only 50 per cent of employed women aged 15 years and above are recorded as married or living with a partner, and a further 36 per cent report never having been married, according to the General Household Survey of 2005.

As this discussion illustrates, the PIT system still contains some implicit biases. These biases are not simple gender biases in the sense of treating women differently from men. Instead, they discriminate against women with particular – and common – forms of living arrangements.

Two further examples of gender-related bias are found in the Standard Income Tax on Employees (SITE) tax deductions and tax payments for non-standard employment.

*Standard Income Tax on Employees tax deductions*

Tax on employees' earnings is deducted at source by employers and paid over to SARS. This tax is divided into two categories: one, known as SITE is deducted for all employees earning up to R60,000 (2005–06); the other, known as Pay As You Earn (PAYE), is deducted on the remainder of the earnings of those earning above R60,000. Only those subject to PAYE are required by law to submit an annual tax return so that SARS can reconcile total earnings with deductions made through the SITE and PAYE system. The SITE system there-fore exists to ease the administrative burden of PIT, and the assumption is made that taxes collected by the employer and passed on to SARS are done correctly.

For the higher earning employee, the distinction between SITE and PAYE is not all that important. For those who fall below the SITE cut-off, more likely to be women than men, the absence of a requirement to submit an individual tax return can be seen as an advantage. It may create a disadvantage, however, when a person does not earn consistently over the year, as the tax will be deducted on the assumption of consistent monthly earnings.

In cases where income and tax obligations fluctuate and the person submits a tax return, SARS makes the adjustments either through a refund or by requiring additional payment. In similar cases but where the person does not submit a tax return, the employer is meant to make the adjustment at the end of the tax year. The problem is that many employers do not do this, and many employees may be unaware of, or unable to enforce, their right to an adjustment. For the most part, the error is likely to work against the employee, for example, where she or he did not work a full year. These workers will then have paid more than they need to pay, out of already small earnings. Women, more than men, are less likely to work a full year, because of reproductive demands among others.

The upper SITE threshold has remained at the level of R60,000 since 1998. Since this time, two factors have probably reduced the impact of SITE. First, many taxpayers, through inflation-related wage increases, would have migrated out of the SITE system. Women, who are more likely than men to have low earnings, would have formed a significant proportion of these taxpayers. As a result, whereas in 1998, according to Smith (2002), women accounted for 33 per cent of taxpayers above the SITE threshold, this increased to 42 per cent in the 2008–09 tax year (National Treasury 2007; SARS 2008: 32). Second, while the upper SITE threshold has remained at R60,000, the lower threshold has changed. In 2008–09 at R54,200, it was very close to the SITE threshold. SITE is thus now paid on a very small band of income. Given that the gap between the SITE and tax thresholds is now so small, the Treasury is considering scrapping the SITE system and replacing it with a waiver on the requirement to submit a tax return for taxpayers with only one employer.

*Tax payments for non-standard employment*

A similar bias results from the fact that SARS applies an administrative rule for persons in non-standard employment (part-time or casual employment), requiring the employer to deduct 25 per cent of earnings for SITE and PAYE. These workers are meant to submit a tax return at the end of the financial year but, given that many may be relatively unskilled and unfamiliar with this procedure, large numbers are unlikely to submit returns and may bear an unfair burden.

Another example of implicit bias, which typically operates against women, relates to the taxation of retirement earnings. Retirement-related taxes are covered by both the Income Tax Act, 1962 and the Tax on Retirement Funds Act, 1996. There have been significant changes over the period under review in the way in which retirement-related income is dealt with. In March 1996, for example, a tax of 17 per cent was introduced on retirement fund incomes. The rate was increased to 25 per cent from 1 March 1998, but by 2006 had dropped again to 9 per cent. The tax is applied to pension, provident, retirement annuity and untaxed policy-holder funds of long-term assurance companies (SARS 2006).

A 2007 discussion document produced by the Department of Social Development in relation to social security reform notes that tax can be levied (or subsidies provided) on retirement money at three different points: at the point where

contributions are made; at the point where investments increase in value; and at the point when benefits are received. South Africa currently exempts contributions from tax, and taxes both investment earnings and benefits received. The Department's document notes, however, that the tax rate on retirement fund interest earnings was decreased substantially from 18 per cent to 9 per cent in 2006. It observes that this change 'altered the balance significantly in favour of higher income groups' (Department of Social Development 2007: 80).

More generally, the document estimates that the subsidy of contributions provided by the South African tax regime amounted to about R17.8 billion net of deferred taxation in 2005. When the subsidy on retirement investment earnings is added, the amount was R28.5 billion (ibid.: 11). The Department notes that this amount is far larger than the R8 billion that it would cost to universalize the old age pension by removing the means test. In essence, then, the government is providing far greater assistance to wealthier people in respect of provision for retirement than it would if it dropped subsidies and universalized the old age grant. Thus subsidies that are generally motivated on the grounds that they will encourage people to save for their own coverage, rather than depending on government, cost more than would government provision.

As noted above, contributions are exempt from tax, at least up to a certain amount. For contributions, the individual can deduct up to 7.5 per cent of remuneration or R1,750, whichever is the greater, when calculating taxable income. Those contributing for themselves (and who may or may not be employees) to retirement annuities can deduct up to 15 per cent of taxable income, or R3,500 less current deductions to a pension fund, or R1,750. In essence, these deductions constitute subsidization of retirement coverage for the individuals concerned.

Surveys give some idea of the extent of coverage of employees in terms of employer contributions. In the Labour Force Survey of March 2006, employers were said to make contributions to a pension or other retirement fund for 55 per cent of male employees, as opposed to 48 per cent of female employees. In absolute terms the differences are even greater because a smaller number of women than men are employed overall. Thus employer contributions were made on behalf of 3.2 million male employees versus 1.9 million female employees. This suggests that subsidies for pension contributions disproportionately benefit men.

### Hypothetical PIT payments

Table 8.4 shows hypothetical PIT payments for different household types at varying levels of income, namely, half the median, the median and twice the median income. The median household income in South Africa for 2005 is estimated at R26,291. Reflecting the very unequal distribution of income, the median income is significantly lower than the average household income of R74,588 (Statistics South Africa 2008).

Unfortunately, the results for South Africa are not very revealing for a number of reasons. First, there is no dependant allowance so, unlike some other countries in the project, whether the male or female member of the household enjoys this

*Table 8.4* Hypothetical tax burden of PIT for households, South Africa, 2007–08 (Rands)

|  | Half the median | Median | Twice the median |
|---|---|---|---|
| Total households | 13,146 | 26,291 | 52,582 |
| Single-income household | NIL | NIL | 1725 |
| Dual-earner household Equal earners | NIL | NIL | NIL |
| Dual-earner household Male or female earns twice as much as partner | NIL | NIL | NIL |

*Source*: Authors' calculations.

benefit is irrelevant. Second, because of the skewed income distribution, all households at the median and half the median do not pay any personal income taxes. Third, South Africa has a global, not schedular, income tax system so the source of the income is also irrelevant. Table 8.4 shows that only single-income households at twice the median income pay personal income taxes. However, this result does reinforce the important point made earlier that horizontal inequity exists across households with the same total income.

## Indirect tax incidence

This section examines the incidence of indirect taxes from a gender perspective, explaining how households are classified in terms of their 'gender' characteristics and describing the distribution of individuals across the varying household types in South Africa. After reviewing the results, we consider further possible policy changes to the indirect tax system.

### The indirect tax rate structure

Indirect taxes contribute just under 40 per cent of tax revenue in South Africa. The main component is the VAT, which accounts for 25.7 per cent of total tax revenue (see Table 8.1), with much smaller shares derived from excise duties (3.4 per cent), the fuel levy (4.2 per cent) and customs duties (4.7 per cent).

In South Africa, the VAT is a multi-stage single-rate tax levied on the consumption of most goods and services (whether they are produced locally or imported). The VAT rate has remained at 14 per cent on the value of most goods and services since 1993, although there are a number of zero-ratings and exemptions. Zero-rated goods and services, include: basic food items (brown bread, eggs, vegetable oil, grains, rice, milk, fresh fruit and vegetables, dried legumes and canned fish), illuminating paraffin, goods subject to the fuel levy (petrol and diesel), international transport services, certain farming inputs, sales of going concerns and certain government grants. The zero-rating of basic food items and paraffin (used predominantly by the poor as a fuel for cooking, lighting and heating) was implemented specifically to alleviate the burden of VAT on poorer households.[2]

The goods and services which are VAT-exempt are residential rental and accommodation; educational services (including child-care centres or crèches); public road and rail transport; non-fee-related financial services; and medical aid and medicine/medical services provided by public health institutions. Unlike with goods that are zero-rated, suppliers of VAT-exempt goods are not able to claim back the input VAT. This implies that, to the extent that the inputs attract VAT themselves, some of the VAT may be passed on to the final consumer. An effective rate would be between zero and 14 per cent. However, for this project, we rate these goods at zero per cent, given that the largest input cost in these sectors is likely to be labour. While we could estimate the effective VAT rate from an input–output table for South Africa, this would lead to a loss of detail (and precision) as the Income and Expenditure Survey that we use has far more detailed expenditure categories than the input–output table that is available.

Specific unit excise duties are levied on sorghum meal, non-alcoholic beverages, alcoholic beverages and tobacco products. Details of these unit taxes are provided in Table 8.5. It is important to note that the taxes on alcoholic beverages and tobacco are particularly high. The fuel levy is also a unit tax, levied at 110.1 cents per litre of petrol and 89.4 cents per litre of diesel. For this study, we calculate the incidence of the fuel levy on petrol and diesel for household use and for private transport only. We do not estimate the impact of a transfer of the fuel levy onto the consumer where fuel is an input in other production processes. However, we do make a rule-of-thumb adjustment for the *public transport* sector, where it is assumed that the total amount of the fuel levy is passed on to the consumer and that fuel constitutes 30 per cent of input costs in this sector.

### Data and definitions

The expenditure data used to calculate the tax incidence are drawn from the Income and Expenditure Survey (IES) of 2000.[3] The IES is conducted every five years by the national statistical agency, Statistics South Africa, among a nationally representative sample of 30,000 households. The survey contains very detailed information on the spending patterns of households, with data on almost 600 expenditure items.[4] The tax rate and price information used to calculate the tax incidence per item comes from various government sources (National Treasury 2000; South African Revenue Service VAT Guide for Vendors; monthly retail prices collected by Statistics South Africa 2000).[5]

To estimate the gendered incidence of indirect taxes, we use three sets of household classifications that categorize households as 'male-type' or 'female-type'. The first, based on the number of male and female adults (aged 18 years and older) in the household, includes three categories: adult male-majority households, adult female-majority households and equal-number adult households. The second and third classifications take into account gendered spending power in the household by adding the dimension of control over resources, measured through headship and employment status.

*Table 8.5* Indirect tax rates and specific duties, South Africa

| Tax | Item | Ad valorem *rate/ specific duty* |
|---|---|---|
| **VAT** | | |
| VAT-rated | Most goods and services (incl. imports) | 14% |
| Zero-rated goods | 19 basic food items (brown bread, dried mealies and mealie rice, brown bread flour, samp, eggs, fruit, vegetables, dried beans, lentils, maize meal, rice, pilchards in tins or cans, vegetable cooking oil, milk, cultured milk, milk powder and dairy powder blend, edible legumes and pulses of leguminous plants, i.e., peas, beans and peanuts) | 0% |
| | Paraffin | |
| | Exports | |
| | Petrol and diesel | |
| | Farming inputs | |
| | Sales of going concerns | |
| | Certain grants by government | |
| Exempt goods | Residential rental and accommodation | Assumed to be 0% |
| | Educational services (including creches) | |
| | Public road and rail transport | |
| | Non-fee-related financial services | |
| | Medical aid and medicine/medical services provided by public health institutions | |
| Excise duties | Preparations of sorghum for making beverages | 33 cents/kg |
| | Mineral water and non-alcoholic beverages | 8 cents/litre |
| | Beer | 2,239 cents/litre of absolute alcohol |
| | Sorghum beer | 745 cents/100 litres |
| | Unfortified wine | 6,790 cents/100 litres |
| | Fortified wine | 15,360 cents/100 litres |
| | Sparkling wine | 18,811 cents/100 litres |
| | Spirits | 303,365/100 litres of absolute alcohol |
| | Cigars | 56,989 cents/kg |
| | Cigarettes | 141.5 cents/10 cigarettes |
| | Cigarette tobacco | 6,412 cents/kg |
| | Pipe tobacco | 3,893 cents/kg |
| Fuel levy[a] | Petrol | 110.1 cents/litre |
| | Diesel | 89.4 cents/litre |

*Source*: Budget Review 2000, Department of Finance, South Africa.

*Note*: a The levy consists of a fuel levy component and a Road Accident Fund component.

The headship classification consists of male-headed and female-headed households.[6] We recognize that the concept of headship is problematic and, in particular, often does not capture the phenomenon that analysts assume it does (Budlender 2003). However, we have used it here to be consistent with the other countries in this volume, and because it does highlight an important gendered group in South Africa. Households that report being headed by women are concentrated at the lower end of the income distribution, and draw their resources predominantly from female employment, migrant labour remittances and social grants.

The employment classification results in four categories of household – 'male-breadwinner households' with at least one employed adult male and no employed adult females,[7] 'female-breadwinner households' with at least one employed adult female and no employed adult males, 'dual-earner households' with at least one employed adult male and one employed adult female, and households with no employed persons. In South Africa, this latter group consists mostly of households where either pensions and grants (predominantly through the government's social welfare programme) or remittances from migrant workers form the main source of income (87 per cent of all no-employed households), with a much smaller proportion of households reporting the sale of farm products or other non-farm income as the main source.[8]

Table 8.6 shows the distribution of individuals across the different household types (see the last column). In South Africa, 40 per cent of individuals live in female-headed households, a far higher percentage than in other countries. Among other reasons, this is due to a high incidence of labour migration, particularly among men (resulting in the female in the household being reported as the de facto resident head), and relatively low levels of marriage and partnership.

For South Africa, there is a large overlap across the three gendered household classifications (see Casale 2009: Table 4). For example, just over 80 per cent of female-headed households fall into two employment status categories: 40.7 per cent are in the 'female-breadwinner' category and 40.6 per cent are in the 'no-employed' category. The majority of female-headed households (71 per cent) are female adult majority households. About 73 per cent of female adult majority households fall into the categories of 'female-breadwinner' (36.6 per cent) and 'no-employed' (35.9 per cent).

The female-type households and those with no employed tend to be among the less well-off, concentrated in the lower quintiles of the expenditure distribution. In contrast, the male-type households, the dual-earner households, and the equal number adult households are more heavily concentrated at the upper end of the expenditure distribution (Casale 2009). This means that any tax policy that has positive gender equality implications will also result in strong income equality outcomes.

### Gendered indirect tax incidence analysis

The results of the incidence analysis are presented in Tables 8.6 to 8.8. Table 8.6 reports the overall tax incidence for the different household types using the three

*Table 8.6* Overall indirect tax incidence by household type, South Africa (% of expenditure)

| | Total tax | VAT | Excise tax | Fuel tax | Distribution of individuals across household types (%) |
|---|---|---|---|---|---|
| *Household sex composition* | | | | | |
| Adult male-majority | 9.23 | 7.29 | 1.1 | 0.84 | 21.9 |
| Adult female-majority | 8.13 | 7.07 | 0.47 | 0.59 | 42.0 |
| Equal-number adult | 8.84 | 7.12 | 0.85 | 0.88 | 36.1 |
| *Employment categories* | | | | | |
| Male-breadwinner | 9.36 | 7.36 | 1.12 | 0.88 | 26.4 |
| Female-breadwinner | 8.14 | 7.05 | 0.45 | 0.64 | 21.6 |
| Dual-earner | 9.15 | 7.13 | 0.89 | 1.14 | 24.2 |
| No-employed | 7.84 | 6.99 | 0.49 | 0.37 | 27.8 |
| *Headship* | | | | | |
| Male-headed | 9.06 | 7.17 | 0.96 | 0.94 | 59.1 |
| Female-headed | 7.99 | 7.08 | 0.44 | 0.48 | 40.9 |

*Source*: Authors' calculations from IES 2000.

*Note*: Data are weighted.

gendered household classifications. Due to the strong correlations across household categories noted above, the story that emerges from these results is consistent regardless of which household classification is used. Total indirect tax incidence is lower in female-type households than in male-type households, by around a full percentage point on a base of approximately 8 per cent. This result also holds for the different types of taxes, specifically VAT, excise duties and the fuel levy. The pattern of incidence among households with no employed members is similar to the pattern among female-type households, while the dual-earner and equal-number adult households resemble the male-type households in their tax incidence.

While there are statistically significant gender differences for all three types of taxes, the largest gender differentials are reported for the excise duties and the fuel levy.[9] Most of the excise and fuel tax burden borne by male-type households is a result of their larger expenditure on alcohol and tobacco and on fuel for private transport. The gender difference in the incidence of the fuel levy would have been even more pronounced if we had not adjusted for the pass through of the fuel levy to consumers in the public transport sector. This is because female-type households (and households with children) are relatively more intensive users of public transport, while male-type households (and households without children) are relatively more intensive users of private transport.

Table 8.7 and Figures 8.2 to 8.5 report the incidence results for the employment status classification only, disaggregated by expenditure quintile and the presence of children (aged 17 years or younger) in the household. For the most part, regardless of the presence of children in the household or the quintile,

*Table 8.7* Indirect tax incidence by employment status, presence of children and quintile, South Africa (% of expenditure)

| Quintile | Total tax | VAT | Excises | Fuel | Total tax | VAT | Excises | Fuel | Total tax | VAT | Excises | Fuel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Total male-breadwinner* | | | | *Male-breadwinner children* | | | | *Male-breadwinner w/o children* | | | |
| 1 | 8.17 | 6.98 | 0.85 | 0.35 | 8.13 | 6.97 | 0.81 | 0.35 | 9.36 | 7.25 | 1.85 | 0.26 |
| 2 | 8.95 | 7.4 | 1.08 | 0.47 | 8.88 | 7.38 | 1.01 | 0.48 | 9.77 | 7.6 | 1.85 | 0.32 |
| 3 | 9.64 | 7.78 | 1.24 | 0.62 | 9.61 | 7.83 | 1.15 | 0.64 | 9.82 | 7.51 | 1.77 | 0.54 |
| 4 | 9.92 | 7.53 | 1.31 | 1.08 | 9.77 | 7.54 | 1.12 | 1.11 | 10.22 | 7.51 | 1.67 | 1.04 |
| 5 | 9.36 | 6.97 | 0.99 | 1.4 | 8.83 | 6.64 | 0.65 | 1.53 | 9.84 | 7.26 | 1.29 | 1.29 |
| Total | 9.36 | 7.36 | 1.12 | 0.88 | 9.14 | 7.34 | 0.98 | 0.82 | 9.95 | 7.39 | 1.51 | 1.06 |
| | *Total female-breadwinner* | | | | *Female-breadwinner children* | | | | *Female-breadwinner w/o children* | | | |
| 1 | 6.9 | 6.27 | 0.29 | 0.33 | 6.87 | 6.26 | 0.29 | 0.32 | 8.36 | 7.03 | 0.59 | 0.74 |
| 2 | 8.2 | 7.27 | 0.52 | 0.41 | 8.2 | 7.28 | 0.52 | 0.4 | 8.18 | 7.08 | 0.58 | 0.51 |
| 3 | 8.72 | 7.59 | 0.49 | 0.64 | 8.78 | 7.65 | 0.47 | 0.66 | 8.36 | 7.23 | 0.61 | 0.52 |
| 4 | 8.73 | 7.43 | 0.53 | 0.77 | 8.83 | 7.5 | 0.55 | 0.78 | 8.41 | 7.19 | 0.47 | 0.74 |
| 5 | 8.08 | 6.41 | 0.41 | 1.25 | 7.87 | 6.19 | 0.4 | 1.28 | 8.37 | 6.73 | 0.43 | 1.21 |
| Total | 8.14 | 7.05 | 0.45 | 0.64 | 8.11 | 7.06 | 0.45 | 0.6 | 8.37 | 7.01 | 0.5 | 0.86 |
| | *Total dual-breadwinner* | | | | *Dual-earner children* | | | | *Dual-earner w/o children* | | | |
| 1 | 7.95 | 6.73 | 0.9 | 0.33 | 7.94 | 6.72 | 0.89 | 0.33 | 8.62 | 7.07 | 1.35 | 0.21 |
| 2 | 9.24 | 7.45 | 1.23 | 0.57 | 9.22 | 7.45 | 1.19 | 0.58 | 9.72 | 7.43 | 1.9 | 0.38 |
| 3 | 9.5 | 7.7 | 1.04 | 0.76 | 9.48 | 7.71 | 0.97 | 0.8 | 9.79 | 7.67 | 1.79 | 0.33 |
| 4 | 10.07 | 7.78 | 1.01 | 1.27 | 10.02 | 7.73 | 0.95 | 1.34 | 10.35 | 8.09 | 1.39 | 0.87 |
| 5 | 8.69 | 6.4 | 0.61 | 1.68 | 8.57 | 6.35 | 0.56 | 1.66 | 8.99 | 6.54 | 0.74 | 1.71 |
| Total | 9.15 | 7.13 | 0.89 | 1.14 | 9.11 | 7.14 | 0.86 | 1.11 | 9.39 | 7.02 | 1.03 | 1.33 |
| | *Total no-employed* | | | | *No-employed children* | | | | *No-employed w/o children* | | | |
| 1 | 7 | 6.39 | 0.39 | 0.23 | 6.98 | 6.38 | 0.37 | 0.23 | 7.66 | 6.48 | 0.97 | 0.21 |
| 2 | 7.82 | 7.12 | 0.44 | 0.26 | 7.83 | 7.14 | 0.43 | 0.26 | 7.76 | 6.84 | 0.72 | 0.2 |
| 3 | 8.56 | 7.63 | 0.59 | 0.34 | 8.56 | 7.7 | 0.51 | 0.36 | 8.54 | 7.34 | 0.93 | 0.28 |
| 4 | 8.96 | 7.67 | 0.72 | 0.56 | 8.91 | 7.87 | 0.42 | 0.62 | 9.01 | 7.46 | 1.04 | 0.51 |
| 5 | 8.72 | 6.73 | 0.56 | 1.43 | 8.76 | 6.59 | 0.32 | 1.85 | 8.71 | 6.77 | 0.62 | 1.32 |
| Total | 7.84 | 6.99 | 0.49 | 0.37 | 7.7 | 6.97 | 0.42 | 0.31 | 8.58 | 7.09 | 0.85 | 0.64 |

*Source*: Own calculations from IES 2000.

*Note*: Data are weighted.
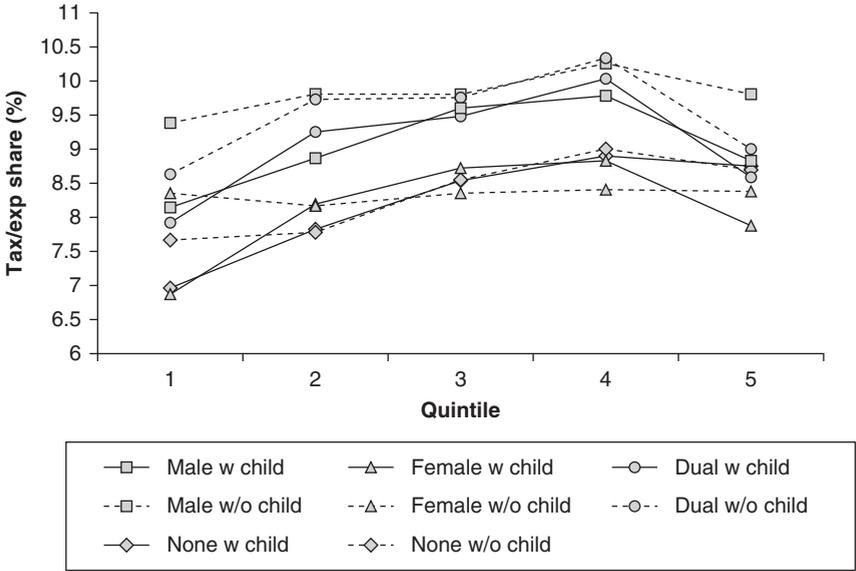
*Figure 8.2* Total tax incidence by employment status, quintile and presence of children, South Africa.
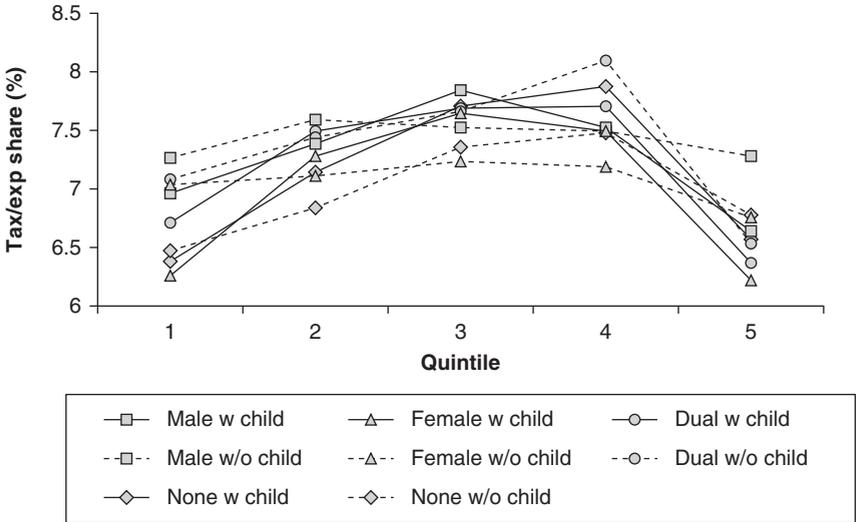


*Figure 8.3* VAT incidence by employment status, quintile and presence of children, South Africa.

female-breadwinner households and those with no employed members bear a lower incidence than do male-breadwinner and dual-earner households, for total indirect taxes and for the different types of taxes. Two exceptions are that
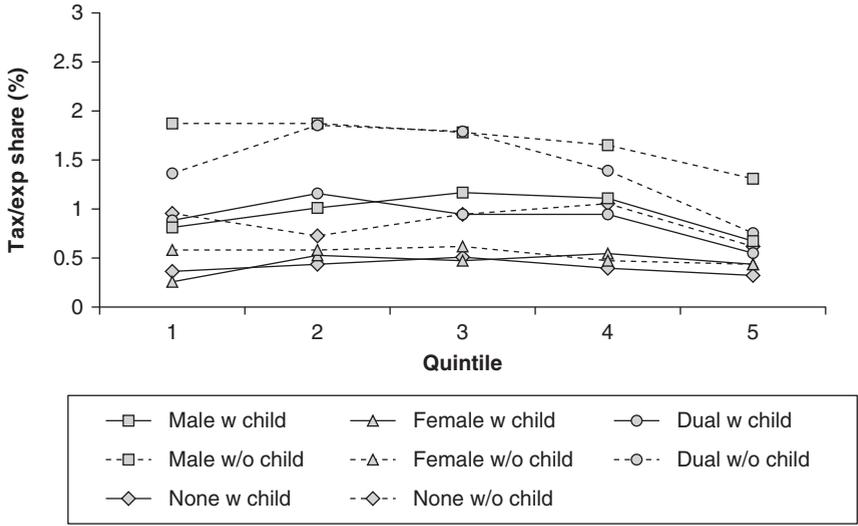
*Figure 8.4* Excise incidence by employment status, quintile and presence of children, South Africa.
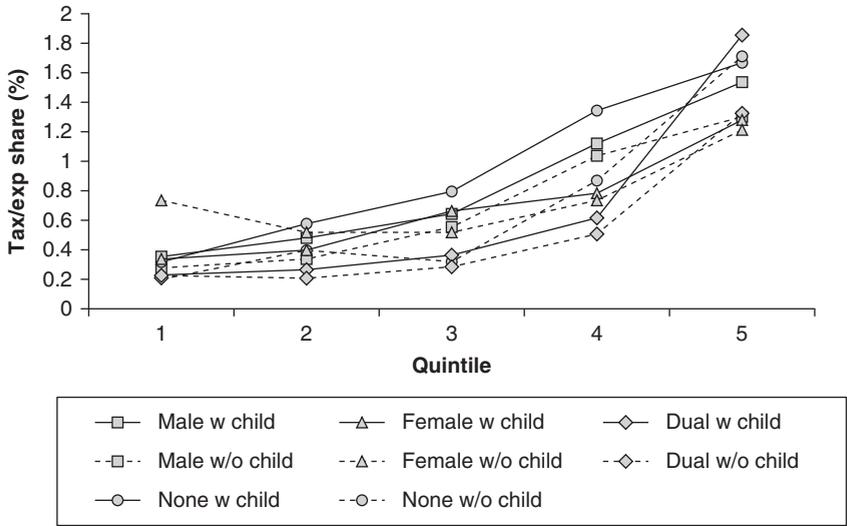


*Figure 8.5* Fuel levy incidence by employment status, quintile and presence of children, South Africa.

female-breadwinner households without children in the lowest two quintiles bear a higher incidence of the fuel levy than the other categories of household without children in those quintiles, and no-employed households with children in the highest quintile bear a higher burden of the fuel levy and VAT than most other household types in that quintile.

Within each household category, households with children bear a lower total indirect tax burden than those without children, driven mostly by the differences in the incidence of excise duties and the fuel levy. However, there are some exceptions by quintile: for example, female-breadwinner and no-employed households *with children* in the middle quintiles have a higher total tax incidence than those female-breadwinner and no-employed households without children. This is generally because the VAT and fuel levy incidence are higher in those quintiles among the households with children.

For all four of the employment status household categories, *total* indirect tax incidence tends to fall most heavily on the middle quintiles, particularly quintiles 3 and 4, with the poorest quintile paying a smaller share of expenditure on tax than the richest quintile. For VAT and excise duties, the incidence is predominantly on the middle quintiles, while the fuel levy is strongly progressive. When disaggregated by the presence of children in the household, some differences in the patterns of tax incidence across the quintiles emerge (see Figures 8.2–8.5): for both male-breadwinner and female-breadwinner households without children, the incidence of excise duties tends to be more 'regressive' and the VAT incidence more 'proportional' (i.e., the inverted-U shape of the VAT curves is less pronounced) compared to those households with children.

Table 8.8 shows total indirect tax incidence by consumption category. The gender differences that emerge are consistent with the broader international literature on gendered spending patterns. Female-breadwinner households bear a greater tax incidence on food (non zero-rated items as well as sugar items/confectionary items), utilities, children's clothing, personal care items (essential and non-essential), household fuel and education-related items (although education is VAT-exempt, textbooks and stationery in this category attract VAT). Male-breadwinner households bear a greater tax incidence on meals out, non-alcoholic beverages, alcoholic beverages (particularly beer), tobacco, adult clothing, private transport, fuel for transport, medical expenditure (mostly due to private health care), communication and recreation. Again, dual-earner households for the most part resemble the male-breadwinner households, and no-employed households resemble the female-breadwinner households in their spending patterns.

Consumption items for which taxes are generally more 'progressive' (for all household types) are housing, meals out, private transport, fuel for transport, communication and recreation; while items for which taxes are more 'regressive' are food, children's clothing, personal care necessities, fuel for household use and education. The tax incidence on non-alcoholic and alcohol beverages and tobacco generally falls most highly on the middle quintiles (see Figures 8.6 to 8.8, which plot tax incidence by quintile on food, alcohol and tobacco). It is interesting to note that many of the items for which the tax is more 'regressive' and that might also be considered 'good' or necessity items are those consumed more intensively by female-breadwinner and no-employed households.

Although the data are not shown here due to space constraints, when the tax incidence results by consumption item are further disaggregated by presence of children in the household, the earlier findings are reinforced. A comparison

*Table 8.8* Indirect tax incidence for main commodity groups by employment status and quintile, South Africa (% of expenditure)

| Category | Male-breadwinner | | | | | | Female-breadwinner | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *1* | *2* | *3* | *4* | *5* | *Total* | *1* | *2* | *3* | *4* | *5* | *Total* |
| Housing and utilities | 0.55 | 0.52 | 0.69 | 0.73 | 0.73 | 0.67 | 0.48 | 0.7 | 0.84 | 0.8 | 0.79 | 0.72 |
| *Housing | 0.04 | 0.02 | 0.04 | 0.07 | 0.14 | 0.07 | 0.03 | 0.04 | 0.05 | 0.08 | 0.13 | 0.06 |
| *Utilities | 0.52 | 0.51 | 0.64 | 0.66 | 0.59 | 0.6 | 0.45 | 0.66 | 0.79 | 0.72 | 0.66 | 0.66 |
| Food | 2.6 | 2.69 | 2.52 | 2.26 | 1.43 | 2.22 | 2.49 | 2.7 | 2.64 | 2.35 | 1.49 | 2.4 |
| *Basic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Other | 1.99 | 2.23 | 2.18 | 2.01 | 1.29 | 1.9 | 1.89 | 2.22 | 2.27 | 2.06 | 1.33 | 2.01 |
| *Sugar/confectionery | 0.61 | 0.46 | 0.34 | 0.25 | 0.15 | 0.32 | 0.6 | 0.48 | 0.37 | 0.29 | 0.16 | 0.4 |
| Meals out | 0.01 | 0.07 | 0.1 | 0.14 | 0.27 | 0.14 | 0.04 | 0.03 | 0.07 | 0.13 | 0.21 | 0.09 |
| Non-alcoholic beverages | 0.36 | 0.43 | 0.44 | 0.4 | 0.31 | 0.39 | 0.35 | 0.4 | 0.39 | 0.39 | 0.27 | 0.37 |
| Alcoholic beverages | 0.39 | 0.61 | 0.7 | 0.73 | 0.63 | 0.64 | 0.09 | 0.23 | 0.22 | 0.3 | 0.17 | 0.21 |
| *Spirits | 0.03 | 0.06 | 0.09 | 0.11 | 0.17 | 0.1 | 0.01 | 0.03 | 0.03 | 0.05 | 0.05 | 0.03 |
| *Wine | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.01 | 0 | 0.01 | 0.02 | 0.02 | 0.01 |
| *Beer | 0.33 | 0.51 | 0.58 | 0.59 | 0.43 | 0.51 | 0.07 | 0.2 | 0.18 | 0.23 | 0.1 | 0.16 |
| Tobacco | 0.9 | 1.02 | 1.16 | 1.23 | 0.85 | 1.05 | 0.31 | 0.52 | 0.45 | 0.47 | 0.41 | 0.44 |
| Clothing and footwear | 0.79 | 0.88 | 0.91 | 0.86 | 0.68 | 0.82 | 0.69 | 0.87 | 0.89 | 0.89 | 0.66 | 0.81 |
| *Adult clothing | 0.33 | 0.48 | 0.59 | 0.63 | 0.55 | 0.54 | 0.25 | 0.42 | 0.52 | 0.6 | 0.46 | 0.45 |
| *Children's clothing | 0.45 | 0.4 | 0.31 | 0.23 | 0.13 | 0.28 | 0.44 | 0.45 | 0.37 | 0.29 | 0.19 | 0.36 |
| Personal care | 0.74 | 0.79 | 0.72 | 0.63 | 0.48 | 0.65 | 0.8 | 0.81 | 0.81 | 0.77 | 0.56 | 0.77 |
| *Necessities | 0.43 | 0.39 | 0.35 | 0.28 | 0.16 | 0.3 | 0.42 | 0.42 | 0.36 | 0.3 | 0.17 | 0.35 |
| *Baby products | 0.01 | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 | 0 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 |
| *Other | 0.3 | 0.38 | 0.36 | 0.34 | 0.3 | 0.34 | 0.37 | 0.39 | 0.44 | 0.46 | 0.38 | 0.41 |
| Fuel for HH use | 0.41 | 0.28 | 0.18 | 0.12 | 0.05 | 0.17 | 0.31 | 0.27 | 0.23 | 0.12 | 0.06 | 0.21 |
| Furniture, HH Equipment and Maintenance | 0.66 | 0.63 | 0.74 | 0.69 | 0.6 | 0.66 | 0.6 | 0.64 | 0.74 | 0.77 | 0.5 | 0.66 |
| Domestic and household services | 0 | 0.01 | 0.02 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |

*Table 8.8* (Continued)

| Category | Male-breadwinner | | | | | | Female-breadwinner | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Total | 1 | 2 | 3 | 4 | 5 | Total |
| Transportation | 0.01 | 0.05 | 0.1 | 0.22 | 0.7 | 0.26 | 0.02 | 0.02 | 0.06 | 0.09 | 0.54 | 0.12 |
| *Private Transport | 0.01 | 0.05 | 0.1 | 0.22 | 0.7 | 0.26 | 0.02 | 0.02 | 0.06 | 0.09 | 0.54 | 0.12 |
| *Public/Collective transport | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fuel for transport | 0.34 | 0.45 | 0.62 | 1.07 | 1.4 | 0.87 | 0.33 | 0.41 | 0.64 | 0.77 | 1.24 | 0.63 |
| Medical expenditure | 0.05 | 0.07 | 0.07 | 0.07 | 0.1 | 0.08 | 0.04 | 0.06 | 0.07 | 0.07 | 0.11 | 0.07 |
| Education | 0.06 | 0.05 | 0.03 | 0.03 | 0.03 | 0.04 | 0.1 | 0.06 | 0.05 | 0.05 | 0.04 | 0.06 |
| Communication | 0.12 | 0.11 | 0.2 | 0.26 | 0.36 | 0.23 | 0.09 | 0.14 | 0.22 | 0.26 | 0.43 | 0.21 |
| Recreation | 0.08 | 0.11 | 0.21 | 0.25 | 0.48 | 0.26 | 0.04 | 0.1 | 0.16 | 0.24 | 0.38 | 0.17 |
| Gambling | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | 0 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 |
| Miscellaneous | 0.08 | 0.16 | 0.21 | 0.17 | 0.23 | 0.18 | 0.1 | 0.21 | 0.22 | 0.24 | 0.2 | 0.19 |
| TOTAL | 8.17 | 8.95 | 9.64 | 9.92 | 9.36 | 9.36 | 6.9 | 8.2 | 8.72 | 8.73 | 8.08 | 8.14 |
| | Dual-earner | | | | | | No-employed | | | | | |
| Housing and utilities | 0.35 | 0.5 | 0.68 | 0.83 | 0.8 | 0.7 | 0.48 | 0.64 | 0.87 | 0.94 | 1.08 | 0.68 |
| *Housing | 0.04 | 0.06 | 0.08 | 0.12 | 0.19 | 0.12 | 0.03 | 0.05 | 0.07 | 0.08 | 0.17 | 0.06 |
| *Utilities | 0.31 | 0.45 | 0.61 | 0.71 | 0.61 | 0.58 | 0.45 | 0.59 | 0.79 | 0.86 | 0.91 | 0.63 |
| Food | 2.55 | 2.57 | 2.5 | 2.32 | 1.28 | 2.03 | 2.67 | 2.72 | 2.67 | 2.45 | 1.63 | 2.6 |
| *Basic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Other | 1.95 | 2.12 | 2.17 | 2.07 | 1.15 | 1.75 | 1.93 | 2.15 | 2.22 | 2.13 | 1.45 | 2.04 |
| *Sugar/confectionery | 0.6 | 0.44 | 0.33 | 0.25 | 0.14 | 0.28 | 0.73 | 0.58 | 0.45 | 0.33 | 0.18 | 0.56 |
| Meals out | 0.07 | 0.07 | 0.13 | 0.15 | 0.19 | 0.14 | 0.02 | 0.02 | 0.1 | 0.07 | 0.15 | 0.05 |
| Non-alcoholic beverages | 0.35 | 0.39 | 0.39 | 0.38 | 0.22 | 0.32 | 0.37 | 0.41 | 0.43 | 0.42 | 0.27 | 0.39 |
| Alcoholic beverages | 0.35 | 0.78 | 0.53 | 0.49 | 0.35 | 0.47 | 0.12 | 0.18 | 0.28 | 0.39 | 0.32 | 0.21 |
| *Spirits | 0.05 | 0.08 | 0.08 | 0.09 | 0.15 | 0.1 | 0.02 | 0.02 | 0.04 | 0.05 | 0.13 | 0.03 |
| *Wine | 0.02 | 0.04 | 0.04 | 0.03 | 0.04 | 0.03 | 0.01 | 0.01 | 0.01 | 0.01 | 0.05 | 0.01 |
| *Beer | 0.29 | 0.65 | 0.41 | 0.37 | 0.17 | 0.33 | 0.1 | 0.15 | 0.23 | 0.33 | 0.14 | 0.16 |
| Tobacco | 0.96 | 1.13 | 1.01 | 1 | 0.54 | 0.85 | 0.43 | 0.46 | 0.59 | 0.69 | 0.5 | 0.5 |
| Clothing and footwear | 0.63 | 0.92 | 0.97 | 0.95 | 0.53 | 0.77 | 0.68 | 0.83 | 0.8 | 0.76 | 0.42 | 0.73 |
| *Adult clothing | 0.25 | 0.49 | 0.59 | 0.67 | 0.4 | 0.49 | 0.24 | 0.36 | 0.44 | 0.54 | 0.35 | 0.35 |
| *Children's clothing | 0.37 | 0.43 | 0.38 | 0.29 | 0.13 | 0.27 | 0.44 | 0.47 | 0.36 | 0.22 | 0.07 | 0.39 |

*(Continued)*

*Table 8.8* (Continued) Indirect tax incidence for main commodity groups by employment status and quintile, South Africa (% of expenditure)

| Category | Dual-earner | | | | | | No-employed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *1* | *2* | *3* | *4* | *5* | *Total* | *1* | *2* | *3* | *4* | *5* | *Total* |
| Personal care | 0.81 | 0.74 | 0.77 | 0.65 | 0.43 | 0.62 | 0.74 | 0.8 | 0.74 | 0.71 | 0.5 | 0.74 |
| *Necessities | 0.46 | 0.38 | 0.34 | 0.25 | 0.12 | 0.26 | 0.42 | 0.4 | 0.37 | 0.32 | 0.16 | 0.38 |
| *Baby products | 0 | 0.01 | 0.01 | 0.02 | 0.03 | 0.02 | 0.01 | 0.01 | 0 | 0.01 | 0 | 0.01 |
| *Other | 0.35 | 0.35 | 0.42 | 0.38 | 0.29 | 0.35 | 0.31 | 0.39 | 0.37 | 0.38 | 0.33 | 0.35 |
| Fuel for HH use | 0.4 | 0.32 | 0.18 | 0.12 | 0.04 | 0.16 | 0.29 | 0.29 | 0.29 | 0.19 | 0.07 | 0.27 |
| Furniture, HH Equipment and Maintenance | 0.64 | 0.67 | 0.76 | 0.72 | 0.47 | 0.62 | 0.62 | 0.71 | 0.71 | 0.71 | 0.45 | 0.66 |
| Domestic and household services | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 |
| Transportation | 0.05 | 0.05 | 0.08 | 0.29 | 0.87 | 0.4 | 0.01 | 0.04 | 0.04 | 0.17 | 0.46 | 0.07 |
| *Private transport | 0.05 | 0.05 | 0.08 | 0.29 | 0.87 | 0.4 | 0.01 | 0.04 | 0.04 | 0.17 | 0.46 | 0.07 |
| *Public/Collective transport | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fuel for transport | 0.33 | 0.54 | 0.76 | 1.24 | 1.66 | 1.13 | 0.23 | 0.25 | 0.33 | 0.55 | 1.41 | 0.36 |
| Medical expenditure | 0.1 | 0.07 | 0.08 | 0.07 | 0.12 | 0.09 | 0.06 | 0.08 | 0.08 | 0.09 | 0.22 | 0.09 |
| Education | 0.07 | 0.06 | 0.05 | 0.03 | 0.03 | 0.04 | 0.06 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 |
| Communication | 0.09 | 0.14 | 0.2 | 0.3 | 0.41 | 0.28 | 0.08 | 0.13 | 0.17 | 0.27 | 0.44 | 0.15 |
| Recreation | 0.07 | 0.1 | 0.17 | 0.28 | 0.5 | 0.3 | 0.06 | 0.07 | 0.13 | 0.22 | 0.54 | 0.12 |
| Gambling | 0 | 0.02 | 0.04 | 0.02 | 0.02 | 0.02 | 0 | 0.01 | 0.01 | 0.02 | 0.03 | 0.01 |
| Miscellaneous | 0.1 | 0.16 | 0.21 | 0.2 | 0.19 | 0.18 | 0.09 | 0.14 | 0.26 | 0.25 | 0.17 | 0.16 |
| TOTAL | 7.95 | 9.24 | 9.5 | 10.07 | 8.69 | 9.15 | 7 | 7.82 | 8.56 | 8.96 | 8.72 | 7.84 |

*Source*: Own calculations from IES 2000.

*Note*: Data are weighted.
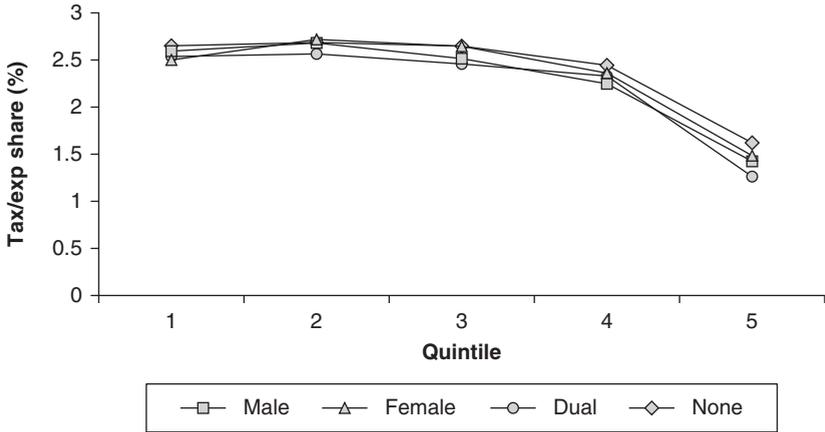
*Figure 8.6* Food tax incidence by employment category and quintile, South Africa.
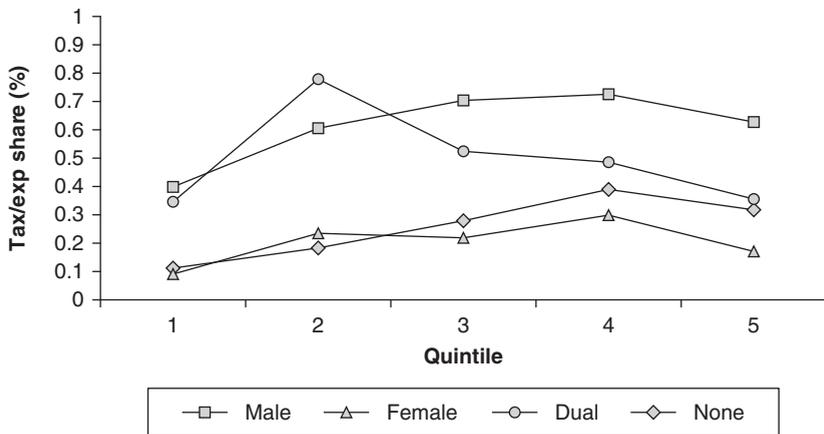


*Figure 8.7* Alcohol tax incidence by employment category and quintile, South Africa.

between male-type households with children and female-type households with children, finds that male-type households with children bear a higher incidence of taxes particularly on housing, meals out, alcoholic beverages, tobacco, adult clothing, private transport, fuel for transport, communication and recreation; while female-type households with children bear a higher burden on food, children's clothing, basic personal care items and other non-essential personal care items, fuel for household use and furniture, equipment and household maintenance items.

Both male-type and female-type households with children bear a lower incidence overall compared to the households without children, but a higher incidence on certain consumption items, such as housing, food, children's clothing,
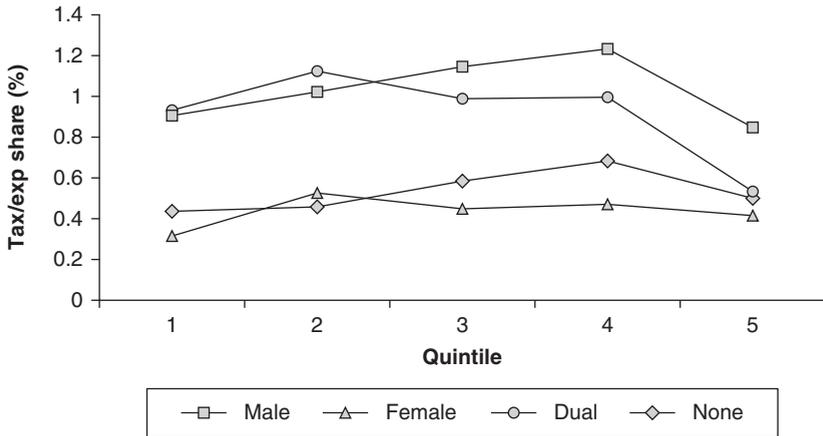
*Figure 8.8* Tobacco tax incidence by employment category and quintile, South Africa.

personal care (especially necessities and baby products), household fuel, furniture equipment and household maintenance items and education. In contrast, male-type and female-type households without children bear a higher incidence on meals out, non-alcoholic and alcoholic beverages, tobacco, other non-necessity personal care items, adult clothing, transport, fuel for transport, (private) medical expenditure, communication and recreation. These results suggest that, if we had to divide spending very crudely into 'good'/necessity items and 'bad'/luxury items, the presence of women (with spending power) and children in the household is associated with a greater proportion of spending on the former basket of goods.

## Policy simulations

The impact of zero-rating additional items that would benefit poor female-breadwinner and no-employed households (and those that contain children) is considered here. We estimate the distributional and revenue consequences of zero-rating all non-confectionary food items that are not currently zero-rated; and more specifically, poultry; children's clothing and footwear; and a basket of basic personal care items (toilet paper, toothpaste/toothbrushes, soap, tissues, contraception, and sanitary towels). These goods were chosen on the basis that (1) they are recurring expenditure items; (2) they do not impose any obvious neg-ative externalities; and (3) they make up a larger relative share of the budget of female-breadwinner and no-employed households (particularly those with children in the lower quintiles) compared to male-breadwinner and dual-earner households.[10] This last criterion by definition results in strong gender- and income-distributional outcomes for all of the policy experiments; we are interested, there-fore, in which policy changes have the largest relative effect without resulting in undue revenue losses. For comparison, we also estimate the effect of VAT rating items that are currently zero-rated, specifically, basic food items and paraffin.

*Table 8.9* Indirect tax incidence and government revenue effect of VAT and zero-rating (selected items), South Africa

| | Base incidence | Effect of VAT rating (% change) | | | Effect of zero-rating (% change) | | |
|---|---|---|---|---|---|---|---|
| | Tax incidence (% of exp) | Basic food | Paraffin | Other non-conf. food items | Children's clothing | Basic personal care items | Poultry |
| Male-breadwinner | 9.36 | 23.29 | 2.03 | −20.19 | −2.99 | −3.21 | −4.38 |
| Female-breadwinner | 8.14 | 33.91 | 2.95 | −24.45 | −4.42 | −4.18 | −5.59 |
| Dual-earner | 9.15 | 19.56 | 1.42 | −19.02 | −2.95 | −2.73 | −3.68 |
| No-employed | 7.84 | 45.92 | 4.34 | −25.89 | −4.85 | −4.72 | −6.60 |
| Ratio female/ male % change | | 1.46 | 1.45 | 1.21 | 1.48 | 1.30 | 1.28 |
| Q1 | 7.28 | 60.03 | 5.22 | −26.37 | −5.91 | −5.77 | −7.29 |
| Q2 | 8.36 | 41.27 | 4.07 | −25.96 | −5.26 | −4.78 | −6.76 |
| Q3 | 9.11 | 29.09 | 2.74 | −24.15 | −3.95 | −3.95 | −5.65 |
| Q4 | 9.56 | 18.83 | 1.36 | −21.44 | −2.72 | −2.93 | −4.07 |
| Q5 | 8.82 | 8.39 | 0.23 | −14.17 | −1.59 | −1.59 | −1.81 |
| Ratio Q1–3/Q4–5 % change | | 4.79 | 7.57 | 2.15 | 3.51 | 3.21 | 3.35 |
| Total | 8.63 | 30.13 | 2.55 | −22.25 | −3.82 | −3.71 | −5.00 |
| Loss/gain to fiscus per year (millions Rands, 2000 prices) | | 3,876 | 229 | −4,788 | −576 | −618 | −761 |

*Source*: Own calculations from IES 2000.

*Note*: Data are weighted.

The results of the policy simulations are presented in Table 8.9. The findings suggest that the largest income equality gains have already been exhausted through the current zero-rating of basic food items and paraffin. The zero-rating of these items has also resulted in substantial gender equality outcomes, benefiting female-breadwinner and no-employed households the most in relative terms. The potential zero-rating of children's clothing would offer the next largest gain in terms of income equality, and even stronger gender benefits than the current zero-rating of foodstuffs and paraffin. This would seem to be the most attractive policy recommendation, also because of its perfect targeting to households with children.

Although the revenue loss resulting from this policy change (R576 million per annum in 2000 prices) is more than double the loss incurred through the zero-rating of paraffin, it amounts to a relatively small percentage of the total VAT intake (1.2 per cent). By comparison, the reduction in revenue from the zero-rating of all other non-confectionary foodstuffs would amount to a loss of over 10 per cent of the total VAT intake. Put another way, the loss of revenue from the zero-rating of

children's clothing is the equivalent of about one per cent of the education budget for that year and only about half a per cent of the total social services budget.

We would not encourage balancing the revenue loss from this change with other indirect tax increases. Given that it is not possible to estimate accurately the gender incidence of indirect taxes *within* the household or to measure any behavioural change following a tax policy adjustment, a tax increase based on static household incidence results may have unintentional negative effects. For example, raising the excise duties on alcohol and tobacco (based on the demerit argument) could result in negative gender equality effects within the household if income is taken away from 'necessity' goods to finance the inelastic demand for these items. It is also important to note that while the majority of women (56 per cent) in South Africa live in female-breadwinner or no-employed households, 21 per cent live in male-breadwinner households and 23 per cent live in dual-earner households and are therefore affected by policies targeting these households.

## Conclusion and policy recommendations

Tax reforms in South Africa following the political transition have addressed the explicit gender biases in the PIT system, and have gone a long way to reducing implicit bias against female-type households in the indirect tax system. As we have demonstrated, however, a number of implicit gender biases continue to exist. On the PIT side, some of this bias arises as a result of systems which seek to ease the administrative burden, both for the revenue authorities and for the taxpayer. The SITE system, which presumes that taxes collected by the employer are accurate, may well be placing an undue tax burden on poor women, especially those working in irregular employment.

Horizontal inequity across households with the same income but different numbers of income earners remains a feature of the PIT system. The tax burden is particularly borne by low-income, single female-earner households. This is clearly an issue that needs some attention. We would not, however, propose a return to household filing as this will further disadvantage women. The issue is probably best dealt with on the expenditure side of the budget. To some extent, this is already the case with programmes such as the child support grant, which cater for poor households with child dependants

For the indirect tax system, there is no implicit bias *overall* against 'female-type' households, those in the lowest quintiles and those with children. Instead, the high taxes on alcohol and tobacco and the fuel levy result in a higher incidence on 'male-type households' and those without children. The zero-rating of basic food items and paraffin, goods which are consumed relatively more by poor female-type households with children, has helped to protect these households from carrying a disproportionate share of the indirect tax burden.

Implicit bias against female-type households in the indirect tax system is visible only when the results are disaggregated into different consumption items: female-type households (in the lowest quintile and with children) bear a higher burden on 'good' or necessity items such as food, basic personal care items,

children's clothing and fuel for household use. Our policy simulations suggest that the zero-rating of children's clothing in particular may be a feasible recommendation as it has large gender- and income-distributional impacts and perfectly targets households with children, but has relatively small revenue implications.

However, any change to the indirect tax system that benefits female-type households needs to be evaluated against the trade-off of introducing further horizontal inequality (and complexity) into the indirect tax system. In addition, changes to the indirect tax system (that are feasible in terms of revenue loss) are likely to have a rather marginal effect on pre-tax gender and income inequalities. Policies designed to reduce unequal outcomes for women and children may be more effective on the expenditure side of the budget, particularly through the continued and extended provision of social welfare grants to those in need.

## Notes

1  The average exchange rate of the ZAR to the US$ for 2007 is 7.0544.
2  Paraffin was only zero-rated in April of 2001. However, our expenditure data are from October 2000. We calculate tax incidence as if the zero-rating had applied in 2000, i.e., using the spending behaviour information of households on paraffin from 2000, in order to get a more realistic picture of the current incidence on the poor. This assumption ignores any knock-on effects that an effective reduction in the price of paraffin would have on other spending patterns.
3  The 2005 IES was released in early 2008, but we chose not to use this survey as some of the expenditure data are not considered reliable (Statistics South Africa 2008). In particular, the share of spending on food was found to be much lower than in 2000 across all quintiles in the distribution (and compared to other countries of similar levels of development), which would affect our incidence results substantially.
4  The quality of the income data from the 2000 survey has been called into question (see Simkins 2004), so we use only the expenditure data from the IES. We use a cleaned version of the dataset (prepared by Global Insight) which has had many of the anomalies corrected or removed, and we also use revised and updated sampling weights based on the 2001 Census provided by Statistics South Africa.
5  Thanks to Morné Oosthuizen and Ingrid Woolard for sharing their price and excise duty data.
6  Statistics South Africa (2002: 90) defines headship for the IES as:

> The head is the person in whose name the dwelling is registered. It may be the person who owns the dwelling, or is responsible for the rent, or gets the dwelling through their work, or through their relationship to the owner. If two or more persons have equal claim to be head of the household, or if people state that they are joint heads or that the household has no head, then choose the eldest as the head.

It is not clear to what extent this definition is followed by fieldworkers when conducting the survey, even though Statistics SA instructs enumerators to explain it.
7  In the IES 2000, employment status is based on the following question and prompt: 'During the past seven days, did . . . do any work for pay, profit or family gain? *Formal/informal work, working on a farm, casual/seasonal work, etc.*'
8  Authors' own calculations from the South African Labour Force Survey of September 2001.

9   For standard errors of the estimates and t-tests of the equality of mean incidence across groups, see Casale (2009).
10  Baby food (milk and grain only) and other fuels for household use (particularly coal, firewood and candles) were also possible candidates, but were not considered further here because, for the former, there is some concern about the implications for breast-feeding, while for the latter, there are possible environmental consequences (for details, see Casale 2009). White bread, white sugar and tea were also excluded because of the nutritional implications, although they do form a larger relative share of the budgets of (poor) female-type households compared to male-type households.

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# 9 Gender equality and taxation in Uganda

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## Introduction

Uganda is a low-income country that has registered strong economic growth in recent years, averaging about 8 per cent since 1992. Tax reforms introduced in July 1996 have resulted in an increase in tax revenue from about 11 per cent of gross domestic product (GDP) in 1997–98 to 13 per cent in 2005, where it has remained. One of the key challenges facing government is how to increase revenues and generate the funding needed to eradicate poverty and pay for critical development investments, thereby reducing its dependency on foreign aid. Many Ugandans have not shared in the country's economic growth and income inequality is growing. Poverty remains high, with about 31 per cent of the population living below the poverty line in 2005–06 (Ssewanyana and Okidi 2007). It is unclear, however, whether the country's policy-makers view taxation as primarily a means of raising revenue or as a redistributive instrument.

Since the 1990s the government has introduced a number of reforms in the taxation system. Several studies (Bahiigwa *et al*. 2004; World Bank 2006; Ssewanyana and Okidi 2008) have assessed the impact of these reforms on household welfare, while others (Chen *et al*. 2001 and Ssewanyana and Okidi 2008) provide useful analyses of the incidence of taxation by focusing on the tax burden by poverty status and expenditure quintile. This chapter examines the shifts in the burden of taxation resulting from the reforms from a gender perspective. More specifically, it is an attempt to analyse the differential impact tax policies and tax reforms have had on men and women, particularly on poor women. It focuses on both domestic indirect taxes, including the Value-Added Tax (VAT) and excise duties, and direct taxes, with specific reference to personal income tax (PIT) including Pay-As-You-Earn (PAYE) and the Local Service Tax (LST). Our analysis relies heavily on the Uganda National Household Survey of 2005–06 (UNHS III) data and administrative data from the Uganda Revenue Authority (URA).

## Gendered structure of earnings and income

Uganda is one of a growing number of countries in Sub-Saharan Africa that are beginning to take gender into account when developing economic policy. Gender

is one of the cross-cutting issues identified in Uganda's Poverty Eradication Action Plan (PEAP) and a number of recent policies explicitly promote gender equality and equity. For example, under a recent affirmative action policy, girls wishing to enrol in public universities are given 1.5 extra points on their applications. Gender inequalities in access to social services, adult literacy and other outcome indicators have steadily narrowed. However, these efforts to improve gender equality through expenditures have not been matched by similar reforms in revenue generation.

The participation of women in the labour market has increased over time, along with their share of decision-making high positions in government and Non-Governmental Organizations (NGOs) (Okurut *et al.* 2006; Kiiza 2006). Nearly 53 per cent of the employed population aged 18 years and above are women. Almost 79 per cent of Ugandans are self-employed, of which 34 per cent are unpaid family workers, and women represent about 83 per cent of this category. Only 16 per cent of the paid workforce (1.67 million) is in the formal sector; 80 per cent of these work for private employers. Nearly three-quarters of all salaried employees are men – approximately 1.21 million compared to 0.47 million women. Figure 9.1 depicts the distribution of Uganda's workforce by gender.

In 2005–06, 15.5 per cent of workers, primarily women, earned less than half the median income, which was on average UGX434,400 (equivalent to US$241.29). Table 9.1 shows that nearly two-thirds of all wage workers received less than twice the median income. Disaggregating the results by sector, we note that most paid workers in the private sector earn less than half the median income. Despite its small share in total employment, the public sector provides far better wages. It also has a narrower gap between male and female wages than does the private sector.

Nearly 44 per cent of all households reported expenditures below the minimum PAYE threshold of UGX130,000 per month (equivalent to US$ 72.21 per month). Government has been compensating low-income households through transfers,
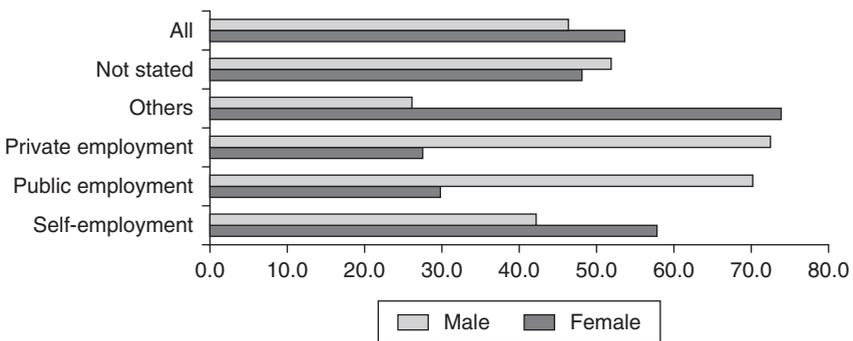


*Figure 9.1* Workface composition, persons aged over 18 years by sex, Uganda (in %).

*Source*: Authors' calculations based on Uganda National Household Survey-UNHSIII 2005–06.

*Table 9.1* Median employment earnings per person per year, 2005–06, Uganda

| Employees | % persons below: | | | UGX per annum | |
|---|---|---|---|---|---|
| | Half of median | Median | Twice the median | Mean | Median |
| *All employees* | | | | | |
| Female | 24.4 | 63.2 | 79.3 | 702,597 | 240,000 |
| Male | 11.0 | 37.1 | 60.1 | 1,335,176 | 600,000 |
| All | 15.5 | 45.9 | 66.6 | 1,120,095 | 434,400 |
| *Public sector* | | | | | |
| Female | 2.7 | 5.5 | 12.0 | 2,487,105 | 1,716,000 |
| Male | 1.5 | 6.2 | 15.6 | 3,221,970 | 1,800,000 |
| All | 1.8 | 6.0 | 14.6 | 3,018,688 | 1,800,000 |
| *Private sector* | | | | | |
| Female | 26.7 | 69.3 | 86.4 | 514,016 | 217,200 |
| Male | 12.4 | 41.6 | 66.6 | 1,056,334 | 480,000 |
| All | 17.4 | 51.3 | 73.5 | 867,366 | 384,000 |

*Source*: Authors' calculations based on Uganda National Household Survey, UNHSIII, 2005–06.

such as provision of basic social services, although, as noted, these are largely donor-supported. Benefit incidence analysis demonstrates that the poor have benefitted from such services, particularly primary education and access to basic public health facilities (Deininger and Mpuga 2008). However, the quality of these services leaves a lot to be desired.

### Household structure

In 2005–06, Uganda had nearly 5.2 million households, each averaging 5.2 people. This chapter classifies households in three ways: according to the sex of the 'head'; by the sex composition of adults (considered to be 18 years and older) in the household (female-majority, male-majority or equal numbers); and by the employment status of adult members (male-earner, female-earner and dual-earner). Table 9.2 shows that nearly one in every three Ugandan households is majority female, about 27 per cent have female heads and 21.1 per cent are female breadwinners. These female-type households predominate among the poorest households; the proportion of male-headed households increases with income level. Looking at households by adult sex composition, we observe a concentration of male-majority households in the wealthiest quintile. Similarly, a comparison by employment status shows that households with male breadwinners are concentrated in the top quintile.

More disaggregated analysis shows that female-headed households are more likely to have a higher concentration of female breadwinners with no male breadwinners, and tend to be heavily dominated by adult females. On the other hand,

*Table 9.2* Distribution of household typology by income, Uganda (%)

| Household typology | All | Expenditure quintile | | | | | Numbers of HH ('000) |
|---|---|---|---|---|---|---|---|
| | | Q1 | Q2 | Q3 | Q4 | Q5 | |
| *Gender of head* | | | | | | | |
| Female | 26.9 | 17.8 | 16.6 | 17.7 | 21.4 | 26.5 | 1,408 |
| Male | 73.1 | 15.8 | 18.0 | 19.4 | 21.0 | 25.9 | 3,821 |
| *Adult sex composition* | | | | | | | |
| Female-majority | 29.7 | 16.9 | 16.9 | 18.7 | 21.0 | 26.4 | 1,552 |
| Male-majority | 20.1 | 9.2 | 12.1 | 15.1 | 20.3 | 43.4 | 1,050 |
| Equal gender | 50.2 | 18.8 | 20.3 | 20.6 | 21.4 | 18.9 | 2,627 |
| *Employment status* | | | | | | | |
| Dual-earner | 54.0 | 18.2 | 20.4 | 21.4 | 21.5 | 18.5 | 2,826 |
| Female-breadwinner | 21.1 | 19.0 | 16.7 | 18.7 | 19.0 | 26.5 | 1,104 |
| Male-breadwinner | 16.0 | 7.8 | 9.3 | 11.4 | 20.8 | 50.7 | 836 |
| No-earning-adult | 8.9 | 13.7 | 17.7 | 17.9 | 24.3 | 26.6 | 463 |

*Source*: Ssewanyana (2009).

households designated as male-headed have a higher concentration of dual earn-ers. Eight in every 10 female-type households live with children, compared to only 5 in 10 male-type households. Nine in every 10 dual-earner households and those with an equal number of adult males and females live with children. Female-type households have a higher proportion of children than male-type households, which themselves have a higher proportion of children than the national average. Similar results are noted for dual-earner households and those with an equal-number of males and females households.

## Taxation and tax revenue since 1997

Like many countries in Sub-Saharan Africa, Uganda has relied heavily on foreign development assistance, although this dependency has gradually diminished from more than 50 per cent of the total national budget in 1992 to an estimated 28 per cent in 2008–09 (Government of Uganda 2008). Even so, donor financing plays a major role in social protection programmes, including the provision of basic social services, reflecting the country's inability to fully fund its development needs through domestic resources. Uganda's domestic revenue base remains very low. The share of tax revenue in GDP has remained about 13–14 per cent since 2005 (see Table 9.3), much lower than the proportion in neighbouring Kenya (23 per cent) and Tanzania (16 per cent).

Despite efforts to improve the efficiency of domestic revenue collection, the government has yet to achieve its target of increasing domestic revenues by 0.5 per cent of GDP per annum. The recent discovery of oil, production of which is scheduled to begin at the end of 2009, should improve this situation, primarily through the licensing fees levied on oil companies.

*Table 9.3* Share of type of tax to GDP and total tax revenue, Uganda, 2002–07

| | *2002–03* | *2003–04* | *2004–05* | *2005–06* | *2006–07* |
|---|---|---|---|---|---|
| *% share of tax to GDP* | | | | | |
| Net URA collections (excluding govt taxes and tax refunds) | 11.97 | 12.45 | 12.68 | 12.86 | 12.47 |
| Gross revenues | 12.33 | 12.86 | 13.09 | 13.47 | 14.43 |
| *o/w Total domestic taxes* | 6.09 | 6.24 | 6.67 | 6.87 | 7.23 |
| Direct domestic Taxes + fees and licences | 3.05 | 3.44 | 3.8 | 3.92 | 4.16 |
| PAYE | 1.43 | 1.52 | 1.62 | 1.81 | 1.89 |
| Indirect domestic taxes | 3.04 | 2.8 | 2.87 | 2.95 | 3.07 |
| *o/w govt VAT payments on behalf of private co.* | 0 | 0 | 0 | 0 | 0.01 |
| Taxes on international trade | 6.14 | 6.53 | 6.32 | 6.5 | 7.06 |
| Government taxes on imports | 0.11 | 0.09 | 0.1 | 0.1 | 0.14 |
| *% share in total tax revenue* | | | | | |
| Net URA collections (excluding govt. taxes and tax refunds) | 97.07 | 96.79 | 96.89 | 95.49 | 93.32 |
| Gross revenues | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| *o/w Total domestic taxes* | 49.00 | 48.53 | 50.96 | 51.02 | 50.09 |
| Direct domestic taxes and fees and licenses | 24.73 | 26.75 | 29.04 | 29.10 | 28.83 |
| Indirect domestic taxes | 24.63 | 21.78 | 21.92 | 21.91 | 21.25 |
| *o/w govt VAT payments on behalf of private co.* | 0.00 | 0.00 | 0.00 | 0.87 | 0.07 |
| Taxes on international trade | 49.76 | 50.77 | 48.27 | 48.27 | 48.92 |
| Government taxes on imports | 0.88 | 0.70 | 0.77 | 0.71 | 0.99 |

*Source*: Authors' calculations based on data from Uganda Revenue Authority (2007–08).

Figure 9.2 shows the patterns and trends in revenue performance by type of tax. As can be seen in this figure, PAYE has remained the major source of income tax revenue, followed by corporate income tax and withholding tax. The contribution of PAYE to total tax revenue (and GDP) has been growing over time, from a low of 6 per cent in 1997–98 to about 14 per cent in 2006–07, representing about 1.89 per cent of GDP. This trend is a result of both more rigorous tax enforcement as well as job and salary growth in the formal sector, even though this sector's share in total employment has remained at about 16 per cent.

Indirect taxes on consumption are also an important source of revenue. Since 2002–03, the contribution of excise duties has remained almost flat, at less than 8 per cent of total revenue – a significant drop from its 12 per cent share in 1997–98. Further disaggregated analysis reveals stagnating excise duties from beer and cigarettes and a rising contribution from phone talk time. Excise duties on domestically produced beer have been reduced by 10 per cent, effective FY 2008–09. This is supposedly meant to promote local value addition, modernization of agriculture
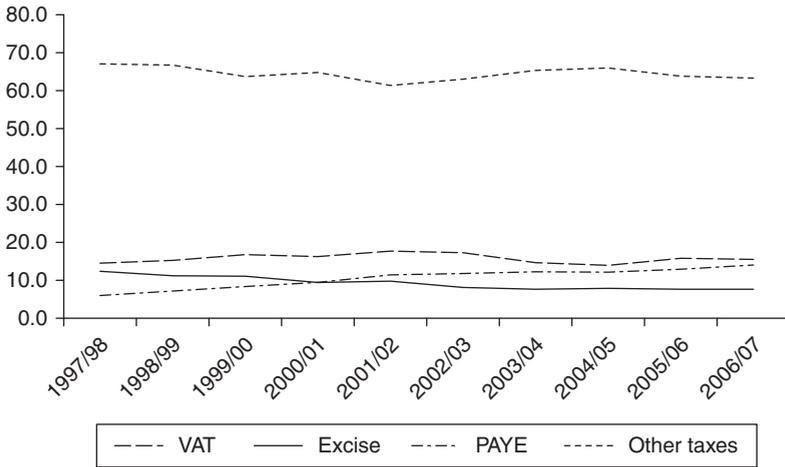
*Figure 9.2*  Patterns and trends of tax type in total central government revenue, Uganda (%).

*Source*: Uganda Revenue Authority (URA) 2008.

and overall poverty reduction. The VAT contribution to revenues has fluctuated between 15 and 18 per cent since 1997. It is worth noting that an increase in the VAT rate from 17 to 18 per cent in 2005 has not generated significant growth in tax revenue. Finally, the contribution of other taxes remains at about 60 per cent, of which the largest proportion is from international trade (see Table 9.3).

## Tax reforms

Since the mid-1990s, Uganda has implemented several tax reforms, several of which are relevant to this analysis. The Income Tax Act of 1997 was enacted in 1997. Recent direct tax reforms have included the abolition of the graduated tax in 2005, a local government head tax paid by all economically active males and females aged 18–60 years. This was a severe blow to local government, which relied heavily on this tax as a major source of revenue. To compensate for this loss, in 2008, the government introduced the Local Service Tax (LST) on individuals, mainly those with monthly wage incomes.

The VAT was introduced in July 1996 to replace the sales tax on goods and the Commercial Transaction Levy (CTL) on services. There are three categories of VAT: exempt, zero-rated and a standard rate of 17 per cent, which was raised to 18 per cent in 2005–06 (see Ssewanyana 2009). Commodities that attract tax include processed foods and beverages such as sugar, salt, beer, soda; household appliances such as flat irons; utilities including piped water, electricity; children and adult clothing and footwear; and dry cleaning services, to mention a few.

The excise tax system is not as broad-based as the VAT. It covers only a few items, such as alcoholic and processed soft drinks, telephone airtime, spirits and

*waragi* (locally distilled spirits), cigarettes and tobacco, and petroleum products (petrol, diesel and paraffin). Ad valorem excise duty is expressed as a percentage of expenditure on a given service or product (e.g., beer) and flat rate excise duty is levied per unit of the physical quantity of a given good (e.g., petroleum products). Like VAT, excise duty treatment was altered in significant ways in 2005–06. Beer was further divided into malt and non-malt, with a 60 per cent and 20 per cent excise duty, respectively, on the ex-factory price. The tax on spirits was set at 60 per cent of the ex-factory price. The excise duty on phone talk time increased from 10 per cent in 2004–05 to 12 per cent in 2005–06. The tax on cigarettes was changed from ad valorem to a flat rate. A flat rate of UGX50 per kg was levied on sugar. On average, the levy per litre on petrol and diesel rose from UGX490 (equivalent to US$0.27) in 2002–03 to UGX560 (equivalent to US$0.31) in 2005–06. The tax on kerosene has remained at UGX200 (equivalent to US$0.11) per litre since 2002–03.

### Personal income tax

The PAYE income tax brackets and tax rates have remained the same since 1997. PAYE is a progressive direct tax; better paid workers pay a higher proportion of their income in tax. Every bracket of paid employment contains more men than women, and the incidence of PAYE is correspondingly greater among male workers than female workers, especially in the highest income bracket. As can be seen in Table 9.4, the pattern is similar for the Local Service Tax (LST).

Employees in the public sector contributed 45.8 per cent of total PAYE revenue in 2005–06 and would have contributed 43.7 per cent of LST if the tax was introduced during that time. The incidence of LST is less gender-responsive relative to PAYE. Overall, women workers contributed 13 per cent of PAYE but their contribution to LST would be estimated at 18.9 per cent.

At the household level, the incidence of PAYE as a percentage of income is 11.3 per cent for dual-earner, female-majority households, higher than the percentage for dual-earner, male-majority households. A comparison among single-earner households shows that the incidence of PAYE on single-male-earner households is almost twice that of single-female-earner households. This is partly owing to

*Table 9.4* Share of PAYE by income tax bracket, Uganda (%)

| PAYE income tax brackets ('000UGX) | Tax rate % | Share of total PAYE Of which | | | Share of total LST Of which: | | |
|---|---|---|---|---|---|---|---|
| | | All | Female | Male | All | Female | Male |
| < 1,560 | 0 | 0.0 | 0.0 | 0.0 | 11.3 | 3.2 | 8.1 |
| 1,560–2,820 | 10 | 4.5 | 0.9 | 3.6 | 17.2 | 4.0 | 13.2 |
| 2,820–4,920 | 20 | 17.9 | 2.9 | 15.0 | 23.2 | 3.7 | 19.5 |
| > 4,920 | 30 | 77.6 | 9.2 | 68.4 | 48.3 | 7.9 | 40.4 |

*Source*: Uganda National Household Survey-UNHS III, 2005–06.

the fact that single-male-earner households predominate in the higher PAYE tax categories. These households are more often found in the highest quintile and contribute 54.3 per cent of total PAYE. Single-female-earner households make up the majority in the 1st and 2nd quintiles. Single-female and dual-earner, female-majority households contribute just 5.7 per cent and 7 per cent of total PAYE, respectively.

### Gender biases in direct taxes

Uganda's direct tax system contains no obvious explicit gender biases. The Income Tax Act treats men and women with the same level of income the same way. The majority of income taxpayers are men, owing to their relatively higher participation in the wage labour market and other income-generating activities. Increasing women's contribution to total personal income tax will require increasing women's participation in wage employment.

However, equal treatment in the tax code does not translate into substantive gender equality, and Uganda's system of personal income tax does contain implicit gender biases. For example, there are no adjustments of tax thresholds and brackets to compensate for inflation, which as discussed below results in an implicit gender bias against females. In addition, there is horizontal inequity in the system: households with the same level of earnings but a different taxpayer composition have different personal income tax burdens; households with the same level of income and composition of taxpayers pay the same amount of income tax regardless of whether they contain children and other dependants.

Income tax policies have not really addressed gender concerns. Women are treated the same way as men, with no deductions or allowances to compensate for their greater vulnerability to poverty. A few amendments to the Income Tax Act 1997 have some gender relevance, though only incidentally. One provision of the Income Tax (Amendment) Act 2003 exempts earners engaged in agriculture, plantation or horticultural farming from paying tax. This has gender relevance only in the sense that most employed women work in agriculture. Similarly, the Income Tax (Amendment) Act 2008 provides incentives to earners engaged in agro-processing. Again the gender relevance of the amendment is only to the extent that agro-processing is key to agriculture, where as noted, the majority of women work for a living.

Tax exemptions tend to benefit males more than females, primarily because of occupational segregation in the labour market. For instance, the value of any property acquired by gift, bequest, or inheritance that is not included in business, employment or property income is exempt from personal income tax. This exemption favours men relatively more than women because in Uganda most communities are patrilineal and inheritances mainly benefit men.

Pension income is also exempt from tax. This provision benefits men relatively more than women, fewer of whom are in employment with pensions. A lump-sum payment that is made by a resident retirement fund to a member of the fund or a dependant of a member of a fund is exempt from income tax. The exemption

again benefits men relatively more than women because of the relatively larger proportion of men in pensionable employment. Finally, the official employment income of people employed in the armed forces, the police or prison services is exempt from income tax. Until very recently, the forces employed only men. Even now, the proportion of women in the Uganda People's Defence Force is below 5 per cent, and women make up only 25 per cent of Uganda's police force.

Another source of implicit bias comes from fiscal drag, whereby tax thresholds are not adjusted for inflation. Although inflation has been low since the 1997 Income Tax Act was enacted, it has steadily eroded the value of Ugandan wages; income tax brackets have not been adjusted upwards. Bategeka *et al*. (2009) demonstrate that even though the UGX130,000 minimum income exempt from PAYE in 1997 was equivalent to UGX197,271 a decade later, the government has kept the same tax thresholds. This means that wage earners whose monthly incomes were in the range of UGX130,000–197,271 and who were previously exempted from income tax now have to pay. This group includes a higher proportion of women than men, suggesting that inflation has burdened them disproportionately. In 2007, compensation for this implicit gender bias generated by inflation would have required a 52 per cent upward adjustment of income tax brackets. Making such an adjustment would eliminate this source of implicit gender bias in the tax system.

Uganda's personal income tax system treats men and women the same way so long as both sexes earn similar incomes. In line with the principle of vertical equity, higher income individuals pay a larger fraction of their income in tax compared to lower income individuals. However, the tax system contains horizontal inequities, as the tax code results in differential treatment of different household types. The tax paid by each household depends on the incomes of the individuals within it and not on the total income of the household.

Dual-earner households (i.e., households with equal numbers of female and male earners, with dependants) dominate across income tax brackets, making up more than 50 per cent of the total. The second largest group is composed of households that contain one male earner with dependants. Tax incidence is higher in single-earner (whether male or female) households than it is in dual-earner households. We show this by using data from the Uganda National Household Survey 2005–06 (UNSH III) and classifying households by annual income categories. We present two scenarios: one that shows the tax liability for households with approximately median household income and one that shows the tax liability for high-income households.

In Table 9.5, in the first scenario, we consider two households that have total annual household income of UGX3 million. The first household has only one earner who makes UGX3 million. The second household has two earners, a female earning UGX1.2 million (which puts her in the lowest tax bracket at the zero rate) and a male earning UGX1.8 million per annum (which puts him in the second bracket at a 10 per cent rate). Both households live with children. Applying the PAYE statutory rules in 2005–06, the total tax payable per annum for the first household is UGX162,000 whereas the tax liability of the second household is UGX24,000 per annum. Although

*Table 9.5* Tax impact on households by earner, Uganda

| HH earner | Children/ dependant | Female annual income | Male annual income | Female annual income tax | Male annual income tax | Total HH annual income tax | Total HH annual income |
|---|---|---|---|---|---|---|---|
| *Household total income UGX3 million* | | | | | | | |
| One earner male | W/C | – | 3,000,000 | – | 162,000 | 162,000 | 3,000,000 |
| One earner female | W/C | 3,000,000 | – | 162,000 | – | 162,000 | 3,000,000 |
| Dual earner more males | W/C | – | 3,000,000 | – | >24,000 | 24,000 | 3,000,000 |
| *Household total income UGX5.76 million* | | | | | | | |
| One earner male | W/C | – | 5,760,000 | – | 798,000 | 798,000 | 5,760,000 |
| One earner female | W/C | 5,760,000 | – | 798,000 | – | 798,000 | 5,760,000 |
| Dual earner more males | W/C | 960,000 | 4,800,000 | – | 378,000 | 378,000 | 5,760,000 |

the two households have the same total earnings per annum, the tax burden on the single-earner household (5.4 per cent) is almost seven times greater than the tax burden on the two-earner household (0.8 per cent). Note the burden will be the same for households with the same earning structure and no children.

In the second scenario, both households are in the top tax bracket, with total annual household income of UGX5.76 million. The first household has a single earner (either male or female) who makes UGX5.76 million and pays a PAYE of UGX798,000 per annum. The second household has a male who earns UGX4,800,000 (which falls in the second highest tax bracket) and a female who earns UGX960,00 per annum (again below the tax threshold) and owes UGX378,000 in PAYE per annum – less than half as much as the first household.

These examples show that the Ugandan PIT is progressive in income terms. As Table 9.6 indicates, it can also be considered progressive in gender terms in that 31 per cent of females, compared to 69 per cent of males, in dual-earner households are in the lowest tax bracket, and hence have no tax liability. The percentage of female- and male-single-earner households in the lowest bracket is equivalent at 17 per cent. By contrast, 20 per cent of females in dual-earner households are in the highest tax bracket compared to 80 per cent of males, and 11 per cent of single-earner households in the highest brackets are female compared to 29 per cent of males. Households with children bear a higher burden of income tax, as the tax system does not offer child rebates or allowances to households with children, who are predominantly cared for by women.

Thus, while the Ugandan personal income tax system is vertically equitable, it makes no provision for horizontal equity. Households with the same total income pay different amounts of tax, because of differences in the earning structure of individual members. And, households with children bear a larger burden of taxes than do households without children, as the personal tax system contains no provision for dependants. This calls for the government to put in place tax measures that could reduce gender inequality in terms of disposable income.

*Table 9.6* Distribution of household type by PAYE income tax bracket and gender, Uganda (%)

| PAYE brackets | Dual-earner | Single female-earner | Single male-earner | No-earning adult | Total | % Dual-earner by gender | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | PAYE brackets | Females | Males |
| <130,000 | 63.50 | 16.73 | 17.07 | 2.71 | 2,373,849 | <130,000 | 31.11 | 68.89 |
| 130,000–235,000 | 56.23 | 13.99 | 28.86 | 0.92 | 286,762 | 130,000–235,000 | 17.94 | 82.06 |
| 235,000–410,000 | 58.73 | 12.95 | 28.32 | 0.00 | 140,186 | 235,000–410,000 | 10.25 | 89.75 |
| >410,000 | 56.82 | 10.58 | 28.92 | 3.68 | 85,312 | >410,000 | 19.79 | 80.21 |
| Total | 1,799,371 | 464,373 | 552,360 | 70,005 | 2,886,109 | | | |

*Source*: Authors' calculations based on Uganda National Household Survey-UNHS III, 2005–06.

### Gender and indirect tax incidence

In examining the incidence of indirect tax, we have used the UNHS III data as well as administrative data from URA. Throughout the chapter, the incidence of tax is defined as the share of a specific type of tax in total household consumption expenditure – the higher the incidence, the higher the burden of tax on a given household. To capture the gender dimension, households are classified into the categories described earlier, specifically, according to the sex of household head, the sex composition of adult members, and the employment status of adult members.

The incidence of indirect tax is significantly greater for male-type households than for female-type households (see Figure 9.3 and Table 9.7). As noted above, VAT imposes a greater burden on households than do excise duties or the fuel levy. Total indirect taxes are moderately progressive: the share of total indirect tax in total expenditure increases with expenditure quintile (see Figures 9.4(a) and 9.5(a)). Within each quintile, female-type households have a significantly lower incidence of total indirect tax than their male counterparts. The only exception is in female-majority households, where significant gender differences appear in the 4th and 5th quintiles (Ssewanyana 2009).

Gender differences do appear in the incidence of some types of tax, although not in others. Regardless of household category, no significant gender differences are evident in the incidence of the fuel levy except in the richest quintile. Incidence of the fuel levy is significantly greater for the richest male-type households than for their female counterparts. Not surprisingly, since it is a broad-based tax, the VAT imposes a higher tax burden than do excise duties for all expenditure quintiles. With the exception of the sex composition category, the results reveal a significantly higher VAT and excise tax burden for male-type households relative to their female counterparts with similar household income.

With regard to excise duties, female-majority households have a lower incidence than do male-majority households, except in the poorest quintile. In terms of VAT, female-majority households in the poorest and wealthiest quintiles have a significantly lower VAT tax burden than do male majority households. It is important to note that gender differentials in the tax burden are more pronounced

**(a) By gender of household head**
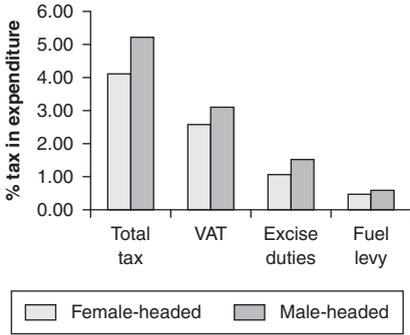


**(b) By sex composition of adult members**
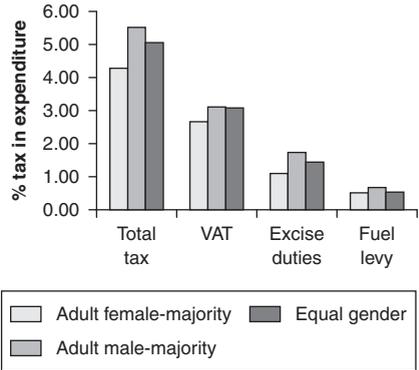


**(c) By adult member employment status**
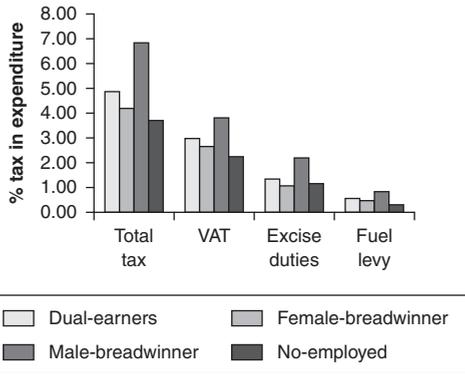


*Figure 9.3* Incidence of indirect tax by type of tax and household typology, Uganda (%).

*Table 9.7* Incidence of indirect tax by tax type and household typology, Uganda (%)

| Household type | Total tax | Tax type | | | Number of households ('000) |
|---|---|---|---|---|---|
| | | *VAT* | *Excises* | *Fuel* | |
| *Sex of head* | | | | | |
| Male-headed | 5.22 | 3.11 | 1.52 | 0.59 | 3,820.8 |
| Female-headed | 4.11 | 2.58 | 1.06 | 0.47 | 1,408.5 |
| *Adult sex composition* | | | | | |
| Male-majority | 5.52 | 3.11 | 1.73 | 0.67 | 1,049.8 |
| Female-majority | 4.28 | 2.67 | 1.10 | 0.52 | 1,552.4 |
| Equal number | 5.06 | 3.08 | 1.44 | 0.54 | 2,627.1 |

*Table 9.7 (Continued)*

| Household type | Total tax | Tax type | | | Number of households ('000) |
|---|---|---|---|---|---|
| | | VAT | Excises | Fuel | |
| *Employment status* | | | | | |
| Male-breadwinner | 6.81 | 3.79 | 2.18 | 0.83 | 836.3 |
| Female-breadwinner | 4.18 | 2.64 | 1.34 | 0.47 | 1,104.1 |
| Dual-earner | 4.85 | 2.97 | 1.34 | 0.55 | 2,825.8 |
| No- employed | 3.69 | 2.23 | 1.15 | 0.31 | 463.1 |

*Source*: Authors' calculations based on Uganda National Household Survey-UNHS III, 2005–06.

among the richest than among the poorest quintiles. Overall, the findings indicate that analysing gender differentials in the taxation system by considering the adult sex composition of households might not suggest significant policy recommendations. For this reason, the subsequent analysis examines the incidence of indirect taxes on households classified by the sex of the head and by the employment status of adult members, controlling for the presence of children.

Nearly 17 per cent of Ugandan households are not living with children. Because they are clustered in the highest quintile, on average these households have a significantly higher tax burden compared to their counterparts living with children (see Table 9.8). This suggests that these households have higher disposable incomes, making it possible for them to spend more on taxable goods and services. On the other hand, higher taxes leading to higher prices might prevent households living with children from consuming certain goods and services. More importantly, the incidence of tax is significantly lower for female-type households relative to their male counterparts regardless of whether the household includes children. The patterns of gender differences in the incidence of tax on households with children do not change much after controlling for expenditure quintile (see Figures 9.4(b) and 9.5(b)). Households without children exhibit no discernible patterns (see Figures 9.4(c) and 9.5(c)).

### Gender differences in consumption

Figure 9.6 portrays gender differentials in consumption patterns of goods and services that attract tax. Households headed by males were more likely to report spending on alcohol beverages, tobacco and cigarettes, and transport and communication than were households headed by females, which in turn were more likely to report expenditures on food than were their male counterparts. The high incidence in the food category is driven largely by purchases of salt, which is consumed by nearly 93 per cent of Ugandan households.

Disaggregated incidence analysis of various consumption categories provides insights into possible tax reforms (see Table 9.9). Gender differences are significant at the aggregate level, with few exceptions. However, the impact varies according to household type. Female-majority households have a higher incidence of indirect tax on food, children's clothing and footwear and fuel than male-majority households.

Table 9.8  Incidence of tax by employment status and presence of children, Uganda

| Quintile | Total tax | VAT | Excises | Fuel | Number of HH ('000) | Total tax | VAT | Excises | Fuel | Number of HH ('000) | Total tax | VAT | Excises | Fuel | Number of HH ('000) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *All male-breadwinner* | | | | | *Male-breadwinner with children* | | | | | *Male-breadwinner with no children* | | | | |
| 1 | 4.12 | 2.58 | 1.43 | 0.11 | 65.4 | 4.16 | 2.66 | 1.38 | 0.12 | 57.4 | 3.83 | 2.00 | 1.83 | 0.00 | 8.0 |
| 2 | 5.83 | 3.29 | 2.27 | 0.28 | 78.0 | 5.45 | 2.16 | 1.82 | 0.33 | 63.2 | 7.47 | 3.25 | 4.17 | 0.05 | 14.8 |
| 3 | 5.13 | 3.15 | 1.50 | 0.48 | 95.3 | 5.23 | 2.27 | 1.47 | 0.40 | 69.1 | 4.88 | 2.62 | 1.59 | 0.67 | 26.2 |
| 4 | 6.32 | 3.62 | 2.05 | 0.65 | 173.5 | 6.43 | 3.80 | 1.76 | 0.86 | 113.8 | 6.11 | 3.28 | 2.59 | 0.24 | 59.7 |
| 5 | 7.98 | 4.29 | 2.49 | 1.20 | 424.2 | 7.74 | 4.27 | 2.27 | 1.18 | 142.4 | 8.10 | 4.29 | 2.60 | 1.20 | 281.8 |
| All | 6.81 | 3.79 | 2.18 | 0.83 | 836.3 | 6.23 | 3.66 | 1.84 | 0.73 | 445.8 | 7.46 | 3.94 | 2.57 | 0.95 | 390.5 |
| | *All female-breadwinner* | | | | | *Female-breadwinner with children* | | | | | *Female-breadwinner without children* | | | | |
| 1 | 2.90 | 1.83 | 0.90 | 0.16 | 209.7 | 2.91 | 1.84 | 0.90 | 0.17 | 207.2 | 1.32 | 0.87 | 0.46 | 0.00 | 2.4 |
| 2 | 3.49 | 2.29 | 0.93 | 0.27 | 184.8 | 3.52 | 2.30 | 0.94 | 0.28 | 180.3 | 2.45 | 1.75 | 0.61 | 0.08 | 4.5 |
| 3 | 3.94 | 2.53 | 1.04 | 0.36 | 206.9 | 3.87 | 2.52 | 0.97 | 0.38 | 193.7 | 4.90 | 2.72 | 2.11 | 0.08 | 13.2 |
| 4 | 4.33 | 2.79 | 0.99 | 0.54 | 209.8 | 4.34 | 2.81 | 0.95 | 0.58 | 185.1 | 4.25 | 2.65 | 1.31 | 0.29 | 24.7 |
| 5 | 5.59 | 3.40 | 1.35 | 0.84 | 293.0 | 4.88 | 3.10 | 1.00 | 0.77 | 194.8 | 7.02 | 4.01 | 2.03 | 0.98 | 98.2 |
| All | 4.18 | 2.64 | 1.34 | 0.47 | 1,104.1 | 3.89 | 2.51 | 0.95 | 0.43 | 961.2 | 6.11 | 3.53 | 1.84 | 0.73 | 142.9 |
| | *All dual-earner* | | | | | *Dual-earner with children* | | | | | *Dual-earner with no children* | | | | |
| 1 | 3.99 | 2.50 | 1.31 | 0.18 | 515.3 | 4.00 | 2.51 | 1.31 | 0.18 | 511.7 | 2.82 | 1.88 | 0.94 | 0.00 | 3.6 |
| 2 | 4.39 | 2.75 | 1.34 | 0.30 | 576.7 | 4.39 | 2.75 | 1.33 | 0.31 | 567.0 | 4.37 | 2.55 | 1.77 | 0.05 | 9.7 |
| 3 | 4.56 | 2.82 | 1.27 | 0.47 | 605.5 | 4.59 | 2.84 | 1.27 | 0.47 | 579.6 | 3.92 | 2.41 | 1.21 | 0.30 | 25.9 |
| 4 | 5.12 | 3.04 | 1.35 | 0.73 | 606.1 | 5.05 | 3.00 | 1.30 | 0.75 | 559.7 | 5.94 | 3.47 | 2.00 | 0.48 | 46.4 |
| 5 | 6.25 | 3.75 | 1.42 | 1.09 | 522.1 | 6.16 | 3.73 | 1.33 | 1.09 | 454.4 | 6.86 | 3.88 | 1.99 | 0.99 | 67.7 |
| All | 4.85 | 2.97 | 1.34 | 0.55 | 2,825.8 | 4.80 | 2.94 | 1.31 | 0.55 | 2,672.4 | 5.83 | 3.37 | 1.82 | 0.64 | 153.4 |
| | *All no-employed* | | | | | *No-employed with children* | | | | | *No-employed with no children* | | | | |
| 1 | 2.84 | 1.74 | 0.95 | 0.16 | 63.3 | 2.90 | 1.77 | 0.95 | 0.19 | 52.7 | 2.54 | 1.58 | 0.97 | 0.00 | 10.6 |
| 2 | 3.30 | 2.02 | 1.08 | 0.20 | 81.8 | 3.49 | 2.16 | 1.03 | 0.30 | 56.1 | 2.90 | 1.70 | 1.20 | 0.00 | 25.6 |
| 3 | 3.51 | 2.20 | 1.09 | 0.22 | 82.7 | 3.47 | 2.27 | 0.94 | 0.26 | 40.9 | 3.55 | 2.12 | 1.24 | 0.19 | 41.8 |
| 4 | 3.55 | 2.09 | 1.18 | 0.28 | 112.4 | 3.13 | 1.95 | 0.84 | 0.34 | 55.0 | 3.95 | 2.22 | 1.51 | 0.23 | 57.3 |
| 5 | 4.61 | 2.78 | 1.30 | 0.53 | 123.0 | 4.23 | 2.70 | 0.96 | 0.57 | 55.0 | 4.92 | 2.84 | 1.58 | 0.50 | 68.0 |
| All | 3.69 | 2.23 | 1.15 | 0.31 | 463.1 | 3.45 | 2.17 | 0.94 | 0.34 | 259.8 | 3.99 | 2.31 | 1.41 | 0.27 | 203.3 |

**(a) Incidence of tax by sex of head and expenditure quintile, Uganda (%)**
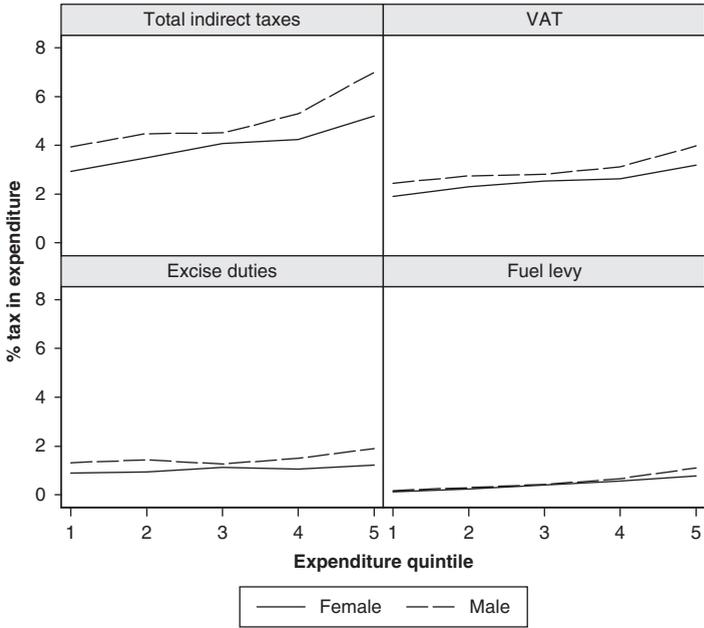


**(b) Tax incidence by sex of head with children and expenditure quintile, Uganda (%)**
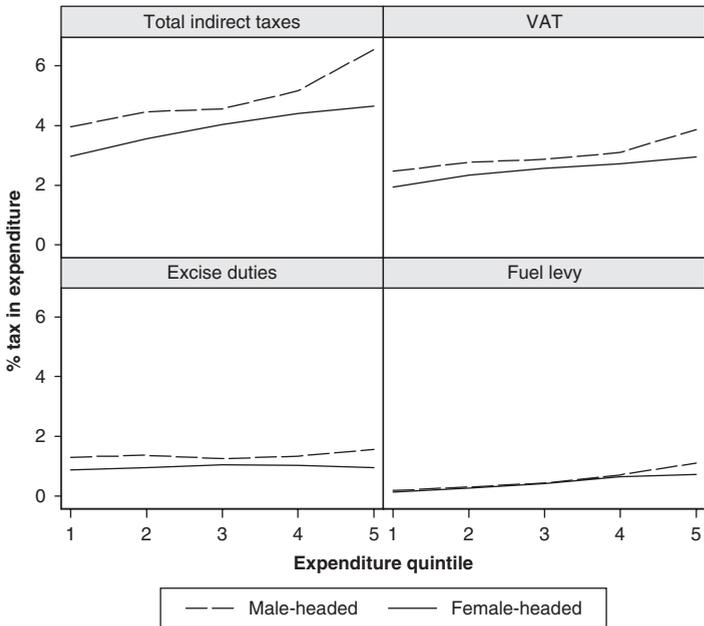


*Figure 9.4* Incidence of tax by sex of head and expenditure quintile, Uganda (%). (Continued).

**(c) Tax incidence by sex of head without children and expenditure quintile, Uganda (%)**
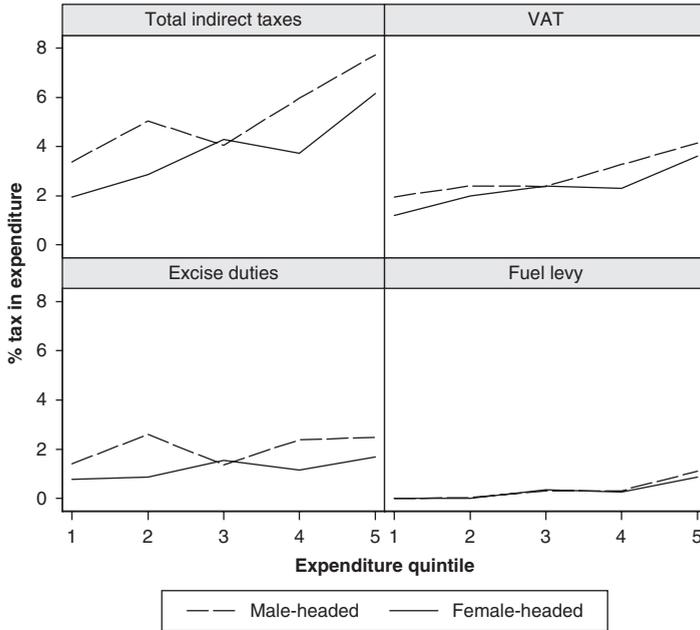


*Figure 9.4* (Continued) Incidence of tax by sex of head and expenditure quintile, Uganda (%).

**(a) Incidence of tax by employment status and expenditure quintile, Uganda (%)**
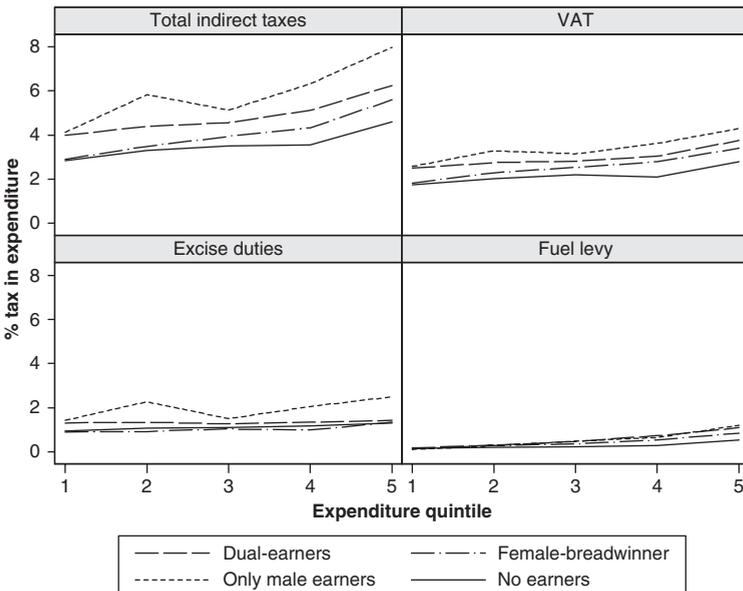


*Figure 9.5* Tax incidence by employment status and expenditure quintile, Uganda (%).

**(b) Tax incidence by employment status with children and expenditure quintile, Uganda (%)**
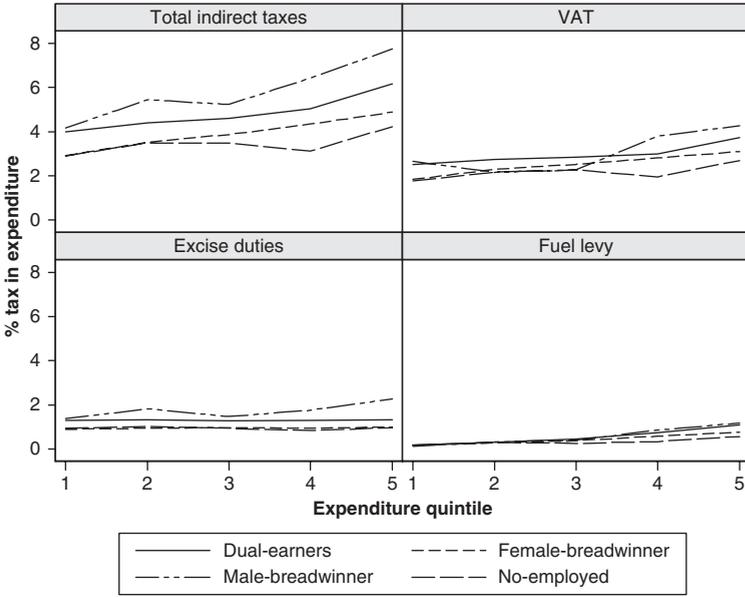


**(c) Tax incidence by employment status without children and expenditure quintile, Uganda (%)**
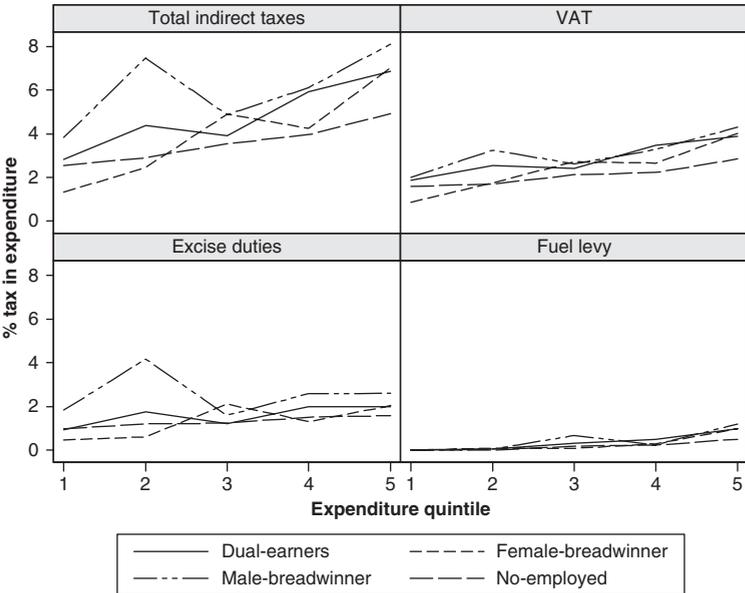


*Figure 9.5* (Continued) Tax Incidence by employment status and expenditure quintile, Uganda (%).
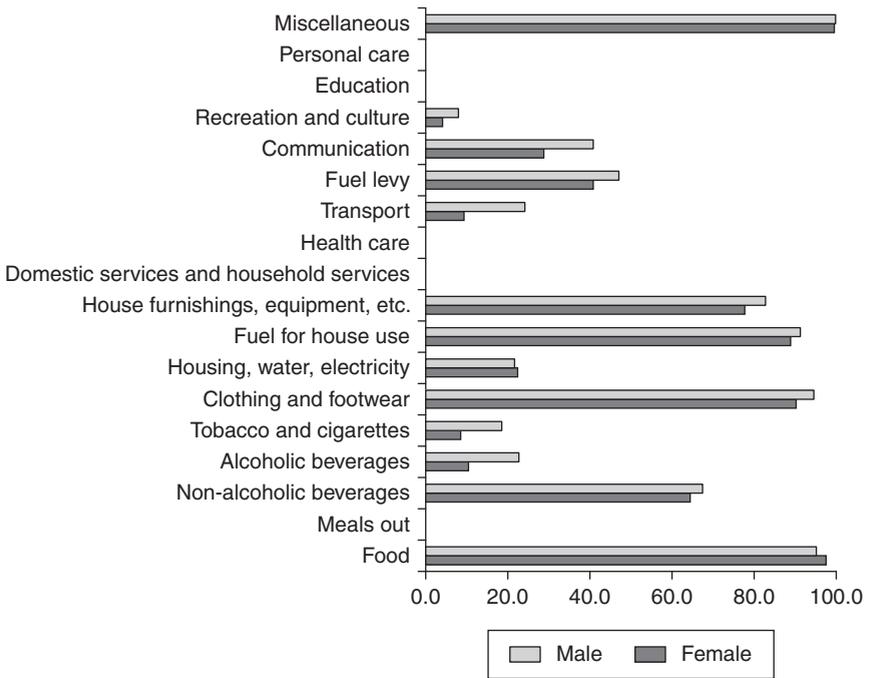
*Figure 9.6* Incidence of non-zero expenses on taxable consumption of categories by sex of head, Uganda (%).

*Note*: Consumption categories such as personal care, education, health care, domestic services and household services and meals out in the figure above are zero because at the time of study in Uganda, they did not attract tax.

The results are quite different for the other household types. Notably, male-type households have a greater incidence of tax on alcoholic beverages, tobacco and cigarettes, transport, communication and adult clothing and footwear than do female-type households. This is partly explained by differences in consumption patterns across gendered household types. Broadly speaking, households with children have a greater incidence of indirect tax than do their counterparts without children. The only exceptionally high consumption categories in these households are adult clothing and footwear, water and electricity, paraffin, communication and miscellaneous goods and services. Gender differences vary across consumption category for household types with similar income levels. The patterns and level of significance remain the same after controlling for presence of children.

The incidence of indirect tax on food does not show any systematic pattern by employment status of adult household members, although significant gender differences are evident in the 3rd and 5th quintiles (see Tables 9.8 and Appendix Table A.1). Households in the wealthiest quintile with female breadwinners have

*Table 9.9* Incidence of indirect tax for consumption categories by employment status, presence of children and quintile, Uganda (%)

| Consumption category | Expenditure quintile | | | | | | Expenditure quintile | | | | | | Expenditure quintile | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *1* | *2* | *3* | *4* | *5* | *All* | *1* | *2* | *3* | *4* | *5* | *All* | *1* | *2* | *3* | *4* | *5* | *All* |
| | All male-breadwinner | | | | | | Male-breadwinner with children | | | | | | Male-breadwinners without children | | | | | |
| Food | 0.84 | 1.16 | 1.33 | 1.26 | 0.83 | 1.01 | 0.93 | 1.32 | 1.50 | 1.45 | 1.08 | 1.25 | 0.20 | 0.44 | 0.88 | 0.88 | 0.71 | 0.73 |
| a) Processed foods | 0.58 | 0.71 | 0.71 | 0.73 | 0.50 | 0.60 | 0.64 | 0.85 | 0.79 | 0.85 | 0.68 | 0.76 | 0.14 | 0.12 | 0.51 | 0.49 | 0.41 | 0.41 |
| b) Sugar | 0.25 | 0.45 | 0.62 | 0.53 | 0.33 | 0.41 | 0.28 | 0.48 | 0.71 | 0.60 | 0.39 | 0.49 | 0.06 | 0.32 | 0.37 | 0.40 | 0.30 | 0.31 |
| c) Unprocessed foods | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Meals out | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-alcoholic beverages | 0.18 | 0.26 | 0.23 | 0.35 | 0.73 | 0.50 | 0.19 | 0.30 | 0.24 | 0.30 | 0.50 | 0.34 | 0.09 | 0.05 | 0.21 | 0.44 | 0.84 | 0.69 |
| Alcoholic beverages | 0.41 | 0.86 | 0.55 | 0.77 | 1.48 | 1.09 | 0.41 | 0.52 | 0.50 | 0.69 | 1.26 | 0.78 | 0.39 | 2.35 | 0.66 | 0.93 | 1.59 | 1.43 |
| a) Beer | 0.05 | 0.15 | 0.07 | 0.25 | 1.02 | 0.60 | 0.06 | 0.19 | 0.10 | 0.35 | 1.12 | 0.50 | 0.00 | 0.00 | 0.00 | 0.05 | 0.97 | 0.71 |
| b) Other alcoholic beverages | 0.36 | 0.71 | 0.47 | 0.53 | 0.46 | 0.49 | 0.35 | 0.33 | 0.40 | 0.34 | 0.14 | 0.29 | 0.39 | 2.35 | 0.66 | 0.88 | 0.62 | 0.72 |
| Tobacco and cigarettes | 0.55 | 1.16 | 0.30 | 0.82 | 0.55 | 0.63 | 0.44 | 0.77 | 0.26 | 0.45 | 0.48 | 0.48 | 1.28 | 2.83 | 0.40 | 1.52 | 0.59 | 0.82 |
| Clothing and footwear | 0.44 | 0.55 | 0.42 | 0.52 | 0.56 | 0.52 | 0.44 | 0.60 | 0.43 | 0.58 | 0.58 | 0.54 | 0.45 | 0.33 | 0.38 | 0.42 | 0.54 | 0.50 |
| a) Adults' clothing and footwear | 0.26 | 0.38 | 0.30 | 0.40 | 0.46 | 0.41 | 0.25 | 0.39 | 0.28 | 0.40 | 0.39 | 0.36 | 0.33 | 0.33 | 0.36 | 0.40 | 0.50 | 0.47 |
| b) Children's clothing and footwear | 0.15 | 0.14 | 0.10 | 0.10 | 0.07 | 0.09 | 0.16 | 0.17 | 0.13 | 0.15 | 0.16 | 0.15 | 0.05 | 0.00 | 0.00 | 0.00 | 0.02 | 0.02 |
| c) Others | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 | 0.02 | 0.02 |
| Housing, water, electricity | 0.04 | 0.08 | 0.14 | 0.20 | 0.30 | 0.22 | 0.04 | 0.10 | 0.16 | 0.27 | 0.36 | 0.23 | 0.01 | 0.00 | 0.09 | 0.08 | 0.26 | 0.21 |
| a) Housing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| b) Water and electricity | 0.04 | 0.08 | 0.14 | 0.20 | 0.30 | 0.22 | 0.04 | 0.10 | 0.16 | 0.27 | 0.36 | 0.23 | 0.01 | 0.00 | 0.09 | 0.08 | 0.26 | 0.21 |
| Fuel for house use | 0.23 | 0.20 | 0.22 | 0.17 | 0.14 | 0.17 | 0.23 | 0.19 | 0.21 | 0.14 | 0.09 | 0.15 | 0.27 | 0.23 | 0.27 | 0.21 | 0.16 | 0.18 |
| a) Paraffin/kerosene | 0.23 | 0.20 | 0.22 | 0.17 | 0.13 | 0.16 | 0.23 | 0.19 | 0.21 | 0.14 | 0.09 | 0.15 | 0.27 | 0.23 | 0.27 | 0.21 | 0.16 | 0.18 |
| b) Generator/lawn mower | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| c) Others | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| House furnishings, equipments and routine maintenance | 0.22 | 0.24 | 0.34 | 0.25 | 0.36 | 0.31 | 0.18 | 0.24 | 0.36 | 0.28 | 0.30 | 0.28 | 0.47 | 0.22 | 0.30 | 0.21 | 0.38 | 0.35 |
| Domestic services and household services | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Health care | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transport | 0.20 | 0.20 | 0.10 | 0.14 | 0.20 | 0.17 | 0.23 | 0.19 | 0.12 | 0.13 | 0.23 | 0.18 | 0.00 | 0.27 | 0.03 | 0.15 | 0.18 | 0.17 |
| Fuel levy | 0.11 | 0.28 | 0.48 | 0.65 | 1.20 | 0.83 | 0.12 | 0.33 | 0.40 | 0.87 | 1.19 | 0.73 | 0.00 | 0.05 | 0.67 | 0.24 | 1.20 | 0.95 |

*(Continued)*

| Consumption category | Expenditure quintile | | | | | | Expenditure quintile | | | | | | Expenditure quintile | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *1* | *2* | *3* | *4* | *5* | *All* | *1* | *2* | *3* | *4* | *5* | *All* | *1* | *2* | *3* | *4* | *5* | *All* |
| Communication | 0.03 | 0.08 | 0.22 | 0.34 | 0.81 | 0.52 | 0.03 | 0.09 | 0.23 | 0.47 | 0.94 | 0.47 | 0.00 | 0.04 | 0.19 | 0.09 | 0.75 | 0.57 |
| Recreation and culture | 0.00 | 0.00 | 0.01 | 0.05 | 0.10 | 0.06 | 0.00 | 0.00 | 0.00 | 0.06 | 0.09 | 0.04 | 0.00 | 0.00 | 0.01 | 0.02 | 0.11 | 0.08 |
| Education | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Personal care | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Miscellaneous | 0.88 | 0.76 | 0.80 | 0.81 | 0.73 | 0.77 | 0.91 | 0.79 | 0.81 | 0.75 | 0.63 | 0.75 | 0.67 | 0.64 | 0.79 | 0.93 | 0.78 | 0.79 |
| | All female-breadwinner | | | | | | Female-breadwinner with children | | | | | | Female-breadwinner without children | | | | | |
| Food | 0.62 | 1.04 | 1.04 | 1.25 | 1.11 | 1.02 | 0.63 | 1.05 | 1.06 | 1.29 | 1.10 | 1.02 | 0.14 | 0.84 | 0.84 | 0.88 | 1.13 | 1.03 |
| a) Processed foods | 0.40 | 0.54 | 0.53 | 0.67 | 0.63 | 0.56 | 0.40 | 0.54 | 0.55 | 0.69 | 0.65 | 0.56 | 0.14 | 0.54 | 0.28 | 0.54 | 0.60 | 0.55 |
| b) Sugar | 0.22 | 0.50 | 0.51 | 0.57 | 0.48 | 0.46 | 0.22 | 0.50 | 0.51 | 0.60 | 0.45 | 0.45 | 0.00 | 0.30 | 0.56 | 0.35 | 0.53 | 0.49 |
| c) Unprocessed foods | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Meals out | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-alcoholic beverages | 0.08 | 0.15 | 0.17 | 0.19 | 0.30 | 0.19 | 0.08 | 0.15 | 0.16 | 0.19 | 0.23 | 0.16 | 0.03 | 0.08 | 0.34 | 0.25 | 0.46 | 0.39 |
| Alcoholic beverages | 0.23 | 0.22 | 0.33 | 0.23 | 0.61 | 0.35 | 0.23 | 0.23 | 0.27 | 0.20 | 0.30 | 0.25 | 0.00 | 0.00 | 1.24 | 0.44 | 1.25 | 1.05 |
| a) Beer | 0.00 | 0.02 | 0.08 | 0.11 | 0.52 | 0.17 | 0.00 | 0.02 | 0.08 | 0.12 | 0.25 | 0.09 | 0.00 | 0.00 | 0.11 | 0.00 | 1.05 | 0.73 |
| b) Other alcoholic beverages | 0.23 | 0.21 | 0.26 | 0.12 | 0.09 | 0.17 | 0.23 | 0.21 | 0.20 | 0.08 | 0.04 | 0.15 | 0.00 | 0.00 | 1.13 | 0.44 | 0.20 | 0.32 |
| Tobacco and cigarettes | 0.23 | 0.15 | 0.14 | 0.07 | 0.07 | 0.13 | 0.23 | 0.16 | 0.10 | 0.06 | 0.04 | 0.12 | 0.00 | 0.07 | 0.76 | 0.15 | 0.13 | 0.18 |
| Clothing and footwear | 0.35 | 0.43 | 0.44 | 0.49 | 0.53 | 0.46 | 0.35 | 0.43 | 0.46 | 0.50 | 0.49 | 0.44 | 0.21 | 0.27 | 0.22 | 0.43 | 0.63 | 0.54 |
| a) Adults' clothing and footwear | 0.18 | 0.22 | 0.26 | 0.30 | 0.36 | 0.27 | 0.18 | 0.22 | 0.27 | 0.29 | 0.28 | 0.25 | 0.18 | 0.24 | 0.19 | 0.37 | 0.52 | 0.45 |
| b) Children's clothing and footwear | 0.14 | 0.17 | 0.15 | 0.16 | 0.12 | 0.14 | 0.14 | 0.17 | 0.16 | 0.18 | 0.16 | 0.16 | 0.00 | 0.00 | 0.00 | 0.01 | 0.04 | 0.03 |
| c) Others | 0.02 | 0.03 | 0.02 | 0.02 | 0.04 | 0.03 | 0.02 | 0.03 | 0.02 | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 | 0.02 | 0.02 | 0.05 | 0.04 |
| Housing, water, electricity | 0.03 | 0.05 | 0.09 | 0.15 | 0.25 | 0.13 | 0.03 | 0.06 | 0.10 | 0.16 | 0.21 | 0.11 | 0.00 | 0.00 | 0.00 | 0.11 | 0.33 | 0.25 |
| a) Housing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| b) Water and electricity | 0.03 | 0.01 | 0.09 | 0.15 | 0.25 | 0.13 | 0.03 | 0.01 | 0.10 | 0.16 | 0.21 | 0.11 | 0.00 | 0.00 | 0.00 | 0.11 | 0.33 | 0.25 |
| Fuel for house use | 0.20 | 0.17 | 0.18 | 0.16 | 0.14 | 0.17 | 0.19 | 0.17 | 0.17 | 0.14 | 0.12 | 0.16 | 0.27 | 0.16 | 0.26 | 0.30 | 0.20 | 0.22 |
| a) Paraffin/kerosene | 0.19 | 0.17 | 0.17 | 0.16 | 0.14 | 0.17 | 0.19 | 0.17 | 0.17 | 0.14 | 0.12 | 0.16 | 0.27 | 0.16 | 0.26 | 0.30 | 0.19 | 0.22 |
| b) Generator/lawn mower | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| c) Others | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| House furnishings, equipments and routine maintenance | 0.21 | 0.21 | 0.26 | 0.25 | 0.39 | 0.28 | 0.22 | 0.21 | 0.25 | 0.25 | 0.39 | 0.27 | 0.07 | 0.24 | 0.31 | 0.22 | 0.40 | 0.35 |

*Table 9.9* (Continued)

| Consumption category | Expenditure quintile | | | | | | Expenditure quintile | | | | | | Expenditure quintile | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *1* | *2* | *3* | *4* | *5* | *All* | *1* | *2* | *3* | *4* | *5* | *All* | *1* | *2* | *3* | *4* | *5* | *All* |
| Domestic services and household services | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Health care | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transport | 0.03 | 0.06 | 0.09 | 0.06 | 0.13 | 0.08 | 0.03 | 0.06 | 0.09 | 0.07 | 0.18 | 0.08 | 0.00 | 0.00 | 0.14 | 0.00 | 0.01 | 0.02 |
| Fuel levy | 0.16 | 0.27 | 0.36 | 0.54 | 0.84 | 0.47 | 0.17 | 0.28 | 0.38 | 0.58 | 0.77 | 0.43 | 0.00 | 0.08 | 0.08 | 0.29 | 0.98 | 0.73 |
| Communication | 0.01 | 0.04 | 0.08 | 0.14 | 0.45 | 0.17 | 0.01 | 0.04 | 0.08 | 0.15 | 0.36 | 0.13 | 0.00 | 0.00 | 0.06 | 0.03 | 0.61 | 0.43 |
| Recreation and culture | 0.01 | 0.00 | 0.00 | 0.01 | 0.05 | 0.02 | 0.01 | 0.00 | 0.01 | 0.01 | 0.07 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 |
| Education | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Personal care | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Miscellaneous | 0.75 | 0.70 | 0.74 | 0.78 | 0.72 | 0.74 | 0.75 | 0.70 | 0.75 | 0.74 | 0.63 | 0.71 | 0.59 | 0.70 | 0.66 | 1.14 | 0.89 | 0.90 |
| | All dual-earner | | | | | | Dual-earner with children | | | | | | Dual-earner without children | | | | | |
| Food | 0.83 | 0.98 | 1.09 | 1.07 | 0.99 | 1.00 | 0.83 | 0.98 | 1.09 | 1.07 | 1.00 | 1.00 | 0.21 | 0.74 | 0.95 | 1.08 | 0.90 | 0.94 |
| a) Processed foods | 0.52 | 0.51 | 0.58 | 0.59 | 0.59 | 0.56 | 0.52 | 0.51 | 0.58 | 0.60 | 0.60 | 0.56 | 0.17 | 0.49 | 0.61 | 0.57 | 0.49 | 0.53 |
| b) Sugar | 0.31 | 0.47 | 0.51 | 0.48 | 0.41 | 0.44 | 0.31 | 0.48 | 0.52 | 0.47 | 0.40 | 0.44 | 0.04 | 0.25 | 0.34 | 0.51 | 0.42 | 0.41 |
| c) Unprocessed foods | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Meals out | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-alcoholic beverages | 0.15 | 0.16 | 0.19 | 0.22 | 0.31 | 0.21 | 0.15 | 0.17 | 0.19 | 0.22 | 0.29 | 0.20 | 0.11 | 0.11 | 0.11 | 0.22 | 0.42 | 0.28 |
| Alcoholic beverages | 0.49 | 0.55 | 0.50 | 0.62 | 0.62 | 0.56 | 0.49 | 0.54 | 0.51 | 0.57 | 0.59 | 0.54 | 0.37 | 1.14 | 0.21 | 1.16 | 0.81 | 0.83 |
| a) Beer | 0.02 | 0.05 | 0.11 | 0.21 | 0.45 | 0.17 | 0.02 | 0.05 | 0.12 | 0.21 | 0.46 | 0.16 | 0.00 | 0.00 | 0.00 | 0.24 | 0.41 | 0.25 |
| b) Other alcoholic beverages | 0.47 | 0.51 | 0.39 | 0.40 | 0.17 | 0.39 | 0.47 | 0.50 | 0.40 | 0.36 | 0.13 | 0.38 | 0.37 | 1.14 | 0.21 | 0.93 | 0.40 | 0.57 |
| Tobacco and cigarettes | 0.39 | 0.36 | 0.29 | 0.28 | 0.21 | 0.31 | 0.40 | 0.36 | 0.29 | 0.26 | 0.16 | 0.30 | 0.13 | 0.47 | 0.38 | 0.52 | 0.52 | 0.49 |
| Clothing and footwear | 0.53 | 0.58 | 0.60 | 0.60 | 0.67 | 0.59 | 0.53 | 0.58 | 0.60 | 0.60 | 0.66 | 0.59 | 0.54 | 0.42 | 0.52 | 0.60 | 0.70 | 0.62 |
| a) Adults' clothing and footwear | 0.33 | 0.38 | 0.40 | 0.40 | 0.46 | 0.39 | 0.33 | 0.38 | 0.39 | 0.39 | 0.43 | 0.38 | 0.53 | 0.33 | 0.46 | 0.55 | 0.62 | 0.55 |
| b) Children's clothing and footwear | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.17 | 0.16 | 0.17 | 0.16 | 0.16 | 0.17 | 0.19 | 0.00 | 0.04 | 0.02 | 0.02 | 0.01 | 0.04 |
| c) Others | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | 0.02 | 0.03 | 0.03 | 0.03 | 0.02 | 0.03 | 0.01 | 0.03 | 0.03 | 0.02 | 0.03 | 0.03 |
| Housing, water, electricity | 0.04 | 0.03 | 0.05 | 0.07 | 0.23 | 0.08 | 0.04 | 0.03 | 0.05 | 0.07 | 0.24 | 0.08 | 0.00 | 0.01 | 0.03 | 0.07 | 0.18 | 0.10 |
| a) Housing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| b) Water and electricity | 0.04 | 0.03 | 0.05 | 0.07 | 0.23 | 0.08 | 0.04 | 0.03 | 0.05 | 0.07 | 0.24 | 0.08 | 0.00 | 0.01 | 0.03 | 0.07 | 0.18 | 0.10 |

Table 9.9 (Continued) Incidence of indirect tax for consumption categories by employment status, presence of children and quintile, Uganda (%)

| Consumption category | Expenditure quintile | | | | | | Expenditure quintile | | | | | | Expenditure quintile | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | All | 1 | 2 | 3 | 4 | 5 | All | 1 | 2 | 3 | 4 | 5 | All |
| Fuel for house use | 0.21 | 0.19 | 0.17 | 0.14 | 0.11 | 0.16 | 0.21 | 0.19 | 0.17 | 0.13 | 0.10 | 0.16 | 0.27 | 0.20 | 0.27 | 0.18 | 0.23 | 0.22 |
| a) Paraffin/kerosene | 0.21 | 0.19 | 0.17 | 0.13 | 0.09 | 0.16 | 0.21 | 0.19 | 0.16 | 0.13 | 0.09 | 0.16 | 0.27 | 0.20 | 0.27 | 0.18 | 0.12 | 0.17 |
| b) Generator/lawn mower | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 |
| c) Others | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| House furnishings, equipments and routine maintenance | 0.24 | 0.24 | 0.24 | 0.29 | 0.46 | 0.29 | 0.24 | 0.23 | 0.25 | 0.28 | 0.47 | 0.29 | 0.16 | 0.40 | 0.15 | 0.37 | 0.42 | 0.35 |
| Domestic services and household services | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Health care | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transport | 0.11 | 0.18 | 0.17 | 0.20 | 0.36 | 0.20 | 0.11 | 0.18 | 0.17 | 0.20 | 0.37 | 0.20 | 0.00 | 0.04 | 0.16 | 0.16 | 0.28 | 0.20 |
| Fuel levy | 0.18 | 0.30 | 0.47 | 0.73 | 1.09 | 0.55 | 0.18 | 0.31 | 0.47 | 0.75 | 1.10 | 0.55 | 0.00 | 0.05 | 0.30 | 0.48 | 1.00 | 0.64 |
| Communication | 0.04 | 0.07 | 0.13 | 0.22 | 0.60 | 0.21 | 0.04 | 0.08 | 0.14 | 0.23 | 0.59 | 0.20 | 0.00 | 0.00 | 0.08 | 0.15 | 0.73 | 0.38 |
| Recreation and culture | 0.00 | 0.00 | 0.01 | 0.03 | 0.07 | 0.02 | 0.00 | 0.00 | 0.01 | 0.03 | 0.08 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 |
| Education | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Personal care | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Miscellaneous | 0.78 | 0.74 | 0.66 | 0.65 | 0.53 | 0.00 | 0.78 | 0.74 | 0.65 | 0.63 | 0.51 | 0.00 | 1.03 | 0.78 | 0.75 | 0.96 | 0.65 | 0.00 |
| | All no-employed | | | | | | No-employed with children | | | | | | No-employed without children | | | | | |
| Food | 0.45 | 0.83 | 0.82 | 0.79 | 0.95 | 0.80 | 0.44 | 0.90 | 0.95 | 0.77 | 0.96 | 0.80 | 0.53 | 0.67 | 0.69 | 0.82 | 0.95 | 0.80 |
| a) Processed foods | 0.25 | 0.42 | 0.40 | 0.30 | 0.47 | 0.00 | 0.24 | 0.42 | 0.42 | 0.37 | 0.46 | 0.00 | 0.27 | 0.43 | 0.38 | 0.23 | 0.48 | 0.00 |
| b) Sugar | 0.20 | 0.41 | 0.42 | 0.49 | 0.48 | 0.42 | 0.19 | 0.48 | 0.54 | 0.39 | 0.50 | 0.42 | 0.26 | 0.24 | 0.32 | 0.58 | 0.47 | 0.43 |
| c) Unprocessed foods | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Meals out | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-alcoholic beverages | 0.11 | 0.09 | 0.17 | 0.16 | 0.27 | 0.17 | 0.13 | 0.11 | 0.22 | 0.20 | 0.21 | 0.17 | 0.04 | 0.04 | 0.13 | 0.12 | 0.32 | 0.18 |
| Alcoholic beverages | 0.24 | 0.39 | 0.43 | 0.49 | 0.49 | 0.43 | 0.29 | 0.41 | 0.21 | 0.19 | 0.29 | 0.28 | 0.00 | 0.37 | 0.64 | 0.77 | 0.65 | 0.61 |
| a) Beer | 0.00 | 0.00 | 0.00 | 0.00 | 0.29 | 0.08 | 0.00 | 0.00 | 0.00 | 0.01 | 0.25 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.33 | 0.11 |
| b) Other alcoholic beverages | 0.24 | 0.39 | 0.43 | 0.48 | 0.20 | 0.35 | 0.29 | 0.41 | 0.21 | 0.18 | 0.04 | 0.23 | 0.00 | 0.37 | 0.64 | 0.77 | 0.32 | 0.50 |
| Tobacco and cigarettes | 0.37 | 0.31 | 0.24 | 0.33 | 0.39 | 0.33 | 0.36 | 0.18 | 0.14 | 0.15 | 0.09 | 0.19 | 0.42 | 0.61 | 0.35 | 0.50 | 0.63 | 0.52 |

*(Continued)*

Table 9.9 (Continued)

| Consumption category | Expenditure quintile | | | | | | Expenditure quintile | | | | | | Expenditure quintile | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | All | 1 | 2 | 3 | 4 | 5 | All | 1 | 2 | 3 | 4 | 5 | All |
| Clothing and footwear | 0.26 | 0.31 | 0.27 | 0.33 | 0.39 | 0.32 | 0.28 | 0.38 | 0.35 | 0.37 | 0.41 | 0.36 | 0.14 | 0.14 | 0.20 | 0.28 | 0.38 | 0.27 |
| a) Adults' clothing and footwear | 0.12 | 0.19 | 0.18 | 0.22 | 0.29 | 0.21 | 0.12 | 0.22 | 0.18 | 0.21 | 0.24 | 0.20 | 0.14 | 0.13 | 0.17 | 0.22 | 0.33 | 0.23 |
| b) Children's clothing and footwear | 0.12 | 0.08 | 0.08 | 0.06 | 0.06 | 0.08 | 0.15 | 0.12 | 0.13 | 0.13 | 0.13 | 0.13 | 0.00 | 0.00 | 0.03 | 0.00 | 0.01 | 0.01 |
| c) Others | 0.01 | 0.01 | 0.01 | 0.01 | 0.03 | 0.01 | 0.01 | 0.02 | 0.02 | 0.01 | 0.03 | 0.02 | 0.00 | 0.01 | 0.00 | 0.01 | 0.02 | 0.01 |
| Housing, water, electricity | 0.01 | 0.03 | 0.10 | 0.06 | 0.17 | 0.09 | 0.02 | 0.03 | 0.15 | 0.09 | 0.19 | 0.09 | 0.00 | 0.01 | 0.06 | 0.03 | 0.16 | 0.08 |
| a) Housing | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| b) Water and electricity | 0.01 | 0.03 | 0.10 | 0.06 | 0.17 | 0.09 | 0.02 | 0.03 | 0.15 | 0.09 | 0.19 | 0.09 | 0.00 | 0.01 | 0.06 | 0.03 | 0.16 | 0.08 |
| Fuel for house use | 0.19 | 0.20 | 0.21 | 0.23 | 0.16 | 0.20 | 0.16 | 0.21 | 0.21 | 0.18 | 0.20 | 0.19 | 0.31 | 0.19 | 0.22 | 0.29 | 0.14 | 0.21 |
| a) Paraffin/kerosene | 0.19 | 0.20 | 0.21 | 0.23 | 0.16 | 0.20 | 0.16 | 0.21 | 0.21 | 0.18 | 0.20 | 0.19 | 0.31 | 0.19 | 0.22 | 0.29 | 0.14 | 0.21 |
| b) Generator/lawn mower | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| c) Others | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| House furnishings, equipments and routine maintenance | 0.23 | 0.23 | 0.21 | 0.16 | 0.33 | 0.24 | 0.24 | 0.21 | 0.20 | 0.15 | 0.28 | 0.22 | 0.17 | 0.29 | 0.23 | 0.18 | 0.36 | 0.26 |
| Domestic services and household services | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Health care | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Transport | 0.12 | 0.06 | 0.09 | 0.05 | 0.13 | 0.09 | 0.14 | 0.09 | 0.18 | 0.07 | 0.23 | 0.14 | 0.00 | 0.00 | 0.00 | 0.04 | 0.06 | 0.03 |
| Fuel levy | 0.16 | 0.20 | 0.22 | 0.28 | 0.53 | 0.31 | 0.19 | 0.30 | 0.26 | 0.34 | 0.57 | 0.34 | 0.00 | 0.00 | 0.19 | 0.23 | 0.50 | 0.27 |
| Communication | 0.01 | 0.03 | 0.02 | 0.05 | 0.20 | 0.08 | 0.01 | 0.03 | 0.03 | 0.07 | 0.18 | 0.07 | 0.00 | 0.02 | 0.02 | 0.04 | 0.21 | 0.08 |
| Recreation and culture | 0.00 | 0.00 | 0.08 | 0.00 | 0.09 | 0.04 | 0.00 | 0.00 | 0.00 | 0.01 | 0.15 | 0.03 | 0.00 | 0.00 | 0.16 | 0.00 | 0.05 | 0.05 |
| Education | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Personal care | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Miscellaneous | 0.69 | 0.62 | 0.62 | 0.60 | 0.51 | 0.60 | 0.65 | 0.65 | 0.57 | 0.54 | 0.49 | 0.58 | 0.92 | 0.56 | 0.68 | 0.66 | 0.52 | 0.62 |

a higher incidence of indirect tax than do their male counterparts. This pattern is reversed in the 3rd quintile. Among other household categories, female-majority households have a significantly higher incidence than do male-majority households, except in the 1st and 3rd quintiles. Male-headed households in the poorest quintile have a significantly higher incidence than do their female counterparts. This pattern is reversed in the 5th quintile. Indirect taxes on foods are mainly VAT on processed foods such as rice, bread, cooking oils and sugar.

The incidence of indirect tax on alcoholic beverages and tobacco and cigarettes is neither progressive nor regressive, but households in the poorest quintile have a lower incidence than do their counterparts in the richest quintile. More specifically, the incidence falls more on male-type households than on female-type households, and is significantly higher in the 2nd, 4th and 5th quintiles. In every quintile, male-headed households have a significantly higher incidence of indirect tax on alcoholic beverages than do female-headed households, largely because they spend more of their income on these goods.

The incidence of indirect tax on clothing and footwear is less affected by income, but in the two poorest quintiles it is significantly greater in male-breadwinner households than in female-breadwinner households (see Table 9.7). A similar pattern is evident when male-headed households are compared with female-headed households. This is true in every quintile. The tax incidence for adult clothing and footwear is also similar. On the other hand, except in the two poorest quintiles, female-majority households have a significantly higher incidence of indirect tax on children's clothing and footwear than do male-majority households. However, the sex of the head of household does not seem to generate significant differences.

Regardless of whether they are headed by males or females, households in lower-income quintiles pay a higher percentage of their income on paraffin tax than do richer households. This is partly due to higher paraffin consumption among households in the lower quintiles. Furthermore, in the three lowest quintiles, the tax incidence is much higher in female-type households than in male-type households. A similar pattern is evident for the miscellaneous goods and services.

The incidence of tax on water and electricity is somewhat progressive. While there are no significant gender differences by employment status for households with similar income, households in the second quintile with female heads have a significantly higher incidence than their male counterparts. On the other hand, the incidence of indirect tax on communication is progressive. Female-type households bear a significantly lower tax burden than do their male counterparts with similar income. The only exception to this pattern is in the poorest households based on employment status.

## Policy simulations on consumption

Our simulations are based on the analysis of the consumption categories described above, the current tax debate in Uganda, and the FY 2008/09 tax reforms. Our goal is to explore whether or not changes in the salt and kerosene/paraffin

taxes would affect households with male heads differently from their female counterparts. Each of these simulations generates a new incidence of indirect tax. However, the results must be considered with the caveat that the simulations are essentially static and show partial effects only. Nonetheless, they provide important empirical evidence on the varied effects tax reforms have on different gendered household types.

### Removal of taxes on salt

Although more than 90 per cent of Ugandan households reported consuming salt, nearly 28.5 per cent reported that they had borrowed salt from neighbours in the 30 days prior to their survey interview, including 31.8 per cent of female-headed households and 27.3 per cent of male-headed households. On a positive note, the government has recently reduced the burden by adding salt to the list of VAT-exempted goods. Based on 2005–06 data, this would cut government revenues by nearly UGX5.6bn annually, equivalent to 28 per cent of the total government budget for social development in FY 2008/09 (Government of Uganda 2005, 2008).

Since nearly all Ugandan households consume salt and the VAT on this item made up only 1 per cent of total household indirect taxes, eliminating this tax will have little impact on the overall progressivity of indirect taxes. Households in the lower quintile, regardless of the sex of the household head, stand to benefit more than their counterparts in higher expenditure quintiles (see Figure 9.7) from the removal of tax on salt. This demonstrates that the tax on salt represented a higher proportion of consumption expenditure for households in the poorer quintiles. Furthermore, VAT drops faster as a percentage of consumption expenditure in households with female heads compared to households with male heads. In other words, although removal of taxes on salt was meant to target the poorest households overall, the greatest beneficiaries are the poorest households with female heads, which can be considered a gender-responsive policy reform.
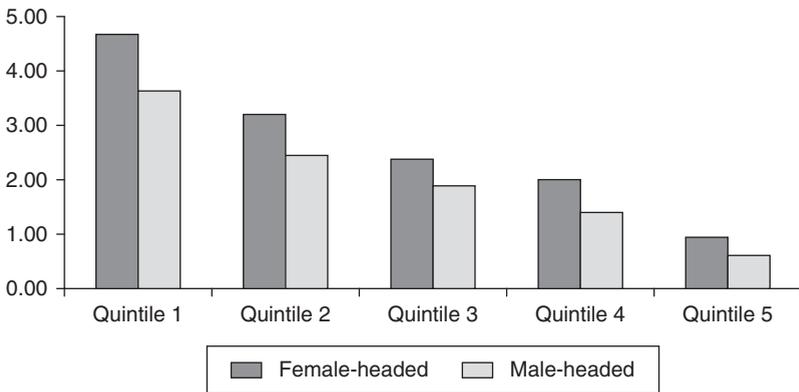


*Figure 9.7* Percentage change in VAT incidence with salt zero-rated, Uganda.
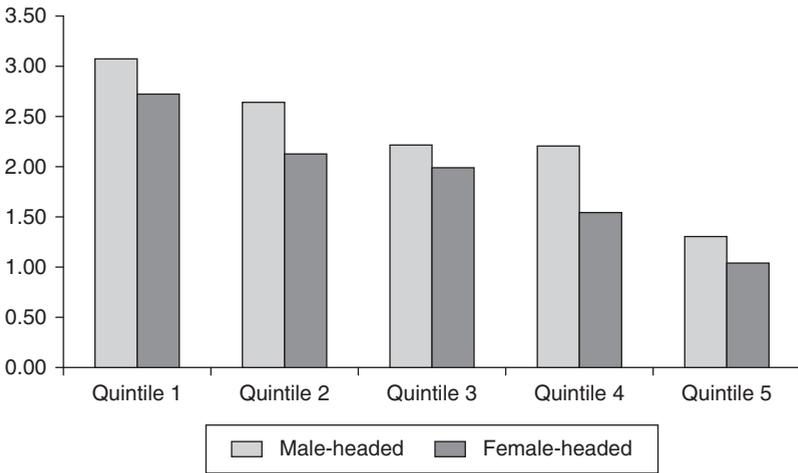
*Figure 9.8*  Percentage change in indirect tax incidence with paraffin levy halved, Uganda (%).

### Cutting the paraffin tax by 50 per cent

The oil lamp (locally known as *tadobba*) is the main source of lighting used by the majority of households in Uganda, especially in rural areas. Up to 79 per cent of rural households rely on these lamps, compared to only about 12 per cent who use paraffin lanterns. While *tadobbas* consume less paraffin than do lanterns, their health hazards are far greater. Furthermore, the use of paraffin in general has become much more expensive as a result of the current global financial crisis, putting it beyond the reach of most rural households. This has prompted proposals that the current excise levy on paraffin of UGX200 per litre be cut in half. The resulting revenue loss of nearly UGX8bn per annum would be almost equivalent to the estimated budget for the Universal Primary Education capitation grant in FY 2008/09. The overall impact on the incidence of indirect tax would be small, but inversely proportionate to income. However, the benefits to female-headed households would be less than those accruing to their male counterparts (see Figure 9.8).

   Overall, the indirect tax policy simulations explored above would definitely have a negative impact on government efforts to mobilize domestic resources. As noted, public spending on the social sector already relies heavily on foreign support. In the current global financial crisis, that assistance is likely to decline, increasing the need for greater domestic resource mobilization and greater efficiency in revenue collection in order to sustain existing social investment. For this reason, the government should consider revisiting its budget priorities and introducing cost-saving measures such as a reduction in public administration expenditures.

## Conclusion and policy recommendations

Uganda's domestic tax revenue sources are still fairly limited, reflecting its limited industrial capacity and large informal sector. For this reason, like other countries in

the region, Uganda has chosen to emphasize indirect taxes, which affect the largest resource base. Indirect taxes are difficult to evade, but seem to deter poorer households from purchases of basic items such as paraffin, salt, piped water and so on. In other words, indirect taxes interfere with the consumption choices of households by raising the prices of taxed goods and services relative to untaxed ones.

In terms of advancing gender equality, our policy simulations show that reductions in taxes on goods and services reduce the tax burden on female-headed households significantly more than on male-headed households. We have demonstrated, for example, that the recent decision to eliminate taxes on salt is gender-responsive, and that halving the current excise duties on paraffin would benefit female-headed households to a greater extent than it would male-headed households, especially in the lower income quintiles.

Reducing taxes on such goods and services will benefit some households, but at the expense of lost tax revenues. The government might address this situation by altering budget priorities and introducing cost-saving measures such as tighter controls on public administration expenditures. If it decides to retain the taxes on these items, it could compensate lower-income households through the provision of transfer payments.

With regard to direct taxation, the share of PAYE in total government tax revenue has been increasing steadily since 1997 and is likely to increase modestly in the future. While this relative success at mobilizing domestic resources should continue, PAYE comes from the formal sector, which makes up only 16 per cent of total employment. This suggests that the best way of raising tax revenue is through creating new job opportunities. The job creation strategy should take into account the gender disparities discussed above to ensure equitable access to decent jobs for both men and women.

In addition, policy debates have recently begun on whether and how to formalize informal work in order to reduce the tendency of informal workers to avoid paying taxes and so improve the country's domestic tax revenue base. Should this be accepted, the benefits of formal employment, including proposed medical health insurance and pension benefits, minimum wage requirements, maximum working hour regulations and other labour protections generally far outweigh the advantages of tax evasion, especially for poorer workers. It is important to make sure also that the types of informal work in which women are often concentrated, such as small-scale trade and service provision, are brought into the formal sector on the same basis as the informal work done by men.

Unlike indirect taxation, however, Uganda's personal income tax system has implicit gender biases stemming from vertical and horizontal inequities at the household level. As the share of PAYE taxes in total tax revenue increases, it is important for policy-makers to address these inequalities. One way in which to do this is by extending tax exemptions that promote gender equality. For example, extending tax deductions for the presence of children in the household would primarily benefit women, since women provide most of the support for young dependants. Women in the lower tax brackets could also be given deductions based on the equity principle that women make less money than men and should pay fewer taxes. In addition, policy-makers should consider indexing income tax brackets to inflation to address the implicit gender biases noted earlier.

Since the 1990s, Uganda has introduced several major reforms of its tax system. However, policy-makers have not examined the differential impact of these reforms on women and men. This chapter has examined these differences and attempted to show the impact of various policy changes in terms of advancing gender equality. Broadly, tax reforms have not been towards the realization of gender equity. The proposals made in this chapter, if implemented, would mark the beginning of 'engendering' Uganda's tax system.

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# 10  Gender equality and taxation

## A UK case study

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## Introduction

The issue of taxes has always been a highly politicized one in the UK, and never more so than in 2009 as the UK government weighed how best to rebalance its budget after rescuing its banking sector while its economy suffered its most severe financial crisis since the 1930s. Debates about taxes, however, tended to focus mainly on the overall level of taxation and government expenditure and on distributional effects among households. With the exception of the work of the Women's Budget Group, a think tank that regularly comments on the gender implications of the Chancellor of the Exchequer's annual budgets, little attention has been paid to the gender aspects of the taxation system. In particular, there has been little debate about what effects any proposals for tax rises to pay for a 2008 stimulus package, or for bailing out the banking sector, are likely to have on both men and women.

This chapter seeks to address this gap by analysing some gender aspects of the United Kingdom's personal income tax system and its expenditure taxes. Taxes have both distributional and behavioural impacts and both of these can be gendered. In this chapter we consider impacts on both inter- and intra-household inequalities, as well as whether taxes reinforce or challenge existing gender roles.

Following a brief overview of existing gender inequalities in the United Kingdom, its tax system and fiscal changes brought about in the past 30 years, this chapter will present a gender analysis of the UK personal income tax system, including its tax credits. It will then analyse the incidence of expenditure taxes on households of different gendered types before the 2008 stimulus package, and simulate the impact of the stimulus package as well as some alternative policy options. Finally, it presents a set of policy proposals based on these analyses and considers the extent to which taxation could be used to tackle gender inequalities in the United Kingdom.

## A gendered picture of employment and income

In order to assess the gendered impact of taxes, we need to understand the nature of gender divisions in the United Kingdom. The inequalities that are most

relevant to the distributional impact of tax are gender differences in employment hours and wage rates, in the income of the households in which men and women live, and in their access to that household income when living with others. Taxes also have a behavioural impact through their incentive effects. Here the most relevant inequalities concern unequal gender roles, especially with respect to the labour market and care-giving responsibilities.

### *Employment hours and wages*

Rates of adult employment (ages 16–64) are high in the United Kingdom compared with the rest of Europe, for both men and women, with rates of female employment (65.8 per cent in 2006) close to those of the Scandinavian countries (European Commission 2008). However, while men work long hours, more than 40 per cent of female employment is part-time, a proportion which has remained unchanged since the mid-1980s, and is one of the highest in Europe.

High rates of women's part-time employment, together with a relatively low minimum wage compared with European countries of similar levels of GDP per capita, have been significant factors in sustaining the United Kingdom's large gender pay gap, and explain why around two-thirds of low-paid employees are women (Palmer *et al.* 2008). On top of this, the United Kingdom has a particularly large part-time wage penalty by European standards, with a median hourly wage of part-time employees only 63 per cent that of full-time employees. Even the full-time gender pay gap is high in the United Kingdom, particularly at the top end of the earnings distribution (ONS 2008).

The gender pay gap reinforces a traditional division of care-giving responsibilities within households. Because child-care provision is patchy and expensive in the United Kingdom, it often makes financial sense, at least in the short term, for women, particularly low-paid women, to reduce their hours of employment to cover family care needs. This, combined with men's long working hours, leaves little scope for challenging traditional gender roles. Women not only receive lower pay but also work fewer hours, often in part-time jobs, with the result that their lifetime earnings are considerably lower than men's; for women born in 1970, earnings up to retirement are projected to be only 62 per cent of those of men (Joshi 2005).

### *Household composition and income distribution*

A large proportion of UK households (28 per cent in 2006–7) are single-person households, and about half of these are retirees, the vast majority of which (76 per cent) are women (Jones 2008). There are also a relatively large number of single-parent households; in 2006, 24 per cent of children lived in single-parent households, 90 per cent of these living with their mother (McConnell and Wilson 2007). The distribution of different household types is not even across household income quintiles. Children are disproportionately concentrated in lower quintiles,

as are full-time students and retirees, particularly women retirees living on their own. Single-parent families are heavily concentrated in lower quintiles, while households consisting of two adults without children are disproportionately in higher quintiles (Jones 2008).

According to a recent report on poverty in the United Kingdom (Palmer *et al.* 2008), women are slightly more likely to live in low-income households (below 60 per cent of the median household income). Overall poverty rates (after housing costs) were 20 per cent for women and 18 per cent for men in 2006–07. This gap is mainly driven by higher poverty rates for single retirees and for single parents, both of whom are primarily women (50 per cent of single parents lived in poverty). However, when men and women live together, as Fagan *et al.* (2006: 52) point out, 'the extent of women's greater risk of poverty may be underestimated because income and other resources are not always shared equally within households'. In particular, when resources are tight, women are more likely than men to go without. In such cases, they also tend to have the stressful burden of budgeting and managing debt (Vogler 1994; Women's Budget Group 2005).

## The UK tax structure

In contrast to other countries studied in this volume, the United Kingdom is clearly a developed economy. In fact, it is the sixth largest economy in the world in terms of output, with an estimated GDP of nearly US$2,800 billion, although it ranks only 22nd by size with a population of just over 61 million (IMF 2008). Like other developed economies, it has a well-developed taxation system that raises a large proportion of its revenue from personal income tax, which is used not only to fund public expenditure, including the welfare state, but also for transfer payments that redistribute income. Some of these payments, such as Child Benefit or Caregiver Allowance, compensate individuals and families for extra expenses or for time spent out of the labour market due to care-giving responsibilities. Others are simply designed to relieve poverty. Since women tend to bear most of the costs both in time and money of caring for children and adults, and are over-represented among the poor, both types of payments tend to be paid to women more than men. Women also benefit more from much direct expenditure on welfare services; they are both greater users of the health service, for example, and the ones who through their own efforts compensate for any failure of state welfare services. Since both transfer payments and these expenditures have to be paid for from taxation, the overall *level* of taxation has a clear gender impact.

### Level of taxation

Figure 10.1 shows how net tax revenues (including social security contributions) have varied as a share of GDP in the United Kingdom over the past 30 years. The year 1979 is a convenient starting point since it marked the election of a Conservative government that promised to reduce government spending and cut taxes. Although this government succeeded in making taxation highly unpopular,
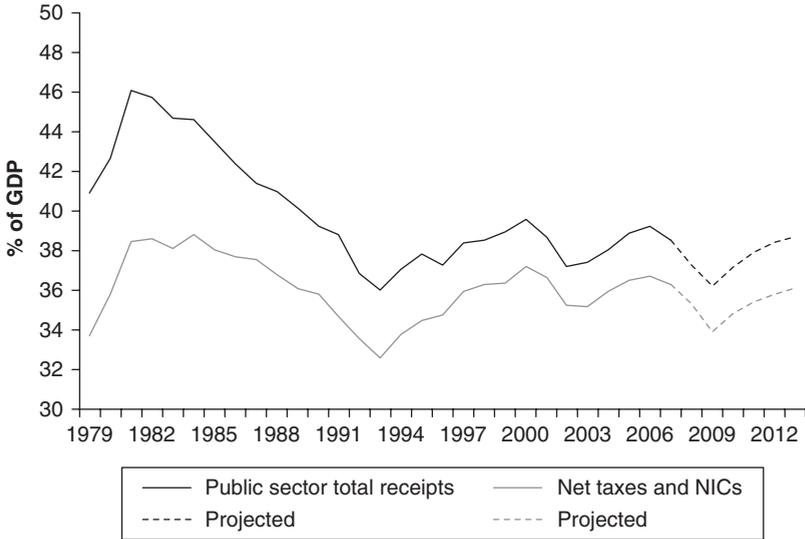
*Figure 10.1*  Total government receipts and taxes (incl. national insurance contributions) as a percentage of GDP, UK, 1978–79 to 2007–08 plus projections to 2013–14.

*Source*: Adam *et al*. (2008).

they were not in the end successful in cutting taxes, as Figure 10.1 shows: by the end of its period of office, taxes were higher than when the government was first elected. The other notable date is 1997 when the New Labour government was elected, promising to no longer be the party of high spending and taxation. Since 1997, taxes have risen as a share of GDP, but only slightly, remaining lower than at their peak in the early 1980s, when there were also substantial non-tax revenues (e.g., from national industries that have since been privatized). The share of national income taken in tax in the United Kingdom is now around the average for developed countries: lower than in most of the EU-15 countries (such as France, Italy and the Scandinavian countries), but higher than in most of the new EU countries of Eastern Europe and than in the USA, Japan and Australia.

Before 2008, the share of government revenues was projected to stabilize at about 40 per cent of GDP, which was relatively low by European standards (Adam *et al*. 2008). In November 2008, the government announced a stimulus package which included an immediate temporary cut in VAT and permanent changes in some other taxes, and some increases in spending to be paid for by future tax rises (from April 2011), including the introduction of a higher personal income tax rate for the highest incomes. Excluding the cost of partial nationalization of several banks, these measures were projected to reduce the share of taxation in GDP to 34 per cent in 2009–10 before climbing again to 36 per cent in 2013–14 (HM Treasury 2008).

### Composition of taxation

Figure 10.2 shows the composition of government total receipts in 2007–08, and for comparison in 1978–79 and 1996–97, years which coincide with the changes in government mentioned above. In 2007–8, about 45 per cent comes from personal income tax and national insurance contributions (NICs), roughly the same proportion as before the Conservative government was elected in 1979; they had succeeded in cutting this share to 40 per cent by 1997, but the Labour government then reversed that trend. The Conservatives increased the share coming from indirect taxes from 23 per cent to 31 per cent; this had fallen to 26 per cent by 2007–08 and decreased further while the stimulus package's cut in VAT was in force.

These longer-term developments are in line with those seen internationally. They include a switch within indirect taxation from taxes on specific goods
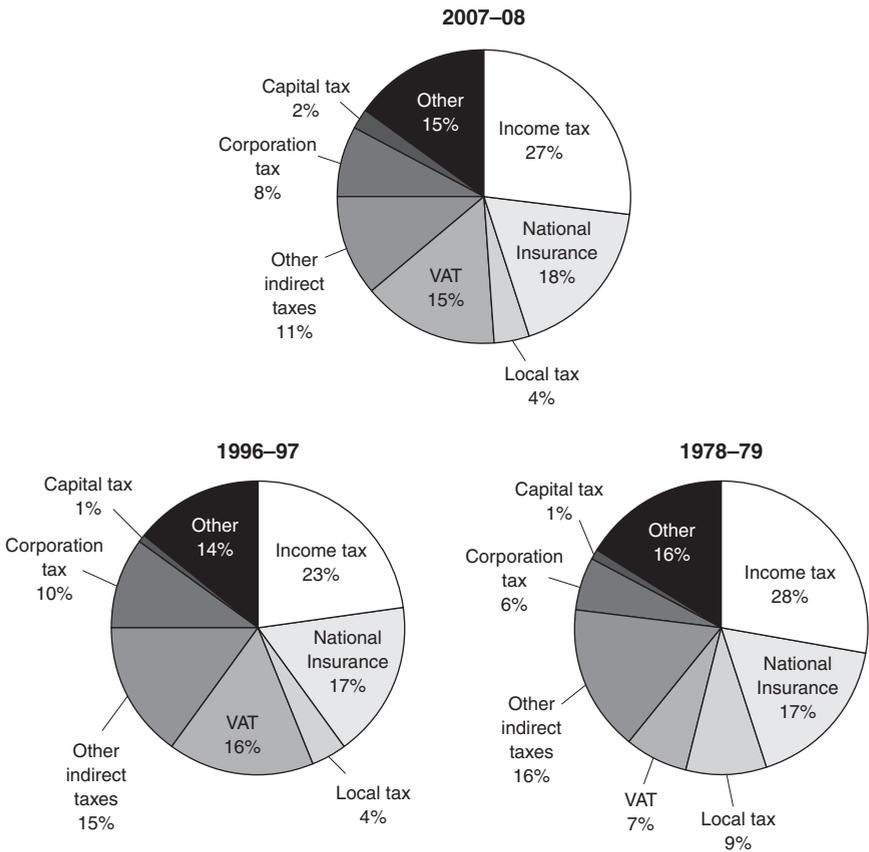


*Figure 10.2* Composition of government current receipts, UK, 2007–08, 1996–97 and 1978–79.

*Source*: Based on HM Treasury (2008, 1997) and Adam and Browne (2006).

towards value-added tax (VAT) and a reduction in the progressivity of personal income tax through a reduction in the number of income brackets and through rate cuts (mainly in pre-election budgets[1]). And in line with most, but not all, European countries, the United Kingdom completed the move from joint to individual filing for married couples in 1990.[2] However, since 1999, the effect of independent filing has been counterbalanced by the introduction of jointly means-tested refundable tax credits for low earners and families with children.

Since the election of the New Labour government in 1997, there has been a slight shift away from indirect taxes towards income tax and national insurance (Figure 10.2). However, comparison with 1979 shows much bigger changes, with a doubling of the share of revenue coming from VAT (rates were substantially increased by the incoming Conservative government) and corresponding falls in other expenditure taxes. Substantial cuts in income tax rates in the period 1979–97 were counteracted by rising incomes, leaving the share of revenue contributed by income tax much the same (see Figure 10.2). There was also a substantial reduction in the proportion of revenue coming from local taxes (and corresponding fall in local government autonomy).

### Distributional effects of the tax and benefits system

Although there has been little gender analysis of the UK tax system, a distributional analysis of its impact on households of different income levels is published annually by the Office for National Statistics. Because a substantial proportion of tax receipts is redistributed in the form of benefits and tax credits affecting household disposable income, effects on distribution can be assessed only by examining the tax and benefit system together.

The net effect of this system is redistributive. Before any government intervention, the top quintile of households has an average income 14.8 times that of the bottom quintile; after taking account of (net) cash benefits this ratio is 6.6 to 1. The effect of direct taxation – personal income tax, national insurance contributions (NICs) and local taxes[3] – is to reduce this ratio to 5.5 to 1 for disposable income, but taking account of indirect taxation pulls it back up to 7 to 1 (Jones 2008: 39). Direct taxation is therefore mildly progressive while expenditure taxes are mostly regressive with respect to household income, and the largest contribution to reducing inequality is made by cash benefits and refundable tax credits.

### Personal income tax

To examine the impact of the UK personal income tax (PIT) system from a gender perspective, we need to include national insurance contributions and to take into consideration the system of refundable tax credits (introduced in 1999), which plays an important role in the redistribution of income across households of different types. While personal income tax and national insurance are paid by most adults (30.6 million individuals in 2008–09, about half the total UK population) (HMRC 2009), by adding those who receive tax credits we can cover

nearly all working-age adults (except those living below the income tax threshold in households with neither children nor anyone employed).

None of these components of the PIT system have explicit gender biases. However, as will be seen below, given gender divisions and inequalities in the United Kingdom, the PIT system as a whole has significant indirect gendered effects on the distribution of income, both between and within households, and on labour market incentives for men and women.

Since 1990, UK personal income tax has been filed on an individual basis. Most employees are automatically enrolled in 'Pay As You Earn' (PAYE), whereby employers deduct tax and national insurance payments directly from employees' wages. Many UK taxpayers therefore rarely fill in a tax form. Self-employed persons, however, are responsible for making their own payments.

### Income tax schedule

Each taxpayer in the United Kingdom receives a tax-free personal allowance, and there are extra personal allowances for elderly people with incomes under a certain limit, as well as for older married couples (or civil partners) and some disabled persons. Until 2010; income from earnings (and some benefits) above personal allowances is taxed according to a schedule with only two brackets, a basic rate of 20 per cent and a higher rate of 40 per cent (see Table 10.1) with about 83 per cent of taxpayers liable only to the basic rate (HMRC 2009). There is a reduced lower rate for savings that applies only to individuals whose taxable non-savings income falls below a low threshold. Income from dividends is also taxed at lower rates and further reduced by a non-refundable dividend tax credit of 10 per cent, to remove double taxation of company profits already taxed through corporation tax when paid out as dividends. When calculating into which tax bracket different income sources fall, dividend income is treated as the top slice of income, followed by savings income, followed by other income.

The UK personal income tax system is progressive, but only mildly so compared to 30 years ago, and also compared to countries of comparable levels of per capita GDP. Both Conservative and Labour governments have 'simplified' the

*Table 10.1* PIT brackets and rates by source of income, UK, 2008–09

| Income brackets (£) | | Rate (%) | | |
|---|---|---|---|---|
| | | Savings | Dividends | Other income |
| 0–2,230 | starting | 10 | 10 | 20 |
| 2,231–34,800 | basic | 20 | 10 | 20 |
| >34,800 | higher | 40 | 32.5 | 40 |

*Source:* HM Treasury (2008).

*Note:* UK£1 = US $1.62 (FT quote on 27 August 2009, at 10.00 GMT).

PIT system in ways that make it less progressive, and have made only small changes to national insurance contributions. This means that the lowest earners, most of whom are women, are likely to pay more income tax in the United Kingdom than they would in more progressive systems, such as those in most other parts of Western Europe. Nevertheless, because of their lower average earnings, women pay less income tax than men overall.

## National insurance contributions

Working individuals under state retirement age must also pay NICs, which are effectively just another form of income tax since they are used to fund general government expenditure, and payments have little impact on an individual's eligibility for benefits (Adam and Browne 2006). NICs must be paid by both employees and their employers for all earnings above a threshold corresponding more or less to the basic personal allowance.[4] Employees pay NICs at 11 per cent on any earnings between this threshold and an upper earnings limit (similar to the threshold for the highest income tax band), and at only 1 per cent of earnings above that upper limit. Thus NICs are regressive, as higher earners pay a lower marginal rate than lower earners, and further reduce the already slight progressivity of the income tax brackets. Again, while women pay lower taxes and NICs on average than men and are the ones most likely not to pay anything in this system, those with lower incomes, who are disproportionately women, pay relatively more tax and NICs in the United Kingdom than they would in more progressive systems.

## Exemptions and deductions

Table 10.2 shows which income is taxable, which is tax exempt, the deductions that can be made from taxable income and the tax credits that reduce tax paid. Given the gendered nature of employment and care-giving roles in the United Kingdom, deductions show a pattern that somewhat favours men. Deductions are worth more to higher earners, mostly men, and tend to recognize expenses that are directly incurred during employment better than they do the problems for those with care-giving responsibilities in getting to employment. For instance, deductions for child-care expenses are limited and available only to those whose employers participate in a national scheme.

   Net deductions for pension contributions are a major loss of revenue, costing the government as much as a third of its total expenditure on state pensions, which have increasingly lagged behind earnings since 1982 (Blundell and Emmerson 2003; HM Treasury 2008). Tax-free pension contributions are subject to a lifetime limit that is more than the amount that all but the very highest paid could hope to save in their lifetimes. Deductions for pension contributions are therefore a significant form of redistribution to the well-paid and to men, since the poor and women are far less likely to take out personal pensions. Occupational pension schemes are further subsidized by tax not being payable

Table 10.2 Main taxable personal income, exemptions and reductions, UK, 2008–09

| Taxable income | Exemptions | Deductions from taxable income | Reductions of tax liability (tax credits) |
|---|---|---|---|
| Earnings from employment, self-employment and non-incorporated businesses Retirement pensions Income from property (rents) Interests on savings Dividends on shares Non-means-tested benefits as replacement income (state pension, job seeker's allowance) | Means-tested social security benefits Child benefits Income from certain savings and dividends (National Savings Certificates, Individual Savings Accounts) | Contributions to occupational pensions by employee and employer Professional expenses (e.g., professional fees and subscriptions, tools and specialist clothing, capital allowances, household expenses for working at home, travel and subsistence costs) Child-care expenses supported by employer (up to a limit of £55 a week, worth a quarter of the cost of an average childcare centre place) Personal tax allowance (£6,035 – about a quarter of median household income); further reductions available to elderly and/or disabled people, up to a certain limit | Non-refundable tax credit on dividends Non-refundable tax credit for donation to charities Refundable, means-tested (on family income), child and working tax credits (see details in the text) |

on employer as well as employee contributions. Women are far less likely than men to be offered the chance to enrol in an occupational pension scheme, or to take up such an offer.

In recognition of the unsustainably low savings rate of the less well-off, and in partial recognition of gender differences in savings opportunities, the pension system is being reformed. However, although it will include default employee and employer contributions, the new system will continue to encourage savings by offering tax incentives, which will inevitably favour men as those more likely to have an uninterrupted employment history and be better-paid employees (Price 2007).

### *Child and working tax credits*

The introduction of tax credits was New Labour's flagship policy to combat poverty, particularly child poverty, which is among the highest in Europe. The current Child and Working Tax Credits are an extension of the previous Working Families Tax Credit (WFTC) introduced in 1999, which in turn was based on a

much less generous system of Family Credit, a benefit for families with children in employment. Modelled on the Earned Income Tax Credit of the United States, these tax credits are refundable (so reach those with incomes below the tax threshold) and aim both to 'make work pay' and to combat child poverty. They are paid directly to recipients, rather than deducted from tax liabilities. Initially WFTC was intended to be paid through the pay packet to one earner; however, in response to feminist protest at this change from Family Credit, which had been paid to the mothers, the government allowed families to choose to whom the credit would be paid. It was recognized that paying tax credits intended for children through the pay packet, and thus more often to the man, could have made the objective of reducing child poverty more difficult to achieve (Goode *et al*. 1998).

In 2003, the system was extended to support more low-income families (not just those with children), and to provide seamless support for children to parents in and out of work. An integrated scheme of two separate tax credits was introduced: the Child Tax Credit (CTC) for low-income families, working or not, and the Working Tax Credit (WTC) for working families, with or without children. Each is paid directly to one person, but they are jointly means-tested on family income.

In these respects tax credits are very similar to other benefits. However, they are treated as part of the tax system in order to reduce the level of taxation and spending in the national accounts (since tax credits count as revenue foregone rather than expenditure) and to free tax credits from the stigma attached to means-tested benefits in the United Kingdom.

Unlike the rest of the individual-based income tax system, tax credits are means-tested at the family level. WTC is paid directly to one earner, but the amount of WTC paid to that earner will depend on the earnings and possibly hours of employment of *both* partners. Although two-earner couples can choose who receives WTC, they cannot request that it be split between them. CTC is paid directly to the 'main caregiver' (nominated by the partners, but in most cases the mother). WTC also provides a substantial subsidy to child-care costs for working parents, which is paid to the main caregiver.

Both the WTC and CTC introduce problematic new categories into the tax system. The WTC implicitly introduces a problematic category of a 'main earner' even though it does not explicitly use that language. The CTC category of 'main caregiver' was introduced with the Tax Credits in 2003, implying a household division of labour in which one person takes the main responsibility for care-giving that not all would accept. Both concepts – 'main caregiver' and 'main earner' – go against the equal sharing of paid and unpaid household roles.

Both CTC and WTC are jointly means-tested and subject to a progressive taper. The poorest families, with gross total family income below about two-thirds of the median (for families with children) and a quarter of the median (for those without children) receive the maximum amounts, which tapers off steeply above these thresholds. A small 'family' element of the CTC, however, is not withdrawn until family income exceeds approximately twice the median income and then is tapered away much less steeply. Thus, the smallest element of the

CTC is paid to most families, but WTC and the more substantial child-based elements of CTC tend to be paid only to poorer families (though the maximum childcare element is sufficiently large that, despite means testing, even some middle-income families receive some support through it).

This family-based means-testing of tax credits effectively undermines the individual filing of income tax for lower-income families, producing the same labour market disincentive effects for second earners, especially the low paid, as joint taxation. Given the gender pay gap and gender roles that typically regard women as second earners in couples, this is a gender bias that reinforces rather than challenges existing inequalities.

### *Inflation and uprating*

Tax brackets and allowances are automatically increased annually in line with the retail price index (RPI), unless Parliament intervenes. Indexing by prices rather than average earnings increases revenues when real earnings rise (see Sutherland *et al*. 2008). These welcome boosts to the exchequer have relied on earnings rising faster than prices. During expansions, such revenue increases have often been used to reduce tax rates or introduce new forms of spending (such as tax credits). However, they will not be available in a recession, when wages may not rise above inflation as employment levels fall.

Tax credit levels and thresholds are periodically revised but not automatically indexed. The family element of the CTC, paid to most families, has not been uprated since its introduction in 2003. By contrast, the child element of CTC, paid only to poor families, has been indexed annually to average earnings, and the government has reaffirmed its commitment to helping low-income families by raising the maximum child element above indexation. Nevertheless, income thresholds for computation of both CTC and WTC are not expected to change in nominal terms; so the number of eligible families will fall if incomes continue to rise (ibid.). Only the very poorest households would be entitled to the increased maximum amounts, which should favour single-parent households, in which women predominate.

## Distributional effects of the UK income tax system

While the UK income tax system is one of the least progressive in Europe if we exclude tax credits, the inclusion of tax credits makes the UK system highly redistributive towards very low-income working families, especially families with children, in comparison with other European countries (De Henau *et al*. 2007).

To illustrate this and explore its gender effects, we have calculated the total income tax incidence, with and without tax credits, on different types of families at three different levels of gross household income: half median, median and twice the median.[5] We look at male/female households with two dependent children, in three employment situations: dual-earner (in which the man's income is twice the woman's); male single-earner; and female single-earner.[6] For the purpose of tax

credits, the woman is assumed to be the main caregiver in the first two cases; in the third case, where the woman is the sole earner, we consider one situation in which the man is the main caregiver and a second in which the woman is both the sole earner and the main caregiver[7] (see Table 10.3).

Looking at the second column of Table 10.3, we can see that without tax credits the PIT system is only moderately progressive across sole-earner families, who are taxed more highly than dual-earner families of the same income, as would be expected from an individual filing system. Across dual-earner families, the PIT system is more progressive.

The third column including tax credits shows greater redistribution of income among families. However, at twice median income, tax credits have practically no effect; only the family element of the CTC still operates to reduce the total tax incidence on the household and on the main caregiver by 1.2 percentage points (whatever the distribution of gross income within the family).

At median income, tax credits are more powerful and reduce the total tax incidence: irrespective of the number of earners, the main caregiver receives CTC equal to 11 per cent of gross household income but no-one receives WTC. For single-breadwinner families, this halves their tax incidence. For dual-earner couples, it reduces it by two-thirds. The impact of tax credits is much stronger at half median income: CTC is paid at its maximum rate and couples are eligible for some WTC, in total worth about half of the couple's initial gross income, so that couples at this income level are net gainers.

The tax credit system also operates to redistribute income between partners towards more equality, specifically, towards the partner with lower income and towards the main caregiver (in three of our cases assumed to be the same person). This can be seen by comparing the share of female income before and after taxes (Table 10.3, columns 1 and 4). For couples of twice median income, the effect on the distribution of income within the household is tiny, reflecting the low progressivity of the income tax system and the small amount of CTC paid. At median income, there is more redistribution within the household, mostly because the main caregiver gains relative to her or his partner.

At half median income, CTC is more than WTC so the greater gain goes to the main caregiver. For single-breadwinner families, CTC increases a non-earning main caregiver's share of total net income from 0 to 28 per cent. In the dual-earner case, because the woman is the main caregiver, her share of income goes up from one-third to almost half of the household's income. Note that if the (female) single earner is also the main caregiver, there is no redistribution between partners at any level of income.

Thus while the tax system on its own does relatively little to redistribute income within and among households, tax credits are an effective way of redistributing income both towards poorer households and, based on the assumptions we made, to women within both poor and median-income households. The poorest couples are most likely to be single – (or no) earner households within which women are more likely to be the main caregiver. For these couples, the tax credit system has been particularly effective in both raising household income and

*Table 10.3* Tax incidence (income tax + NICs – tax credits) as percentage of gross household income, UK couple with two children

| | Female share of total gross household income | Total household tax incidence (tax + NICs) | Total household tax incidence (tax + NICs – tax credits) | Female share of total net household income | Total male incidence | Total female incidence |
|---|---|---|---|---|---|---|
| *Half median income* (£11,518) | | | | | | |
| (i)     male higher income | 33.3 | 5.0 | −56.1 | 47.6 | −15.1 | −40.9 |
| (ii)    male sole earner | 0.0 | 15.3 | −45.7 | 28.1 | −4.8 | −40.9 |
| (iiia)  female sole earner | 100.0 | 15.3 | −45.7 | 71.9 | −40.9 | −4.8 |
| (iiib)  female sole earner-caregiver | 100.0 | 15.3 | −45.7 | 100.0 | 0.0 | −45.7 |
| *Median income* (£23,036) | | | | | | |
| (i)     male higher income | 33.3 | 15.3 | 4.3 | 43.7 | 12.8 | −8.5 |
| (ii)    male sole earner | 0.0 | 23.2 | 12.1 | 12.5 | 23.2 | −11.0 |
| (iiia)  female sole earner | 100.0 | 23.2 | 12.1 | 87.5 | −11.0 | 23.2 |
| (iiib)  female sole earner-caregiver | 100.0 | 23.2 | 12.1 | 100.0 | 0.0 | 12.1 |
| *Twice median income* (£46,072) | | | | | | |
| (i)     male higher income | 33.3 | 23.2 | 22.0 | 36.0 | 16.7 | 5.2 |
| (iia)   male sole earner | 0.0 | 27.9 | 26.7 | 1.6 | 27.9 | −1.2 |
| (iiia)  female sole earner | 100.0 | 27.9 | 26.7 | 98.4 | −1.2 | 27.9 |
| (iiib)  female sole earner-caregiver | 100.0 | 27.9 | 26.7 | 100.0 | 0.0 | 26.7 |

*Source:* Authors' calculations using 2008–09 tax rules.

increasing women's share of it. However this happens largely through the payment of CTC, which is meant for the benefit of children rather than for the main caregiver who receives the tax credits.

### Gender impact of PIT

There is no explicit gender bias in the UK personal income tax system, as men and women are treated alike. Moreover, unlike in some other European countries (e.g., France, Germany and Spain), the UK income tax system is individualized, removing the indirect gender bias of a higher effective marginal rate for the second earner found in joint taxation systems. However, given the large gender wage gap and even larger gender earnings differential due to different hours of work, the impact of income taxation differs for men and women; the latter are less heavily taxed because their incomes are generally lower. But this is less true in the United Kingdom than it would be in countries with more progressive income tax systems.

Efforts to target low-income families by concentrating on the tax credit system have some adverse effects for women in couples, as the means-testing of tax credits raises the effective marginal tax rate of second earners, while CTC makes women's income dependent on the presence of children and on being their main caregiver. While this recognizes the contribution made by those who care for children, it undermines incentives to develop a more gender-equitable division of labour and women's financial autonomy by replacing individually taxed earnings with household-based means-tested tax credits as a source of income for women in poor families. By reducing incentives to seek employment, it may also harm these women's long-term financial prospects and their children's chance of escaping poverty (Fagan *et al.* 2006); research on the WFTC showed that it increased single women's labour-market participation but decreased, albeit only slightly, partnered women's participation (Blundell *et al.* 2000; Bennett and Hirsch 2001; Brewer *et al.* 2006). An individualized tax credit system would be more efficient and would reduce the disincentive to the second earner. However, it would be much more expensive if current levels of support were to be maintained and would provide a much more explicit subsidy to low pay, potentially substituting for wage increases.

## Indirect taxation

Turning to the incidence of indirect (expenditure) taxes, we begin by describing the structure of expenditure taxes in the United Kingdom, as well as the data and the definitions used. Because expenditure data is always aggregated to the household level, we can analyse the incidence of indirect taxes only on households, not individuals, raising the issue of how to define gender categories for households. After examining the distribution of individuals across defined categories, we discuss the main results of the incidence analysis, paying particular attention to

where there are gendered effects, and simulate actual and potential policy changes to analyse the distributional impact of such changes.

### The structure of indirect taxation

Indirect taxes raised 23 per cent of UK tax revenue in 2005. Most comes from VAT, with the remainder being raised by excise duties on alcohol, tobacco, fuel and betting (including the National Lottery), customs duties and a few more specific taxes, such as motor vehicle duties; air passenger duty; insurance premium tax; driving and television licences; stamp duties and fossil fuel levy. Our incidence analysis includes only VAT and excise duties, as the two types of indirect tax that raise the most significant revenue.

There are three VAT rates and some VAT exemptions. Over 50 per cent of the expenditure of the typical household is on goods charged at the standard rate, over 30 per cent on goods that are exempt or zero-rated and only a small proportion is on reduced rate goods, which has however been slightly increasing in recent years (HMRC 2007). Table 10.4 describes the goods that were subject to each rate in April 2005. The main feature is that most food, domestic fuel and some goods which the government might want to encourage people to consume are zero- or reduced-rated. Under European Union (EU) rules the government can reduce but not zero-rate further goods. This explains the anomaly whereby children's car seats are subject to the reduced rate of 5 per cent, while motorcycle helmets are zero-rated because the latter was introduced before these EU regulations were in force. On zero-rated goods suppliers can claim back VAT paid on inputs, but on exempted goods they cannot.[8]

Most excise duties are specific or unit taxes, that is, they are an actual amount per unit purchased. Some goods, such as cigarettes, also have an ad valorem or percentage tax, which charges a percentage of the market price. The fuel levy is by far the most important excise duty, and the most significant green tax, in terms of its contribution to government revenue.

*Table 10.4*  VAT rates and liable goods, UK, April 2005

| VAT rate (%) | Applied to |
| --- | --- |
| 17.5 | Most goods supplied within the UK (standard rate) |
| 5 | Domestic fuel, 'good practice' goods or services (e.g., installation of energy-saving materials, renovation and alteration of dwellings, installation of heating equipment, security goods or connection of gas supply), women's sanitary products and children's car seats |
| 0 | Most food, children's clothing and footwear, public transport, books and newspapers, water and sewerage services and helmets for motorcycles and pedal cycles |
| Exemptions | Financial and banking services, private education and health (excl. spectacles, lenses, sunglasses, most mobility and hearing equipment and non-National Health Service medical products and services), postal charges, betting and funerals |

*Source:* HMRC (2007).

## Incidence analysis

The main data source for this analysis is the Expenditure and Food Survey (EFS) which covers about 7,000 households in the United Kingdom each year. We used the most recent available data at the end of 2007 (see ONS 2005, 2007), based on information collected in late 2005 and early 2006 (the sample period covers 12 months of the year to avoid seasonal effects). This data set covers only private households,[9] excluding people living in hotels, shared flats, lodging houses, homes for the elderly, and so on, and includes levels and sources of income, benefits and contributions, housing characteristics, together with socio-demographic information on all members in the household. It also contains detailed household expenditure data, collected via a face-to-face interview and a diary for respondents to record their expenditure over two weeks.

The number of households responding to the EFS in 2005–06 was 6,258 (about 1 in 4,000) with an additional sample of 527 covering Northern Ireland. The response rate was 57 per cent. The recorded expenditure patterns may under-report some expenditures, notably on tobacco, alcohol and confectionery, for which we cannot reliably correct.

## Methods of calculation

From our expenditure data, we know only the total amount spent; we do not know the number of units purchased or the actual average price they were charged per unit. However, excise taxes on tobacco and alcohol are charged on amounts purchased, or for tobacco on a combination of amount and price. To calculate accurately the total amount of excise duty tax households pay on these categories, we would therefore need the retail price of all different goods within them. Because not all retail prices were available, we estimated the amount of excise duty paid by households on each category of goods using the retail prices and excise duty paid on some typical excisable goods (Table 10.5), together with data published by HM Customs and Excise on the amounts of each excisable good released for consumption.

For betting and gaming, excise duty depends on type of activity, level of profits or potential profits. Gambling expenditures are not subject to VAT and calculating excise duties based on household expenditure was straightforward (for details on methods of estimation and calculation, see Santos 2009).

## Definitions of household types

Three different categorizations of households are used. The first is by 'headship', defined as the household reference person, or 'householder' in whose name the accommodation is owned or rented.[10] If there are joint householders, which is common in the United Kingdom, the household reference person is the one with the higher income, or where incomes are the same, the eldest householder. The second classifies households by its members' employment status (as this might

*Table 10.5* Excisable goods: incidence of duty and tax for typical items, UK, April 2005

| Item | Retail price in pence | Excise duty | VAT | Total tax | Total tax as percentage of price |
|---|---|---|---|---|---|
| Packet of 20 cigarettes[a] | 498 | 314 | 74 | 386 | 78 |
| Pint of beer (bitter) in on-licensed premises[b] | 209 | 29 | 31 | 60 | 29 |
| Pint of lager in on-licensed premises[c] | 228 | 30 | 34 | 64 | 28 |
| 4 large (440 ml) cans of lager in retail outlet[c] | 276 | 93 | 41 | 134 | 49 |
| 75cl bottle of table wine in retail outlet | 333 | 126 | 50 | 175 | 53 |
| 70cl bottle of whisky in retail outlet[d] | 1171 | 548 | 174 | 722 | 62 |
| 75cl bottle of vodka in retail outlet[d] | 1088 | 550 | 162 | 712 | 66 |
| Litre bottle of cider in retail outlet[e] | 175 | 26 | 26 | 52 | 30 |
| Litre of ultra low sulphur petrol | 85 | 47 | 13 | 60 | 70 |
| Litre of ultra low sulphur diesel | 90 | 47 | 13 | 60 | 67 |

*Source*: HMRC (2005), table D1.

*Notes*: 20 pence = £1.
(a) Excise duty consists of 204.78 pence in specific duty and 109.56 pence in *ad valorem*.
(b) Typical strength of 3.9% alcohol by volume.
(c) Typical strength of 4.1% alcohol by volume.
(d) Strength of 40% alcohol by volume.
(e) Typical strength of less than 7.5% alcohol by volume.

affect control over resources), resulting in four categories: male-breadwinner (no female earner and at least one male earner), female-breadwinner, dual-earner and households in which no one is employed. The third is based on numbers of male and female adults and include those with more adult men, those with more adult women and those with an equal number of adults of both sexes.

While headship is not a very useful categorization in the United Kingdom, it may give us some information about power within households; but only if it is associated with formal control over accommodation, a higher share of household income or age. As would be expected, while the vast majority of male-breadwinner households are male-headed and female-breadwinner households female-headed (91 per cent and 85 per cent respectively), women are also the head of 25 per cent of dual-earner households (Santos 2009).

The majority of households (64 per cent) have an equal number of adult men and women, while 17 per cent have more men than women and 19 per cent more women than men. Nearly all of these gender imbalanced households consist of adults living on their own or with children. Although in most male/female couple households both partners are in employment, where only one is employed, it is usually because the woman has left employment because of care-giving responsibilities, so the sole breadwinner is male. While overall there are roughly equal numbers of men and women who are the sole household breadwinners, 56 per cent of male-breadwinner households are couples and only 41 per cent are men

living on their own or with children, while only 22 per cent of female-breadwinner households are couples and 77 per cent are single parents or women living on their own (authors' calculations using BHPS 2005).

Regarding female retirees living on their own and single parents, both of which figure prominently in tax policy discussions, we find that female retirees, like their male counterparts, are found almost exclusively in households in which no one is employed, while 65 per cent of female single parents with dependent children are in female-breadwinner households and 35 per cent are in households in which no one is employed.

### Gender differences in indirect tax incidence

#### Incidence by type of taxes

Table 10.6 presents summary results of the incidence by type of tax (total tax, VAT, excises and fuel levy) according to three gendered measures: sex of household head, employment status of household members, and gender balance of household adults. It shows that female-headed households have a slightly lower incidence for tax overall and for VAT, while male-headed households have a considerably higher incidence of fuel tax. By employment status, single-breadwinner households, probably because more of their expenditure is child-related, have lower incidence rates for total tax, VAT and excise taxes than either dual-earner or no-earner households. Fuel tax has a higher incidence on the households in which there is a male earner, suggesting that the gendered nature of fuel consumption is, at least in part, a result of men commuting longer distances by car than women (Hamilton *et al.* 2002).

Analysis by household adult sex composition shows a slightly different gendered picture. Fuel tax has a higher incidence on households with more men than

*Table 10.6* Overall incidence by household type, UK (tax as % of expenditure)

|  | Total tax | VAT | Excise tax | Fuel tax | Number of households |
|---|---|---|---|---|---|
| *Headship* |  |  |  |  |  |
| Female-headed | 11.37 | 7.34 | 3.97 | 2.02 | 2,639 |
| Male-headed | 11.56 | 7.53 | 3.94 | 2.43 | 4,145 |
| *Employment categories* |  |  |  |  |  |
| Male-breadwinner | 10.99 | 7.04 | 3.84 | 2.31 | 1,171 |
| Female-breadwinner | 11.21 | 7.31 | 3.77 | 2.19 | 902 |
| Dual earner | 11.91 | 7.84 | 4.05 | 2.57 | 2,051 |
| None-employed | 12.27 | 7.78 | 4.34 | 2.15 | 1,163 |
| *Household adult sex composition* |  |  |  |  |  |
| Male-majority | 12.32 | 7.47 | 4.71 | 2.67 | 1,349 |
| Female-majority | 11.41 | 7.40 | 3.95 | 2.18 | 2,010 |
| Equal # females and males | 11.32 | 7.50 | 3.74 | 2.26 | 3,425 |

*Source*: Authors' calculations based on EFS 2005–06.

women and a lower incidence on households with more women than men. Households with equal numbers of adult men and women, nearly all of whom are couples, have the lowest incidence of excise duties. The difference in VAT incidence between different types of households is insignificant.

*Incidence by expenditure quintiles and the presence of children*

In the remainder of the analysis of expenditure taxes we will present the results from only the analysis by employment status.

Table 10.7 and Figure 10.3 show that the presence of children reduces the incidence of total expenditure taxes for all household types and nearly all quintiles. Except for households with children and no-one employed, the total expenditure tax system has the highest incidence on the middle quintiles, impacting less on the lowest and highest quintiles.

Figure 10.4 shows that the incidence of VAT is lower for the bottom half of the expenditure distribution (largely because food and some other necessities are zero-rated) and, except for households in which no one is employed, is broadly neutral across the upper half of the expenditure distribution. The presence of children reduces the incidence of VAT relatively less for lower quintiles than it does for higher quintiles.

Figures 10.5 and 10.6 show that the incidence of both excises and the fuel levy falls with overall expenditure and children reduce incidence for all household types, more for lower quintiles than for higher ones. This suggests that children reduce the proportion of discretionary expenditure on those 'demerit' goods
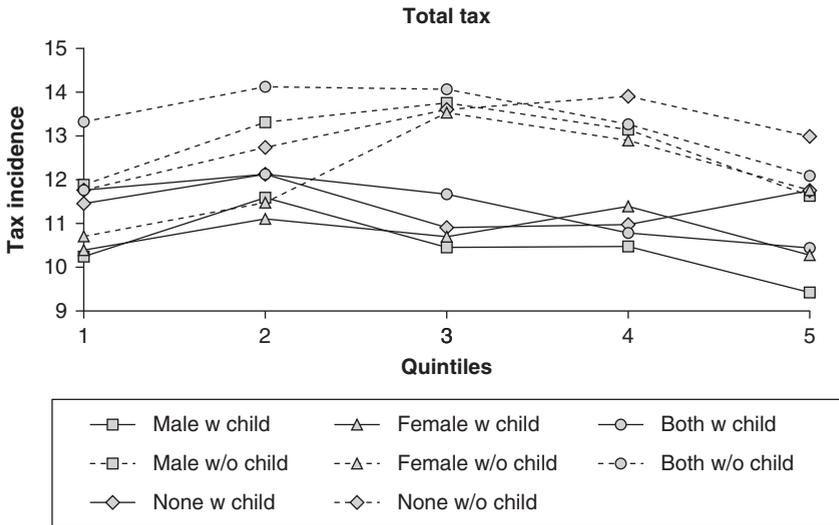


*Figure 10.3* Total tax incidence by household employment status and children, UK.

*Source*: Authors' calculations based on EFS 2005–06.

*Table 10.7* Incidence by employment status, presence of children and quintile, UK (%)

| | Total tax | VAT | Excises | Fuel | Total tax | VAT | Excises | Fuel | Total tax | VAT | Excises | Fuel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Male-breadwinner* | | | | *Male-breadwinner with children* | | | | *Male-breadwinner without children* | | | |
| Quintile 1 | 10.40 | 6.21 | 4.06 | 2.63 | 10.27 | 6.20 | 3.88 | 2.52 | 11.93 | 6.21 | 6.33 | 4.01 |
| Quintile 2 | 11.86 | 7.29 | 4.50 | 2.59 | 11.56 | 7.29 | 4.21 | 2.50 | 13.30 | 7.31 | 5.88 | 3.07 |
| Quintile 3 | 11.23 | 7.38 | 3.70 | 2.36 | 10.46 | 7.22 | 3.09 | 2.12 | 13.71 | 7.94 | 5.65 | 3.15 |
| Quintile 4 | 11.38 | 7.46 | 3.77 | 2.15 | 10.44 | 7.16 | 3.17 | 1.92 | 13.11 | 8.07 | 4.85 | 2.59 |
| Quintile 5 | 10.34 | 7.41 | 2.92 | 1.53 | 9.40 | 6.68 | 2.53 | 1.28 | 11.63 | 8.32 | 3.48 | 1.88 |
| Total | 10.99 | 7.04 | 3.84 | 2.31 | 10.50 | 6.81 | 3.54 | 2.20 | 12.65 | 7.85 | 4.84 | 2.66 |
| | *Female-breadwinner* | | | | *Female -breadwinner with children* | | | | *Female-breadwinner without children* | | | |
| Quintile 1 | 10.41 | 6.40 | 3.85 | 2.30 | 10.38 | 6.42 | 3.80 | 2.20 | 10.71 | 6.27 | 4.38 | 3.44 |
| Quintile 2 | 11.21 | 7.06 | 3.99 | 2.28 | 11.12 | 7.16 | 3.83 | 2.22 | 11.53 | 6.77 | 4.53 | 2.46 |
| Quintile 3 | 11.41 | 7.40 | 3.81 | 2.13 | 10.65 | 7.27 | 3.11 | 1.92 | 13.53 | 7.76 | 5.73 | 2.73 |
| Quintile 4 | 12.09 | 8.26 | 3.90 | 2.32 | 11.37 | 8.03 | 3.31 | 2.06 | 12.84 | 8.54 | 4.52 | 2.59 |
| Quintile 5 | 11.23 | 8.26 | 2.95 | 1.76 | 10.27 | 7.95 | 2.00 | 1.42 | 11.80 | 8.43 | 3.51 | 1.96 |
| Total | 11.20 | 7.31 | 3.76 | 2.19 | 10.75 | 7.09 | 3.47 | 2.07 | 12.28 | 7.84 | 4.45 | 2.47 |
| | *Dual-earner* | | | | *Dual-earner with children* | | | | *Dual-earner without children* | | | |
| Quintile 1 | 11.91 | 7.12 | 4.75 | 3.44 | 11.77 | 7.10 | 4.62 | 3.30 | 13.32 | 7.34 | 6.23 | 4.96 |
| Quintile 2 | 12.52 | 7.65 | 4.81 | 2.83 | 12.10 | 7.67 | 4.37 | 2.68 | 14.04 | 7.59 | 6.44 | 3.36 |
| Quintile 3 | 12.31 | 8.00 | 4.35 | 2.72 | 11.67 | 7.78 | 3.93 | 2.59 | 14.07 | 8.58 | 5.48 | 3.09 |
| Quintile 4 | 11.59 | 7.88 | 3.62 | 2.27 | 10.75 | 7.58 | 3.05 | 1.99 | 13.21 | 8.53 | 4.74 | 2.82 |
| Quintile 5 | 11.24 | 8.27 | 3.05 | 1.96 | 10.49 | 7.97 | 2.55 | 1.58 | 12.07 | 8.58 | 3.59 | 2.38 |
| Total | 11.91 | 7.84 | 4.05 | 2.57 | 11.39 | 7.62 | 3.73 | 2.44 | 13.13 | 8.37 | 4.80 | 2.88 |
| | *No-employed* | | | | *No-employed with children* | | | | *No-employed without children* | | | |
| Quintile 1 | 11.55 | 6.68 | 4.77 | 2.22 | 11.41 | 6.68 | 4.65 | 1.98 | 11.85 | 6.68 | 5.01 | 2.69 |
| Quintile 2 | 12.48 | 7.82 | 4.51 | 2.10 | 12.15 | 7.62 | 4.23 | 1.65 | 12.74 | 7.96 | 4.73 | 2.46 |
| Quintile 3 | 12.93 | 8.75 | 4.08 | 2.35 | 10.91 | 8.10 | 2.52 | 1.17 | 13.64 | 8.97 | 4.62 | 2.76 |
| Quintile 4 | 13.33 | 9.30 | 3.79 | 2.19 | 10.98 | 7.76 | 2.83 | 1.52 | 13.92 | 9.69 | 4.03 | 2.35 |
| Quintile 5 | 12.76 | 9.82 | 2.87 | 1.59 | 11.67 | 9.03 | 2.54 | 1.99 | 13.00 | 10.02 | 2.95 | 1.50 |
| Total | 12.27 | 7.78 | 4.34 | 2.15 | 11.54 | 7.15 | 4.22 | 1.82 | 12.91 | 8.30 | 4.45 | 2.44 |

*Source*: Authors' calculations based on EFS 2005–06.
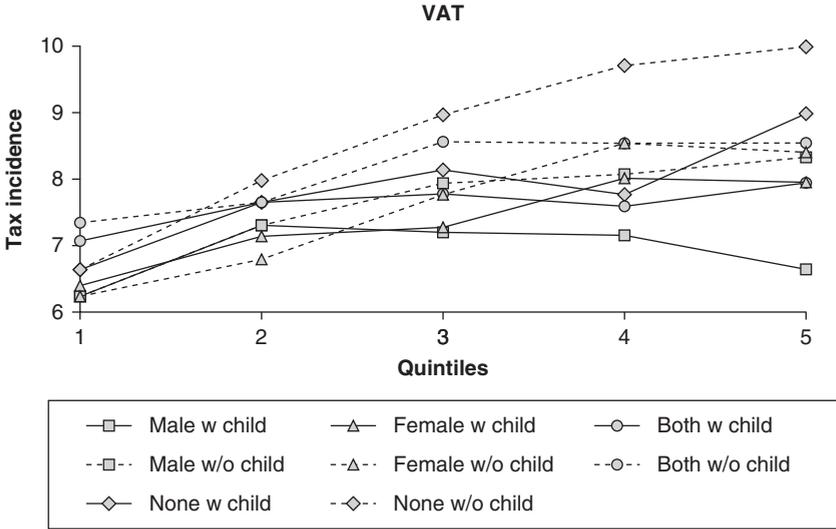
*Figure 10.4* VAT incidence by household employment status and children, UK.

*Source*: Authors' calculations based on EFS 2005–06.
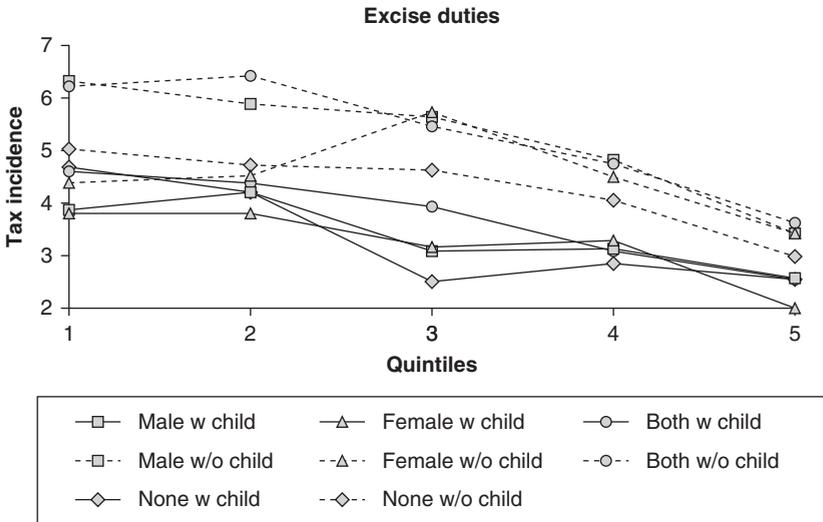


*Figure 10.5* Excise duty incidence by household employment status and children, UK.

*Source*: Authors' calculations based on EFS 2005–06.

which attract excise duty and the fuel levy (a higher proportion of expenditure in lower quintiles) and on goods that attract VAT (a higher proportion of expenditure in higher quintiles).
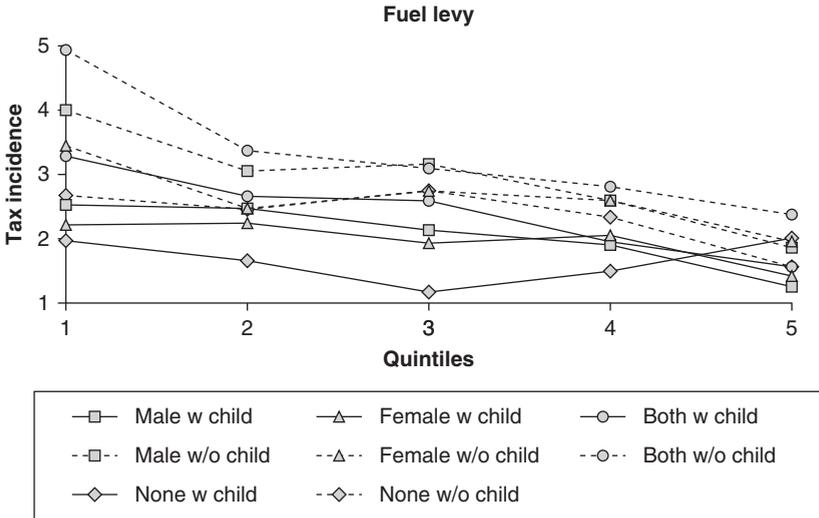
*Figure 10.6*  Fuel levy incidence by household employment status and children, UK.

*Source*: Authors' calculations based on EFS 2005–06.

Among households with children, male-breadwinner households bear the lowest incidence of VAT, probably because they are likely to have the largest families, but dual-earner households and households with no earners pay the most excise duty and fuel levy, especially in the lower quintiles. Not accounting for the effect of children shows less difference between the incidence of taxes on different types of households. Finally, among those without children it is households with no one in employment, largely retirees, and dual-earner couples who bear the highest incidence of VAT while the impact of excise duties and the fuel levy is highest on households with male earners.

*Incidence by commodity groups*

Table 10.8 shows how the tax incidence of different commodity groups changes across quintiles and households under different employment status categories. Where these categories are not subject to excise duties or VAT reductions, tax incidence simply depends on the proportion of expenditure on these items.

Overall, the commodity groups with highest incidence are transport, fuel, recreation, alcohol (especially whisky and spirits) and tobacco, non-utilities housing expenditure and meals out. Looking across employment categories, the main differences are seen in the incidence of tax due to transport related expenditures, alcohol, tobacco, and clothing.

Figure 10.7 shows that households with male earners (dual-earner or male-breadwinner) have the highest incidence of tax on fuel for transport, as noted

Table 10.8 Tax incidence for main commodity groups by employment status and quintile, UK (%)

| Categories | Male-breadwinner | | | | | | Female-breadwinner | | | | | | Dual-earner | | | | | | None-employed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total |
| *Food subtotal* | 0.13 | 0.12 | 0.08 | 0.06 | 0.06 | 0.10 | 0.14 | 0.12 | 0.07 | 0.08 | 0.03 | 0.10 | 0.13 | 0.10 | 0.08 | 0.06 | 0.04 | 0.08 | 0.13 | 0.14 | 0.10 | 0.07 | 0.04 | 0.12 |
| *Basic unprocessed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Basic processed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Sugar/ confectionary and others | 0.13 | 0.12 | 0.08 | 0.06 | 0.06 | 0.10 | 0.14 | 0.12 | 0.07 | 0.08 | 0.03 | 0.10 | 0.13 | 0.10 | 0.08 | 0.06 | 0.04 | 0.08 | 0.13 | 0.14 | 0.10 | 0.07 | 0.04 | 0.12 |
| Meals out | 0.63 | 0.70 | 0.63 | 0.56 | 0.53 | 0.61 | 0.62 | 0.76 | 0.58 | 0.60 | 0.39 | 0.61 | 0.72 | 0.74 | 0.75 | 0.65 | 0.55 | 0.68 | 0.66 | 0.72 | 0.68 | 0.67 | 0.42 | 0.66 |
| Non-alcoholic beverages | 0.17 | 0.13 | 0.10 | 0.08 | 0.06 | 0.12 | 0.16 | 0.16 | 0.12 | 0.09 | 0.05 | 0.13 | 0.16 | 0.12 | 0.10 | 0.08 | 0.05 | 0.10 | 0.20 | 0.13 | 0.12 | 0.07 | 0.05 | 0.14 |
| *Alcoholic beverages subtotal* | 0.69 | 1.04 | 1.23 | 1.23 | 0.98 | 0.99 | 0.65 | 0.92 | 1.21 | 1.20 | 0.93 | 0.96 | 0.96 | 1.55 | 1.44 | 1.29 | 1.00 | 1.27 | 0.94 | 1.45 | 1.37 | 1.47 | 1.13 | 1.21 |
| *Beer and Cider | 0.32 | 0.45 | 0.44 | 0.40 | 0.26 | 0.37 | 0.17 | 0.24 | 0.26 | 0.30 | 0.18 | 0.23 | 0.33 | 0.62 | 0.49 | 0.43 | 0.27 | 0.43 | 0.34 | 0.49 | 0.38 | 0.32 | 0.18 | 0.37 |
| *Spirits | 0.19 | 0.34 | 0.29 | 0.35 | 0.23 | 0.27 | 0.22 | 0.32 | 0.54 | 0.47 | 0.27 | 0.36 | 0.28 | 0.47 | 0.39 | 0.32 | 0.26 | 0.35 | 0.40 | 0.59 | 0.40 | 0.41 | 0.28 | 0.44 |
| *Wine | 0.19 | 0.25 | 0.50 | 0.48 | 0.48 | 0.35 | 0.27 | 0.36 | 0.42 | 0.43 | 0.48 | 0.38 | 0.35 | 0.45 | 0.56 | 0.54 | 0.47 | 0.49 | 0.20 | 0.37 | 0.59 | 0.74 | 0.67 | 0.40 |
| Tobacco | 1.13 | 1.43 | 0.58 | 0.73 | 0.35 | 0.90 | 1.30 | 1.26 | 0.99 | 0.74 | 0.43 | 1.01 | 0.79 | 1.09 | 0.76 | 0.55 | 0.23 | 0.67 | 2.30 | 1.59 | 0.89 | 0.51 | 0.25 | 1.56 |
| *Clothing and footwear subtotal* | 0.29 | 0.62 | 0.46 | 0.43 | 0.46 | 0.44 | 0.49 | 0.67 | 0.59 | 0.64 | 0.55 | 0.59 | 0.58 | 0.59 | 0.60 | 0.57 | 0.53 | 0.57 | 0.65 | 0.62 | 0.85 | 0.71 | 0.60 | 0.67 |
| *Children's clothing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Adult clothing | 0.29 | 0.62 | 0.46 | 0.43 | 0.46 | 0.44 | 0.49 | 0.67 | 0.59 | 0.64 | 0.55 | 0.59 | 0.58 | 0.59 | 0.60 | 0.57 | 0.53 | 0.57 | 0.65 | 0.62 | 0.85 | 0.71 | 0.60 | 0.67 |

*(Continued)*

Table 10.8 (Continued) Tax incidence for main commodity groups by employment status and quintile, UK (%)

| Categories | Male-breadwinner | | | | | | Female-breadwinner | | | | | | Dual-earner | | | | | | No-employed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total |
| Housing, Water, Electricity, Gas Subtotal | 0.37 | 0.50 | 0.58 | 0.94 | 1.32 | 0.69 | 0.55 | 0.44 | 0.54 | 0.62 | 1.63 | 0.68 | 0.40 | 0.52 | 0.60 | 0.72 | 1.38 | 0.75 | 0.45 | 0.62 | 1.05 | 1.24 | 1.78 | 0.77 |
| *Housing | 0.19 | 0.37 | 0.48 | 0.83 | 1.24 | 0.57 | 0.35 | 0.29 | 0.40 | 0.49 | 1.54 | 0.53 | 0.19 | 0.38 | 0.48 | 0.63 | 1.31 | 0.63 | 0.24 | 0.44 | 0.88 | 1.11 | 1.69 | 0.59 |
| *Water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Electricity | 0.09 | 0.07 | 0.06 | 0.05 | 0.04 | 0.07 | 0.12 | 0.08 | 0.08 | 0.06 | 0.05 | 0.08 | 0.12 | 0.08 | 0.06 | 0.05 | 0.04 | 0.06 | 0.12 | 0.09 | 0.09 | 0.07 | 0.05 | 0.10 |
| *Gas | 0.08 | 0.06 | 0.05 | 0.05 | 0.03 | 0.06 | 0.08 | 0.07 | 0.07 | 0.06 | 0.04 | 0.07 | 0.09 | 0.06 | 0.05 | 0.04 | 0.03 | 0.05 | 0.10 | 0.08 | 0.08 | 0.06 | 0.04 | 0.08 |
| *Other (inc. sewerage) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fuel for HH use | 0.05 | 0.02 | 0.02 | 0.01 | 0.02 | 0.03 | 0.02 | 0.02 | 0.01 | 0.01 | 0.01 | 0.02 | 0.02 | 0.03 | 0.02 | 0.01 | 0.01 | 0.02 | 0.03 | 0.02 | 0.02 | 0.01 | 0.02 | 0.03 |
| Furniture, HH Equipment and Maintenance | 0.49 | 0.53 | 0.68 | 0.73 | 0.82 | 0.63 | 0.73 | 0.50 | 0.85 | 0.74 | 1.05 | 0.75 | 0.43 | 0.63 | 0.67 | 0.78 | 0.76 | 0.68 | 0.58 | 0.86 | 1.02 | 1.13 | 1.23 | 0.83 |
| Domestic and household services | 0.01 | 0.02 | 0.01 | 0.03 | 0.05 | 0.02 | 0.00 | 0.02 | 0.04 | 0.06 | 0.11 | 0.04 | 0.01 | 0.02 | 0.01 | 0.03 | 0.11 | 0.04 | 0.01 | 0.03 | 0.03 | 0.07 | 0.10 | 0.03 |
| Health | 0.05 | 0.08 | 0.05 | 0.07 | 0.06 | 0.06 | 0.03 | 0.07 | 0.18 | 0.15 | 0.06 | 0.10 | 0.05 | 0.08 | 0.06 | 0.10 | 0.07 | 0.07 | 0.07 | 0.07 | 0.21 | 0.17 | 0.15 | 0.11 |
| Transportation Subtotal | 1.43 | 1.30 | 1.58 | 1.73 | 1.94 | 1.57 | 0.84 | 1.31 | 1.31 | 1.71 | 1.60 | 1.30 | 1.31 | 1.35 | 1.59 | 1.48 | 1.80 | 1.53 | 1.05 | 1.23 | 1.09 | 2.01 | 2.05 | 1.29 |
| *Collective forms of transport | 0.28 | 0.17 | 0.14 | 0.21 | 0.15 | 0.20 | 0.22 | 0.16 | 0.15 | 0.22 | 0.12 | 0.18 | 0.17 | 0.20 | 0.14 | 0.15 | 0.14 | 0.16 | 0.27 | 0.09 | 0.06 | 0.15 | 0.06 | 0.16 |
| *Flights | 0.04 | 0.06 | 0.05 | 0.17 | 0.45 | 0.14 | 0.00 | 0.02 | 0.03 | 0.13 | 0.18 | 0.06 | 0.00 | 0.06 | 0.03 | 0.05 | 0.22 | 0.08 | 0.00 | 0.06 | 0.00 | 0.12 | 0.28 | 0.05 |
| *Private Transport | 1.11 | 1.07 | 1.39 | 1.35 | 1.34 | 1.23 | 0.62 | 1.13 | 1.13 | 1.35 | 1.30 | 1.06 | 1.14 | 1.08 | 1.42 | 1.28 | 1.44 | 1.29 | 0.78 | 1.08 | 1.04 | 1.74 | 1.72 | 1.07 |
| School transport | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fuel for transport | 2.97 | 3.07 | 2.81 | 2.47 | 1.75 | 2.67 | 2.63 | 2.68 | 2.54 | 2.65 | 2.08 | 2.55 | 4.14 | 3.32 | 3.27 | 2.68 | 2.30 | 3.05 | 2.47 | 2.54 | 2.90 | 2.57 | 1.94 | 2.52 |

*Table 10.8* (Continued)

| Categories | Male-breadwinner | | | | | | Female-breadwinner | | | | | | Dual-earner | | | | | | No-employed | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total | Q1 | Q2 | Q3 | Q4 | Q5 | Total |
| Communication | 0.57 | 0.49 | 0.32 | 0.30 | 0.22 | 0.40 | 0.56 | 0.51 | 0.39 | 0.40 | 0.30 | 0.45 | 0.49 | 0.46 | 0.39 | 0.31 | 0.23 | 0.36 | 0.51 | 0.45 | 0.33 | 0.31 | 0.23 | 0.42 |
| Recreation | 0.89 | 1.31 | 1.53 | 1.45 | 1.31 | 1.25 | 1.03 | 1.14 | 1.34 | 1.74 | 1.57 | 1.31 | 1.16 | 1.25 | 1.40 | 1.61 | 1.56 | 1.42 | 0.96 | 1.42 | 1.67 | 1.65 | 2.09 | 1.35 |
| Education | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *Personal care subtotal* | 0.33 | 0.32 | 0.35 | 0.29 | 0.22 | 0.30 | 0.27 | 0.33 | 0.33 | 0.40 | 0.26 | 0.32 | 0.31 | 0.30 | 0.30 | 0.32 | 0.25 | 0.30 | 0.34 | 0.33 | 0.34 | 0.36 | 0.25 | 0.33 |
| *Necessities | 0.09 | 0.10 | 0.09 | 0.08 | 0.05 | 0.08 | 0.11 | 0.12 | 0.13 | 0.10 | 0.06 | 0.11 | 0.15 | 0.11 | 0.10 | 0.10 | 0.07 | 0.10 | 0.13 | 0.12 | 0.12 | 0.09 | 0.05 | 0.12 |
| *Baby products | 0.09 | 0.06 | 0.05 | 0.05 | 0.02 | 0.06 | 0.04 | 0.01 | 0.01 | 0.01 | 0.00 | 0.02 | 0.04 | 0.03 | 0.02 | 0.02 | 0.01 | 0.02 | 0.07 | 0.03 | 0.01 | 0.01 | 0.00 | 0.04 |
| *Other | 0.14 | 0.16 | 0.20 | 0.16 | 0.14 | 0.16 | 0.12 | 0.21 | 0.19 | 0.29 | 0.19 | 0.19 | 0.13 | 0.16 | 0.18 | 0.20 | 0.18 | 0.18 | 0.14 | 0.18 | 0.21 | 0.25 | 0.19 | 0.18 |
| Gambling | 0.05 | 0.06 | 0.07 | 0.06 | 0.02 | 0.05 | 0.07 | 0.07 | 0.04 | 0.05 | 0.03 | 0.06 | 0.06 | 0.07 | 0.07 | 0.04 | 0.03 | 0.06 | 0.10 | 0.14 | 0.12 | 0.09 | 0.04 | 0.11 |
| Miscellaneous | 0.15 | 0.13 | 0.15 | 0.22 | 0.18 | 0.16 | 0.28 | 0.21 | 0.33 | 0.21 | 0.14 | 0.24 | 0.18 | 0.32 | 0.19 | 0.30 | 0.34 | 0.27 | 0.08 | 0.11 | 0.13 | 0.19 | 0.37 | 0.13 |
| TOTAL | 10.40 | 11.86 | 11.23 | 11.38 | 10.34 | 10.99 | 10.41 | 11.21 | 11.46 | 12.09 | 11.23 | 11.21 | 11.91 | 12.52 | 12.31 | 11.59 | 11.24 | 11.91 | 11.55 | 12.48 | 12.93 | 13.33 | 12.76 | 12.27 |
| Number of households | 160 | 177 | 194 | 259 | 381 | 1171 | 94 | 153 | 172 | 207 | 276 | 902 | 150 | 298 | 438 | 545 | 619 | 2051 | 341 | 299 | 208 | 173 | 142 | 1163 |

*Source*: Authors' calculations based on EFS 2005–06.
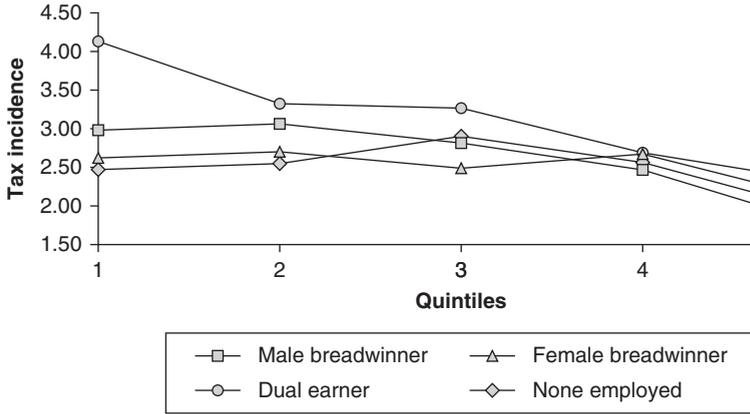
*Figure 10.7* Commodity incidence by employment status across quintiles – fuel for transport, UK.

*Source*: Authors' calculations based on EFS 2005–06.

earlier, perhaps owing to men commuting longer distances by car, while women are greater users of public transport (Hamilton *et al*. 2002). The difference is particularly striking in the lowest quintiles, which also have the highest incidence overall. Tax on fuel for transport is more than 2.5 per cent of total expenditure in the lowest quintile for all household types.

The highest incidence of tax on alcohol is on dual-earner households and those with no earner (see Figure 10.8). Alcohol tax has relatively low incidence overall at around 1 per cent of total expenditure.
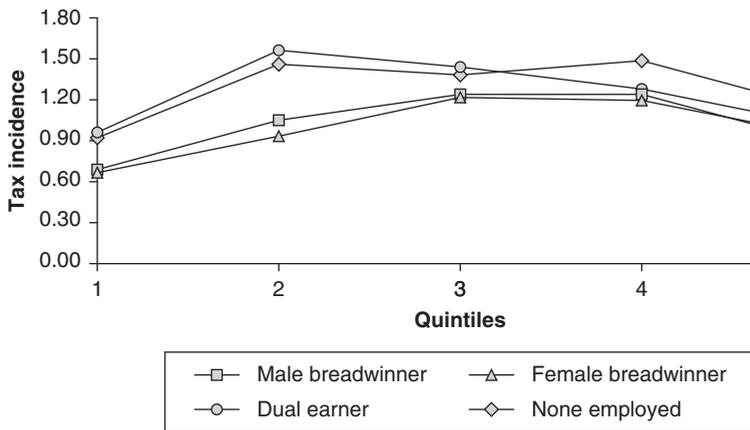


*Figure 10.8* Commodity incidence by employment status across quintiles – alcohol, UK.

*Source*: Authors' calculations based on EFS 2005–06.
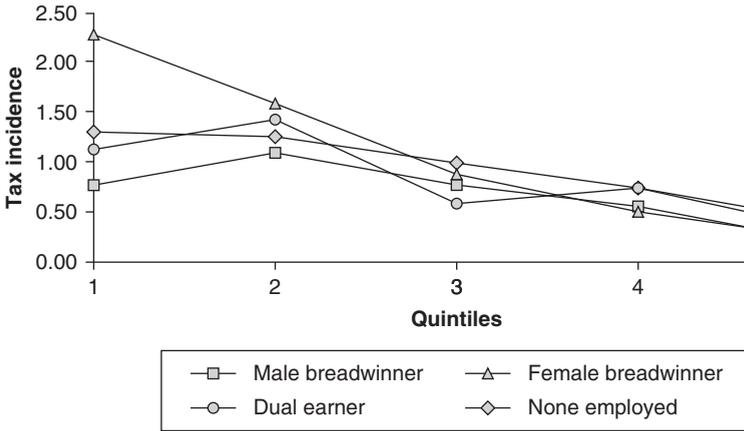
*Figure 10.9* Commodity incidence by employment status across quintiles – tobacco, UK.

*Source*: Authors' calculations based on EFS 2005–06.

Tobacco tax impacts particularly on households in which no one is employed and on poor female-breadwinner households. This is particularly striking in the lower two quintiles, where in these two categories there are many single parents. There is particular concern in the United Kingdom about smoking among young women, with girls having consistently higher rates of smoking than boys (Cancer Research UK 2009). Our figures show an average tobacco tax incidence of around 1 per cent. Given that only about 20 per cent of the population smokes, this means that the overall incidence of tobacco tax on households that do smoke is high.

The incidence of tax on adult clothing is highest on female-breadwinner households and lowest on dual-earner households, but the incidence overall of tax on clothing is fairly low (see Figure 10.10).

Domestic services and meals outside the house, which might have a role in enabling traditional gender roles to be challenged, have relatively low total incidence; less than 1 per cent for any household category (see Figure 10.11). The tax incidence of domestic services depends more on expenditure quintile, though incidence is higher on female-breadwinner households and on households with no earner (these may be retiree households employing home help). Meals out show no consistent pattern across household categories or expenditure quintiles, reflecting the heterogeneous reasons why people eat out (see Figure 10.12).

## Simulations of policy changes on indirect taxes

Table 10.9 on page 290 shows the simulated impacts by household employment categories and across expenditure quintiles of increasing fuel tax, of reducing the standard rate of VAT and of applying VAT standard rate to food, either all food or just basic food.[11]
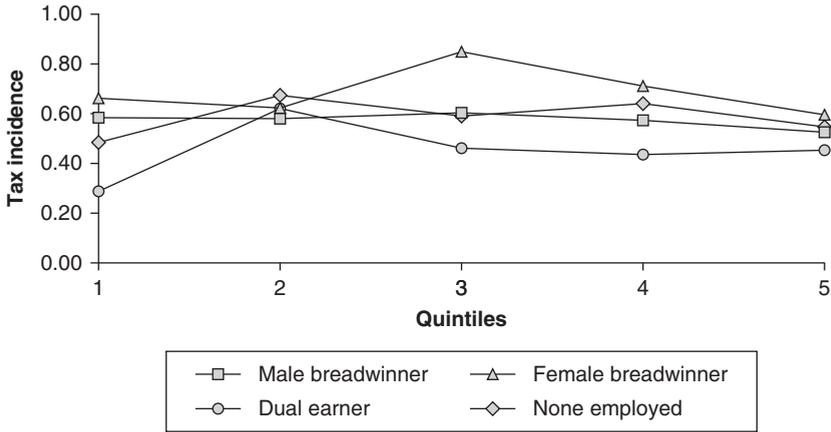
*Figure 10.10* Commodity incidence by employment status across quintiles – adult clothing, UK.

*Source:* Authors' calculations based on EFS 2005–06.
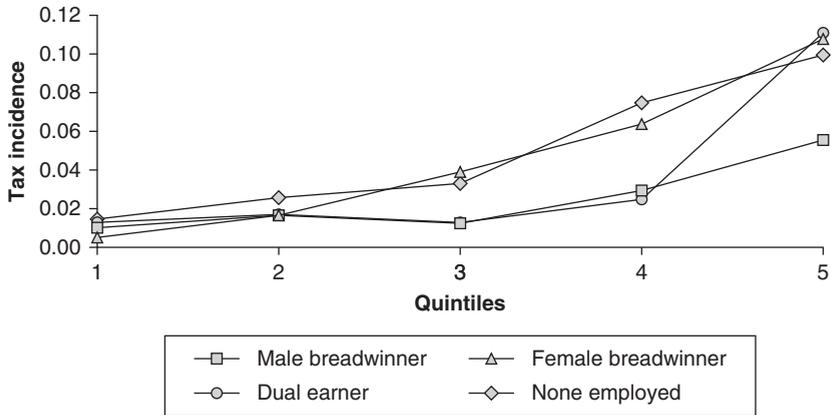


*Figure 10.11* Commodity incidence by employment status across quintiles – domestic services, UK.

*Source*: Authors' calculations based on EFS 2005–06.

One change that we considered was raising tax on fuel for transportation, which is higher in households with a man in employment. Long hours spent commuting inevitably restrict the time men can spend with their families. Reducing men's commuting times is therefore relevant to transforming gender roles. Figure 10.13 shows that an increase of 4.3 pence per litre (or kg) for all types of fuel would, within each quintile, impact more on households with a male earner, but would also impact most on households in the lowest quintile. Unless such a tax rise was spectacularly effective in changing behaviour, it would be a good source

*Figure 10.12* Commodity incidence by employment status across quintiles – meals out, UK.

*Source*: Authors' calculations based on EFS 2005–06.
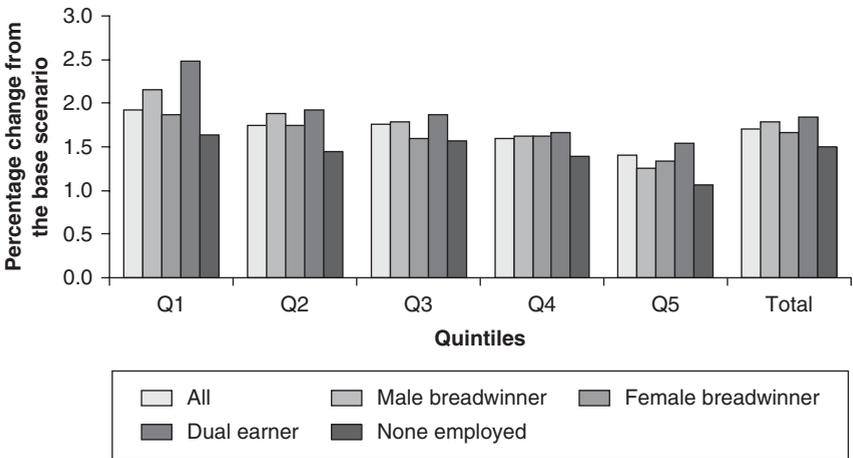


*Figure 10.13* Policy simulation: percentage change from base scenario – increasing fuel excise duty, UK.

*Source*: Authors' calculations based on EFS 2005–06.

of extra revenue, which could be spent, at least in part, on better public transport which by reducing congestion on roads might also impact on men's commuting times.

For comparison with other countries, we also considered removing the zero-rating of either all food or just basic food. These simulations, shown in Figure 10.14, demonstrate the importance of zero-rating food for poor households, as a standard rate applied to basic food (or to all food) would greatly increase the total

Table 10.9 Effects of changes in indirect tax rates on tax incidence by employment status and expenditure quintile, UK

| | Average tax incidence | Percentage change from the base scenario | | |
| --- | --- | --- | --- | --- |
| | Base scenario | Increasing fuel tax | Standard-rating basic food | Standard-rating all food |
| *All* | | | | |
| Quintile 1 | 10.74 | 1.92 | 17.06 | 20.40 |
| Quintile 2 | 11.99 | 1.74 | 11.68 | 14.11 |
| Quintile 3 | 11.96 | 1.76 | 9.54 | 11.69 |
| Quintile 4 | 11.74 | 1.60 | 7.97 | 9.83 |
| Quintile 5 | 11.23 | 1.40 | 5.60 | 6.86 |
| *Total* | 11.00 | 1.71 | 10.84 | 13.13 |
| *Male breadwinner* | | | | |
| Quintile 1 | 10.43 | 2.15 | 16.40 | 19.44 |
| Quintile 2 | 11.86 | 1.88 | 11.06 | 13.35 |
| Quintile 3 | 11.23 | 1.78 | 10.36 | 12.80 |
| Quintile 4 | 11.38 | 1.62 | 8.35 | 10.08 |
| Quintile 5 | 10.34 | 1.25 | 6.31 | 7.61 |
| *Total* | 11.20 | 1.79 | 11.12 | 13.37 |
| *Female breadwinner* | | | | |
| Quintile 1 | 10.41 | 1.86 | 16.06 | 19.60 |
| Quintile 2 | 11.21 | 1.74 | 12.57 | 15.62 |
| Quintile 3 | 11.41 | 1.60 | 9.47 | 11.72 |
| Quintile 4 | 12.09 | 1.62 | 7.71 | 9.51 |
| Quintile 5 | 11.23 | 1.33 | 5.47 | 6.65 |
| *Total* | 11.91 | 1.66 | 10.88 | 13.40 |
| *Dual earner* | | | | |
| Quintile 1 | 11.91 | 2.48 | 14.35 | 17.25 |
| Quintile 2 | 12.52 | 1.93 | 10.32 | 12.53 |
| Quintile 3 | 12.31 | 1.87 | 8.59 | 10.65 |
| Quintile 4 | 11.59 | 1.66 | 7.57 | 9.43 |
| Quintile 5 | 11.25 | 1.54 | 5.30 | 6.62 |
| *Total* | 12.28 | 1.85 | 8.79 | 10.80 |
| *None employed* | | | | |
| Quintile 1 | 11.55 | 1.63 | 18.18 | 21.37 |
| Quintile 2 | 12.48 | 1.44 | 13.37 | 15.82 |
| Quintile 3 | 12.94 | 1.56 | 11.09 | 13.06 |
| Quintile 4 | 13.31 | 1.39 | 8.74 | 10.69 |
| Quintile 5 | 12.78 | 1.07 | 5.99 | 6.98 |
| *Total* | 11.51 | 1.49 | 13.73 | 16.21 |
| Overall Annual Tax Receipts (£1000s) | 71,288 | 72,365 | 77,112 | 78,376 |
| Percentage change in revenues from policy | | 1.51 | 8.17 | 9.94 |

*Source*: Authors' calculations based on EFS 2005–06.

*Note*: Using quarterly weights from the EFS and extrapolating the sample to the whole population.
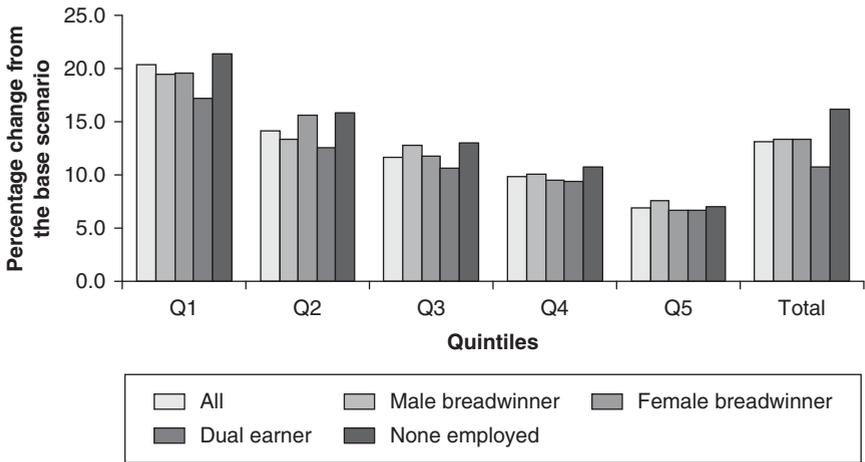
*Figure 10.14* Policy simulation: percentage change from base scenario – standard rating all food, UK.

*Source*: Authors' calculations based on EFS 2005–06.

incidence on poor households, especially those in which no one is employed, and far more than it would on higher quintiles.

We also conducted a policy simulation based on the stimulus package introduced in December 2008 that ran until January 2010 which reduced the standard VAT rate to 15 per cent while increasing (permanently) the excise duties on alcohol and tobacco. Table 10.10 and Figure 10.15 show that this package resulted in greater overall expenditure inequality, by favouring higher quintiles (who pay more VAT); however, within the lower two quintiles this change favours female-breadwinner households, presumably because they consume less of the goods on which tax rose. Given that putting money in the hands of the poor rather than the rich is recognized to be more effective in stimulating an economy, this measure (which reduced total revenue by almost 9 per cent) did nothing to foster gender equality or reduce inequalities, and was less effective than cutting taxes paid by those on lower incomes or increases in public spending would have been in stimulating the economy.

## Conclusion and policy recommendations

Policy to rectify gender inequalities via direct or indirect taxation can be of two broad types. Some attempt to make the distributional impact of such taxation fairer in order to reduce gender inequalities between and within households. Others aim to produce behavioural change in order to transform existing gender inequalities.

*Table 10.10* Effects of government's 2008 stimulus package on tax incidence by employ-ment status and expenditure quintile, UK

| | Average tax incidence | Percentage change from the base scenario | | | |
|---|---|---|---|---|---|
| | Base scenario | Updating VAT rate to 15% | Increasing alcohol duty | Increasing tobacco duty | Full stimulus package |
| *All* | | | | | |
| Quintile 1 | 10.74 | −7.21 | 0.31 | 0.35 | −6.57 |
| Quintile 2 | 11.99 | −7.54 | 0.44 | 0.29 | −6.83 |
| Quintile 3 | 11.96 | −7.97 | 0.48 | 0.17 | −7.33 |
| Quintile 4 | 11.74 | −8.34 | 0.47 | 0.14 | −7.74 |
| Quintile 5 | 11.23 | −8.93 | 0.40 | 0.07 | −8.47 |
| *Total* | 11.00 | −7.85 | 0.38 | 0.21 | −7.26 |
| *Male breadwinner* | | | | | |
| Quintile 1 | 10.43 | −7.25 | 0.28 | 0.28 | −6.71 |
| Quintile 2 | 11.86 | −7.49 | 0.34 | 0.31 | −6.85 |
| Quintile 3 | 11.23 | −8.12 | 0.46 | 0.13 | −7.53 |
| Quintile 4 | 11.38 | −8.11 | 0.47 | 0.16 | −7.48 |
| Quintile 5 | 10.34 | −8.73 | 0.43 | 0.09 | −8.22 |
| *Total* | 11.20 | −8.00 | 0.36 | 0.23 | −7.41 |
| *Female breadwinner* | | | | | |
| Quintile 1 | 10.41 | −7.51 | 0.27 | 0.32 | −6.93 |
| Quintile 2 | 11.21 | −7.75 | 0.35 | 0.29 | −7.11 |
| Quintile 3 | 11.41 | −8.04 | 0.43 | 0.22 | −7.40 |
| Quintile 4 | 12.09 | −8.21 | 0.42 | 0.16 | −7.64 |
| Quintile 5 | 11.23 | −8.96 | 0.37 | 0.10 | −8.49 |
| *Total* | 11.91 | −8.00 | 0.46 | 0.14 | −7.41 |
| *Dual earner* | | | | | |
| Quintile 1 | 11.91 | −7.16 | 0.34 | 0.17 | −6.65 |
| Quintile 2 | 12.52 | −7.44 | 0.51 | 0.22 | −6.72 |
| Quintile 3 | 12.31 | −7.85 | 0.50 | 0.16 | −7.20 |
| Quintile 4 | 11.59 | −8.36 | 0.48 | 0.12 | −7.76 |
| Quintile 5 | 11.25 | −8.90 | 0.39 | 0.05 | −8.46 |
| *Total* | 12.28 | −7.75 | 0.40 | 0.33 | −7.04 |
| *None employed* | | | | | |
| Quintile 1 | 11.55 | −6.98 | 0.32 | 0.51 | −6.18 |
| Quintile 2 | 12.48 | −7.68 | 0.45 | 0.33 | −6.92 |
| Quintile 3 | 12.94 | −8.23 | 0.46 | 0.18 | −7.61 |
| Quintile 4 | 13.31 | −8.67 | 0.50 | 0.10 | −8.08 |
| Quintile 5 | 12.78 | −9.41 | 0.42 | 0.05 | −8.95 |
| *Total* | 11.51 | −7.92 | 0.42 | 0.22 | −7.30 |

*Source*: Authors' calculations based on EFS 2005–06.

Unfortunately in some cases these two aims are in conflict. Tax changes that create behavioural incentives, such as labour-market engagement, which is cur-rently disproportionately carried out by men, can be expected to have a direct dis-tributional impact that favours men. But by making employment more worthwhile

*Figure 10.15* Policy simulation: percentage change from base scenario – full stimulus package, UK.

*Source:* Authors' calculations based on EFS 2005–06.

for women, such tax changes may help women break out of existing gender roles and thus be an important step in transforming existing gender inequalities.

This dilemma disappears when we consider tax changes to create incentives for activities currently carried out more by women, such as care-giving, or to discourage harmful social or environmental behaviour in which men engage more than women, such as car driving. The current distributional effect of such tax changes should favour women. This suggests that to remove such dilemmas, transformational policies might be better targeted at changing the behaviour of men than that of women.

This suggests that taxation alone may not be the best tool to achieve these goals, but should be combined with other policy changes, discussed below. Nevertheless, changes to some features of the UK tax system may still be a useful contribution to such policy changes.

### Personal income tax

In order to create a personal income tax system in the United Kingdom that provides fiscal autonomy to both members of couples, that is, truly independent taxation for individuals, the system of tax credits must be revised. Tax credits could be removed from the tax system and transferred to the benefit system. However, as long as those credits/benefits are assessed on a household basis (and also to some extent means-tested), they carry employment disincentives for second earners and thus may also reinforce an unequal division of care-giving responsibilities. Non-targeted (non-means-tested) child benefit would therefore be more appropriate. However, raising this to a level sufficient to compensate the poorest families for the loss of tax credits would require considerably greater expenditure.

To remove the implicit gender biases of the current tax system, it would therefore be better to have a more progressive income tax system that raises sufficient revenue to permit all benefits and allowances to be provided on a non-means-tested basis. Removing household means-testing would abolish the disincentive problems it causes for second earners; funding it by more progressive taxation would allow the overall system to remain adequately redistributive. Such a system would involve substantial redistribution among those with higher incomes, towards those who would now qualify for benefits and allowances (parents, the disabled, etc.), along with considerable spending levels and higher tax for all better-off individuals. It would therefore take a considerable change in attitudes to make this politically feasible. However, as long as the gender pay gap remains, a more progressive income tax system would also reduce gender inequalities.

### Indirect taxation

The United Kingdom must have one of the world's few expenditure tax systems with an explicit gender content. VAT was removed from female sanitary products because it was thought unfair to tax these gender-specific necessities. Expenditure taxes also have some hidden gender biases, but these largely come through the presence of children. Because many products consumed by children are zero-rated for VAT and children are counted in our analysis equivalently to adults, the presence of children reduces the incidence of VAT. Indirectly this reduces the incidence of VAT on households with women members since they are somewhat more likely than men to live with children, though by employment status incidence is lowest on male-breadwinner households, who have the most children.

For indirect taxes, we have only been able to consider inter-household distributional aspects of gender inequality. Like all indirect tax systems, the UK system is regressive with respect to income, but the regressivity of VAT is reduced because most foods and children's clothing are zero-rated. For this reason, zero-rating 'merit' basic goods such as food and children's clothing should remain, but zero rating should not be extended to sugar products and confectionery, the consumption of which is highest among poor households and those with more women and children. Measures other than removing the tax on these items, such as reforming tax credits perhaps, should be used to boost the income of these households and encourage healthier eating.

The above simulations showed that, without accounting for possible behavioural change, increasing the fuel levy would have the greatest impact on households in which there is a male earner. A gender-impact analysis therefore adds additional support to environmental and other arguments for an increase in fuel taxes. Despite inevitable protest, the government should reinstate the automatic system by which fuel tax rose annually, provided this is supported by extensive improvements to the public transport system, which women use far more than men (Hamilton *et al.* 2002). Policies should also be introduced to reduce the extent of long-distance commuting in the United Kingdom, which must restrict men's ability to participate in caring for their children.

This would be a case of using the indirect taxation system to effect a change in the behaviour of men. However, the increase would also impact disproportionately on lower quintiles. If an increase in fuel levy proved ineffective in discouraging car use, it would squeeze the budgets of some of the poorest households and might reduce the well-being of all household members, including women and children.

The United Kingdom is unique among the countries looked at in this volume in that tobacco tax has a higher incidence on the households in which women predominate, poorer female-breadwinner households and those with no one employed, which include many single mothers. We do not think an appropriate response to this would be to lower tobacco taxes; indeed, price has been shown to be effective in cutting tobacco use so tax should continue to be raised, provided other measures are taken to boost the income of these households. Understanding how such households would respond to increases in tobacco tax rates is needed before drawing further conclusions, though obviously other methods of discouraging tobacco consumption, especially by mothers, should be tried. Our analysis of the impact of tobacco tax suggests that anti-smoking programmes need to be better targeted on members of such households, particularly those with children.

The incidence of alcohol duties is highest in middle quintiles, suggesting that there may be a degree to which consumption responds to prices, and is slightly higher on households with a majority of men (Santos 2009). The United Kingdom has a well-known problem with alcohol abuse, especially among the young. To combat alcoholism, the Chief Medical Officer has suggested a minimum price per unit at which alcohol can be sold (Donaldson 2009). This suggests that the present policy of raising alcohol taxes each year should be continued, together with other programmes to discourage consumption.

In the United Kingdom at least, policies other than the tax system could prove more effective in transforming gender roles and outcomes, particularly in conjunction with tax reforms. We suggest that improvements in public transport and in programmes to reduce alcohol abuse and female smoking should be adopted to reinforce any tax changes. Similarly, improving child-care affordability and availability, reducing gender wage gaps, and improving the pay and conditions of part-time jobs could be effective in reducing the labour market disincentives that tax credits provide. Deeply entrenched factors affecting gender roles with respect to the labour market and caregiving responsibilities cannot be fully counteracted by the tax system alone.

Indirectly, however, tax reforms could help. As was argued at the beginning of this chapter, the overall level of government revenue and spending is itself a gender issue. An important step in achieving a more gender equitable society is therefore a more progressive tax system that would fairly raise greater revenues to fund public services, such as high-quality child and elder care, well-funded family-friendly policies (e.g., well-paid parental leave and limited working hours), good quality education and training, efficient and affordable public transport and effective equal opportunities monitoring, needed to support the creation of a more gender-equal labour market and remove wider gender inequalities in society.

## Notes

1  The Conservative government cut the top income tax rates from 83 per cent to 40 per cent (for earnings) in 1980 and abolished the starting rate of 25 per cent. The starting rate was re-introduced in 1992 at 20 per cent and then cut to 10 per cent (except for savings) by the New Labour government in 1999 and abolished in 2008.
2  With the exception of a married couple's allowance for couples in which one partner was born before 1935.
3  Local taxation ('council tax') is charged on housing and despite rebates available to low-income families is highly regressive, with the poorest quintile paying about 5 per cent of their gross income and the highest only 1.7 per cent. Only the lowest quintile pays more in local than in national direct taxation.
4  Employers pay NICs for each employee who earns over the lower threshold, at a rate of 12.8 per cent. The self-employed pay a fixed amount of NICs plus a percentage of their taxable profits.
5  Median gross household income of £23,036 (or approximately US$37320, according to the FT quote on the 27th August 2009, 10.00 GMT) per year is taken from the Family Resources Survey 2006–7 (DWP 2008).
6  We assume that all earners are employees rather than self-employed, because the self-employed and employees pay different rates of national insurance, though the difference on total tax incidence is small.
7  We have not calculated the effects of the child-care element of WTC which partially offsets child-care costs, since it would be misleading to count such subsidies but not the costs that give rise to them. The main effect of the child-care element is likely to be behavioural: reducing the employment disincentive effect for second earners who need paid child-care to be able to take employment, and increasing the uptake of child care. Capturing such behavioural effects would require a different form of simulation.
8  The most important exempt goods included in this analysis do not include substantial VAT-rated goods or services in their production process (Mahajan 2006) so will be treated as zero-rated.
9  There is some evidence of sampling bias (Foster 1996). For reasons why we do not correct for under-reporting, see Santos (2009).
10  In the UK all government-sponsored surveys have replaced the concept of household head with a concept of a household reference person. We use this to define headship.
11  Aggregate tax incidence was estimated by applying the policy rates for each household, then using the EFS quarterly weights to extrapolate to the whole population. The base scenario raises an estimated £80 billion (about US$43.5 billion), far lower than the official estimates of £121 billion (US$65.8 billion) for 2006 (HM Treasury 2007, exchange rate is the average 2006 rate, US$1 = £0.5434). This discrepancy may be due to under-reporting as well as the exclusion of some commodities from our analysis.

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# 11 Conclusion and policy recommendations

*Imraan Valodia*

There is now a growing analytical literature that highlights the importance of considering gender issues in taxation (e.g., Apps and Rees 1988, 2004; Hartzenberg 1996; Nelson 1996; Stotsky 1997; Bargain *et al*. 2006), reflecting the growing recognition of women as household income earners and economic decision-makers. To date, however, the tax policy literature has paid very little, if any attention to the gender impacts of tax policies. To address this gap, this chapter outlines a set of principles for considering the gender implications of tax policies and presents some key policy messages that emerge from the research presented in this volume.

Tax policy, like all economic policy, has evolved over time. It has also tended over particular periods to converge across countries around the same set of broad considerations, irrespective of national or political context. Thus, E.R. Schlesinger, in one of the early surveys of tax policy issues, noted that

> It is extremely sobering to recognize that very often the recommendations of the individual expert writing about different developed, semi-developed and under-developed countries tend to bear much closer resemblance to one another than do the views of different experts dealing with the same country.
>
> (1965: 444)

Tax policy-making is a complex process and is usually shaped by a number of interests and factors, all of which may themselves frequently change. As Bahl and Bird have pointed out: 'tax policy is usually heavily shaped by past decisions and frequently overtaken by current events. Economic, administrative, political, and social realities have always shaped tax policy decisions and constrained what could be done' (2008: 283).

This presents a number of challenges for drawing out the policy messages that emerge from the studies in this volume, including the need to couch the message within the policy parameters of the current period: the need to address the political and economic realities of the day; and at the same time the need not to be too constrained by any prevailing policy mindsets and consensus. It is important also to take account of the great diversity across the countries studied.

The key objective of tax policy is of course to raise sufficient levels of revenue to fund government's desired expenditure. The ability to collect sufficient revenues to fund public expenditure is fundamentally important for building a capable state and for maintaining or enhancing the legitimacy of that state. As highlighted by Bahl and Bird (2008), the failure to mobilize sufficient resources constrains governments' ability to provide and improve necessary public services – a critical issue for gender equality. Elson (2006) has shown that countries that are unable to raise sufficient revenues are likely to under-provide social services, thereby increasing the burden of unpaid care and social provision shouldered by women. Higher tax revenues enable governments to spend more on social programmes. These tend to have positive gender outcomes because women gain from such expenditure in a number of ways. Government-provided social services, especially in education and health, also actively benefit women in terms of employment, since large numbers of women are employed in the provision of such services. Moreover, the provision of public services such as health and public transport, which are used more by women and low-income groups, tends also to favour women. Finally, the provision of transfer payments to low-income households tends to favour women, who tend to be clustered in low-income groups. Thus, on gender equality grounds, as on many others, policies that generate sufficient revenues are to be encouraged and supported.

The objective of equity, which featured prominently in tax policies throughout the world up until the mid-1970s, reflected the consensus up until then that tax policy is an important instrument to redistribute income. Tax policies were seen as a powerful means of mitigating income inequality, with high tax rates on wealthy groups, sometimes with marginal tax rates up to 70 per cent, justified even when additional revenues were not needed (Goode 1993).

In recent times, the World Bank and the International Monetary Fund (IMF) along with other mainstream economic policy organizations and most governments, have tended to focus less on equity and progressivity in tax policies (see Bird and Zolt 2005), and more on efficiency and ease of tax administration. This is partly the result of the current focus on promoting market-based, supply-side economic reforms and the liberalization of trade and capital mobility, both of which are regarded as key to economic growth. In much of the developing world, the problem of weak state capacity has also contributed to a reluctance to use the tax system for redistributive purposes.

This is not to suggest that policy-makers have not been concerned about the growing income inequality of recent years or about the poverty and equity implications of economic policies. There is certainly a concern among most policy-makers that tax policies should not hurt the poor. However, some public finance analysts (e.g., Shah 2005) have shifted away from the view that tax policy *per se* should be concerned principally with equity and poverty reduction in favour of the view that distributional concerns are better dealt with through transfers and other programmes on the expenditure side of the budget. Consequently these public finance analysts argue that tax policies should focus less on redistributing income from the rich to the poor and more on raising revenue in a manner that

broadens the tax base and improves and simplifies tax administration and promotes compliance.

The focus of tax policy on resource mobilization, tax efficiency and administration is important for gender equality goals. As noted earlier, tax revenue creates the possibility for state expenditure and the provision of public services, so important for promoting a gender equitable society. However, an important message emerging from the studies presented here is that policy-makers need also to consider how taxes and tax policies *per se* impact on gender relations, the degree to which tax policies may be reinforcing existing gender inequalities and the extent to which tax policies may assist in transforming these gender inequalities.

As pointed out in Chapter 1, all social relations are 'bearers' of gender in that they reflect the social norms that ascribe different roles, responsibilities, rights and obligations to males and females in households, markets and organizations. Gender norms underpin differences between males and females in work and employment, property rights, incomes and consumption, all of which in turn interact with the tax system. The principles outlined in the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) state clearly that tax policies must take account of equity in taxation. CEDAW also requires that the concept of equity in taxation move beyond a focus strictly on formal equity (that everyone should be treated in the same manner) to a more substantive concept of equity that recognizes the need to *transform* traditional gendered roles in society that are presently inequitable.

For policy discussions, this framework suggests that policy-makers should adopt more powerful and transformative policy evaluation criteria than those used by standard welfare economics, that is, that only those policy reforms that make some persons or groups better off without making other persons or groups worse off are economically desirable. Drawing on Himmelweit (2002), such a transformative and gender-aware tax policy evaluation matrix would be based on the following four principles.

First, in addition to the standard concerns about the distributional impacts of tax policies on income groups and other forms of social stratification, the distributional impacts between women and men (and girls and boys) need to be carefully evaluated. Policy-makers need to be aware of the extent to which tax policies, such as the tax treatment of income derived from jointly owned assets or the tax rules for child allowances, have a differential effect on women and men and the degree to which these measures reinforce or overcome gender inequalities.

Second, policy-makers should consider the impact of taxation policies and tax reforms on both paid and unpaid work, including unpaid care work, and the interdependence between these two spheres of the economy. For example, provisions in personal income tax (PIT) systems such as higher marginal taxes on secondary incomes constitute a disincentive for married women to participate in paid employment while encouraging them to 'specialize' in or carry a disproportionate burden of unpaid work relative to men. Other features in tax systems, such as the VAT on 'care' services, may also alter the distribution of paid and unpaid work, and thus policy-makers need to be aware of the possible effect of these tax policies on

the rewards to people whose work is differentially distributed across these spheres of the economy. Evaluating the impact of tax policies on both paid and unpaid work may require looking at the costs and benefits, in terms of both money and time, that accrue to women and men.

Third, policy-makers need to be aware of the impact of tax policies both among households and within households. Thus, in addition to impacts on the race, spatial or income profile of households, the impact of tax policies on different gendered household types – dual-earner households, single-parent households, female-breadwinner households, multiple-generation households, households living on savings, pensions or some form of social security, same-sex partnership households, among others – needs to be carefully assessed. For example, policy-makers need to be aware of how systems of individual filing of PIT affect the total taxes paid by these different household types. They need also to consider how tax policies impact on women and men *within* these households and the degree to which gender inequalities within the household are mitigated or reinforced by taxation policy. Policy-makers should be aware not only that increasing VAT on children's clothing may reduce the disposable income of women more than that of men, but that such action, by reducing women's disposable incomes, may impact negatively on women's power to influence household decision-making, including in areas such as education and family nutrition.

Fourth, policy-makers need to consider that tax policies affect people differently over their life cycle. This is an important gender issue because women, more so than men, take on many different roles and live in different situations and households over their lives. Tax policies should take account of these transitions in roles and household types. For example, as demonstrated by Apps and Rees (2005), in many developed countries, women's labour force participation is higher before they have children, but decreases after the birth of the first child. This is less so for men. Unless tax policies account for these gendered role changes, taxes can have the effect of reinforcing gender inequalities and gendered social norms. Thus, the presence of children in combination with the tax treatment of the household's second earner in systems that tax the household's joint income, may lead to a further fall in women's labour force participation. Another example of this is that a woman's poverty in retirement can be caused by the (unequal) tax treatment of her husband's deceased estate, which combined with her care-giving responsibilities in her previous households, may result in inadequate provision for her future. It is therefore important that tax policies take a lifetime perspective on the impact of taxation.

Having outlined a set of principles for evaluating tax policy in a gender-sensitive framework, it is also important to note some limitations of tax policy measures to achieve gender equality and to highlight some caveats in interpreting the findings presented in this volume.

First, as mentioned earlier, there is a view among some public finance economists that the tax system should be designed so as to raise maximum revenue for public expenditure, which can then be channelled into social protection, safety nets, public infrastructure and public services and programmes that meet the

needs of the poor and other disadvantaged groups. As we have argued, raising additional revenues for expenditures on social protection, safety nets and public services does have the potential to achieve substantial gender-equality outcomes. However, it is important to recognize that very often expenditure programmes do not reach the poor and other targeted groups. Moreover, these expenditure programmes tend to target households, not individuals. Where tax systems place an undue burden on poor women and other disadvantaged groups, it is by no means certain that expenditure programmes can successfully correct these burdens.

Second, as is highlighted in many of the country case studies, a large portion of women's paid work in developing countries occurs either in the informal economy or in formal sector occupations where earned incomes are often well below the income tax threshold. In these developing country contexts, the majority of women fall outside the personal income tax net. Using tax allowances in these contexts to achieve some social goals, for example, by providing allowances to socialize child-care costs, impacts only on the small proportion of women that fall inside the tax net. In such cases removing tax deductions for financially dependent adults and children and targeting them through the expenditure side of the budget may be more effective. Tax policies therefore need to be judged in conjunction with and complemented by other policy instruments, especially expenditure policies, and taking income and employment distribution and levels into account. In short, there is a lot that tax policy can do to promote greater gender equality but tax policy is but one of a set of policy instruments available and, to be most effective, it should be considered together with expenditure policy.

While the chapters in this volume have generated a comprehensive and detailed set of research findings, some caution must be exercised in drawing out the policy issues and recommendations of the various studies undertaken. Policy-makers are often concerned with both the distributional and the potential behavioural impacts of taxation. While the studies here have certainly explored some behavioural dimensions of taxation (e.g., PIT and labour supply decisions), the emphasis of the research, particularly the incidence analyses of indirect taxes, has been on the distributional dimensions. None of the studies has modelled behavioural changes. Tax policy changes most often do impact on behaviour, so any policy recommendations flowing from the country studies need carefully to consider their behavioural implications.

## Policy implications of the research findings

The principles outlined above for promoting gender-equitable tax policies provide the framework in which to take up some of the policy issues that flow from the country findings.

In order to rectify gender inequalities in the tax system, policy-makers will have two main policy objectives. The first is to improve the distributional impact of the tax system by reducing the gender inequalities it fosters among and within households. The second is to use the tax system to induce behavioural changes in order to transform existing gender inequalities. These distributional and behavioural

goals may in some cases be in conflict, and in others may reinforce each other. For example, personal income tax policies that promote paid employment, which is currently disproportionately done by men, will have a current distributional impact that favours men. However, changes in deductions and exemptions that make employment more attractive for women can have the long-term effect of challenging and potentially transforming existing gender norms and inequalities. On the other hand, VAT reforms that lower the price of merit goods or activities that are currently disproportionately done by women, such as care-giving activities, or that increase the price of luxury goods disproportionately consumed by men, could both improve the gender distribution of tax policies and potentially transform existing gender inequalities.

This suggests two important lessons for policy-makers. First, as suggested earlier, tax policies need to be combined with other policy instruments. Second, and importantly, tax policies that can challenge and potentially transform existing gender inequalities need to be targeted to both women and men.

## Personal income taxes

As demonstrated in the country case studies, personal income taxes represent an important source of revenue for developing countries. PIT can be enhanced in many ways, and there are several design features which can be introduced to render PIT more gender aware.

All of the PIT systems studied in this volume have progressive rate structures and are all based on individual filing. As discussed in Chapter 2, three cases of explicit gender bias are evident in the countries studied. In Argentina, where income is earned on jointly owned assets, the tax code allocates this income to the husband by default, and a female taxpayer would be allocated the income only under exceptional circumstances. Although the tax impact of this provision is to decrease the taxes paid by the female taxpayer, the tax system is operating to reinforce existing gender inequalities in the allocation and control of income earned jointly by household members. In Morocco, the tax code defines dependants to include a male taxpayer's wife. A female taxpayer's husband and children are, however, not defined as dependants, and she cannot claim a dependant's tax allowance unless she can provide evidence that her husband and children are financially dependent on her.

In both these countries, the tax legislation is clearly in contravention of CEDAW, to which these countries are signatories and therefore legislative amendments are necessary to correct these explicit biases.

The third case, India, presents an interesting example of positive explicit gender bias, where the tax threshold for women is higher than that for men. This tax measure was introduced specifically to promote gender equality. There is unfortunately very little evidence to suggest that this measure has effectively improved women's position in India. In any event, it will have impacted on only a very small proportion of Indian women – those inside and on the margins of the income tax net – so any positive impacts are likely to have been minimal. The efficacy of this measure is open to question and without evidence to the contrary,

higher income tax thresholds for women cannot be recommended to rectify gender inequality.

The country studies have all uncovered implicit biases in the PIT systems in their countries. These are mainly the result of the nature and structure of exemptions and deductions provided by the particular tax regime, and the manner in which these relate to the distribution of employment and income. In many of the countries, for example, contributions to pension funds attract generous tax benefits. Since men tend to be employed disproportionately in the formal sector and earn higher incomes, men disproportionately benefit from these allowances. Because they differ from country to country, the reforms necessary to address these implicit biases can be dealt with only on a country-specific basis. As a broad guideline, however, the evidence from the country studies suggests that policymakers should review exemptions and deductions in PIT to ensure that they do not reinforce existing gender inequalities. Since these biases are linked to gender differences in employment and income opportunities, policies that promote decent work for women and improve women's incomes would go some way towards addressing these inequalities.

The issue of allowances for children and financially dependent adults is especially important given that women bear a disproportionate burden of care provision in the household. The countries studied in this volume take different approaches to this issue. Argentina, Ghana and Morocco all make provisions for dependent children and financially dependent spouses. India, Mexico, South Africa and Uganda make no provisions for non-earning spouses and other financially dependent adults, nor for dependent children in the tax system. Mexico and South Africa do have programmes on the expenditure side of the budget to support the costs of child care. The United Kingdom (UK) system of means-tested support for children and child care, while formally within the tax system, is in practice indistinguishable from an expenditure-side programme of child support.

There are a number of points to be emphasized regarding tax allowances for children and financially dependent adults. First, clearly the system in Morocco, which allocates dependant allowances automatically to a male taxpayer but requires women to prove that they have dependants, is biased and requires reform. Where such allowances do exist, they should apply to all taxpayers on equal terms and the tax authorities need to find an equitable means of allocating such allowances in dual-income households to ensure that gender inequalities are not reinforced. They also need to consider whether allowances for financially dependent members of household who contribute unpaid labour, usually women, should continue, since these allowances favour male-breadwinner households that benefit from such unpaid labour over dual-earner households. In this case, the allowance is effectively a payment for unpaid labour that goes not to the worker herself but to her spouse and results in a disincentive for her to enter paid employment.

Second, in some cases where most women and poor households are inside the income tax net, such allowances can have positive gender-equality outcomes. However they will still exclude non-taxpayers and are likely to be worth more to better-off households and therefore less effective than using directly targeted

expenditures. The only exception is a system of refundable tax credits as in the UK which is highly redistributive towards both poorer households and women. However, the UK Child and Working Tax Credit system, as noted above, is in practice just a form of expenditure under another name.

Third, the case of South Africa, where all dependant allowances have been eliminated and child support grants introduced, shows that in those contexts where most women fall outside the income tax net, it may be more appropriate to deal with care provision on the expenditure side of the budget. Given that tax allowances will not reach most low-income households, the provision of grants or subsidies is likely to be a more effective mechanism than a child and dependant care allowance in the tax system.

However, as discussed in Chapter 2 and exemplified by the UK system, where such tax credits, grants or subsidies are means tested at the household level, they create disincentives, especially for low income earners, who would otherwise fall outside the income threshold, but now find their earnings result in lower subsidies to their households (because the grant or subsidy is means-tested). This impacts particularly heavily on women who are more likely to have low earnings, creating a disincentive for them to seek paid work, thereby reinforcing gender inequalities.

Fourth, in a number of cases, including Mexico, South Africa and the UK, child support payments are made to the care-giver rather than to the main income earner in the household. This is an improvement in cases where there is clearly a sole/main care-giver, but these systems should also avoid enshrining the idea that households need to have a division of labour that involves creating such a role, as current systems do.

Fifth, in many instances, the real value of the tax allowances has been significantly reduced over time so that there is often a large gap between the true costs of child and dependant care and the child and dependant tax allowances. Where these allowances are paid, it is important that the allowances are adjusted regularly so they bear some relationship to the actual costs of child and dependant care.

Given these various considerations, it is difficult to make an unequivocal recommendation about whether or not allowances for children and financially dependent adults should or should not feature in the tax system, though in general it seems that dealing with the costs of children through the expenditure system can reach poorer households more effectively and equitably and that tax allowances for financially dependent spouses may have particularly deleterious effects on gender relations. The particular choice that governments make on this will depend on a range of local factors including the administrative capacity of the tax authority, the level of economic development and the income and earnings distribution within the population. Each country will have to resolve these issues being mindful of the trade-offs involved. Where such allowances do feature in individual filing systems, the tax authorities will need to find ways of equitably distributing these allowances between taxpayers in households with more than one taxpayer.

The simulations done in each country for the PIT have explored the issues of horizontal and vertical equity at the household level. The findings suggest that,

for systems of individual filing, it is very difficult for horizontal equity to be achieved at the household level. Households that may be deemed similar in terms of need, but which have different numbers of income earners, pay different amounts in PIT. Single-income households tend across all the countries to bear a higher PIT incidence than do dual-income households. These differences occur because, under single-filing systems, dual-income households benefit twice from the tax threshold and possibly from other tax allowances and credits, and move into higher tax brackets only at higher levels of household income. Systems of joint filing would overcome this inequity with respect to household money income but would fail to take into account the benefits in kind provided by financially dependent spouses doing unpaid work in male-breadwinner households (or conversely the extra costs of dual-earner households of having to provide for those services in other ways). Joint filing also provides labour market disincentives to second earners whose initial income is taxed at their spouse's marginal rate. Thus, joint filing introduces a number of other gender inequalities. Further, joint filing is likely to reinforce existing intra-household gender inequalities. Although none of the studies have explicitly explored joint-filing systems, there are thus good reasons to believe that single filing is preferable on gender equality grounds.

The Ghana, Uganda and UK case studies raise the importance of fiscal drag as a gender-related issue. In a relatively high-inflation environment, where tax thresholds are not indexed so that the values are automatically adjusted for inflation, women, because they tend to be concentrated in low income brackets, are increasingly drawn into the tax net, even while their real incomes are at levels at which they would have previously been excluded. Furthermore, as discussed above, tax allowances for child care are often eroded by inflation. Policy-makers should review these thresholds and allowances regularly or consider the introduction of automatic inflation indexing.

## Indirect taxes: VAT, excises and fuel taxes

Consistent with international trends, indirect taxes and especially VAT are an important and increasing source of government revenues for the countries studied in this volume. Although it is not validated by many recent empirical studies, there is a popular perception that indirect taxes, and especially the VAT, may be regressive and may place an undue burden on vulnerable households. Owing to the gendered nature of expenditure, indirect taxes such as VAT could also contain implicit gender biases.

The findings in this research show that the overall indirect tax incidence, with respect to expenditure, falls most heavily on households in high-income quintiles in Uganda, Mexico and Morocco; on middle-income quintiles in South Africa and the United Kingdom; and is U-shaped in Ghana (i.e., falls on the richest and poorest households). In Argentina, overall indirect tax incidence is proportional. In India, the lowest income quintile has the higher indirect tax incidence. Though more nuanced, the overall findings with respect to gender are also encouraging. In general, male-type households bear the highest incidence of indirect taxes,

with much of this being driven by these households' greater consumption of goods that attract excise taxes and fuel taxes. Using the employment-based definition of households, the country studies show that male-breadwinner households bear the heaviest incidence of total indirect taxes in Argentina, Ghana, Mexico, South Africa and Uganda, largely owing to these households' greater consumption of goods that attract excises taxes. They also bear the heaviest incidence of fuel levies in Ghana, Uganda and Morocco.

Dual-earner households bear the heaviest incidence of VAT in Argentina, Mexico, Morocco and the United Kingdom, excises in Morocco, and fuel levies in Argentina, Ghana, Morocco, South Africa and the United Kingdom.[1] Households with no employed adults bear the heaviest overall indirect tax incidence and the heaviest incidence of excise taxes in the United Kingdom. India stands out as the one case where, based on headship, female-headed households bear the highest incidence of indirect taxes. Using headship, in both India and Morocco, female-headed households bear a higher incidence of VAT than male-headed households do.

It is worth noting that these results may be sensitive to the fact that the incidence analysis is conducted on expenditure. In Mexico, the one country survey which included income data, the incidence analysis on income suggested some different trends. In particular, Mexican households in which most income is earned by women have a higher indirect tax incidence than households where men earn most income. Incidence is lowest in households where men and women earn similar incomes.

It is worth noting also that the differences in the incidence of indirect taxes between female-type households and male-type households in some of the country studies are of relatively small magnitude. For example, in Argentina, although the incidence of indirect taxes on male-headed households (16.97) is higher than that on female-headed households (16.18), the difference is not large. Similarly, in the United Kingdom, using the employment status category, the VAT incidence for male-breadwinner, female-breadwinner, dual-earner and no-earner households is respectively 7.04, 7.31, 7.84 and 7.78. While these small differences between male- and female-type households may not be enough to warrant policy reform, disaggregating household types across the income distribution may provide more revealing information.

Indeed, female-type households are generally clustered in the lower-income brackets, and it turns out that most of the countries in this volume do make extensive use of zero-rating and exemptions in VAT to protect households in lower income brackets. For policy purposes, the results suggest that measures such as zero-rating and exemptions are effective at protecting vulnerable households from paying a disproportionate share of indirect taxes, which can explain the overall results of the country studies. The simulations conducted by each country further reinforce the point that, without zero-rating, the incidence of VAT would have been higher for female-type households and the relatively small differences in the incidence results would possibly have been larger.

A number of trends emerge from the simulations that each country conducted to make the system of indirect taxes more gender aware. First, the results in South

Africa (where the impact of introducing VAT on basic consumption goods that are currently zero-rated is simulated), Morocco (where a reduction in VAT on some staples is simulated) and Uganda (where zero-rating of salt is simulated) are particularly instructive. The South African simulation shows that zero-rating of basic food items resulted in substantial gender equality and poverty reduction outcomes, benefiting female-breadwinner households and households with no persons employed the most in relative terms. Similarly, in Morocco a reduction in VAT on staples goes some way to countering the high incidence of VAT on female-headed households. The Ugandan example demonstrates that identifying some very specific items consumed by vulnerable households, namely salt and paraffin, can effectively reduce the vulnerability of low-income female-type households, without significantly impacting on total revenue. Collectively, the simulations suggest that there are grounds for specific and targeted usage of the tax system to improve gender equality outcomes. Zero-rating of children's clothing in the United Kingdom and paraffin in South Africa are other useful ways to do this, as shown by the simulations.

To reiterate, all of the countries studied have extensive exemptions and zero-rating in the VAT system. This is one reason why across the countries studied the VAT system is found not to be excessively inequitable in gender terms. Exemptions and zero-rating are discouraged in the policy literature because they are deemed to narrow the VAT base and to create multiple VAT rates, resulting in revenue losses and complex tax administration. Recognizing that countries at different levels of development have very different tax administration capabilities, the results nevertheless suggest that it is possible, even in low-income countries, to administer VAT systems with at least some zero-rating of basic consumption goods. Moreover, the results suggest that there may be ways to compensate for any losses resulting from zero-rating in a manner that promotes gender equity in taxation.

With respect to excise taxes, the results, especially the simulations, suggest that there may be good grounds for raising tax rates on some 'leisure' and demerit goods which are disproportionately consumed by men. Tobacco and alcohol are obvious examples but so may be some others: sports and entertainment, for example. However, the issues are complex. Raising taxes on alcohol and tobacco could have negative effects beyond increasing the potential regressivity of these taxes. Increasing taxes on tobacco could induce a shift to cheaper and inferior tobacco products with additional negative health outcomes. There could also be a potential negative gender impact from increasing taxes on both alcohol and tobacco if men reduce their contributions to women's household allowances as a result of the price increases on these goods (see Black and Mohamed 2006). Although data limitations prevented analysis of intra-household income effects in the country studies, it may well be the case that males can shift the incidence of any tax increases to their female partners.

The findings on fuel taxes suggest that these are an effective form of taxation, with particularly progressive outcomes, on both income-equality and gender-equality grounds. Because the desired behavioural effect would be on men, increasing taxes on fuel for private transport is one area where the distributional

and behavioural goals of taxation policies may reinforce each other. In other words, by discouraging potentially negative social behaviour such as unnecessary car use that appears to be undertaken disproportionately by men, the tax system can also have both positive distributional and behavioural impacts. By contrast, it is important also to recognize the possible poverty and gender impacts of lowered taxes on specific types of household fuel, which is disproportionately consumed by women. Here, the results for South Africa, where the effect of levying VAT on paraffin, which is currently zero-rated, was simulated, shows that specific and well-targeted measures can generate very favourable outcomes.

## A future research agenda

As noted in Chapter 1, the studies in this volume, in addition to suggesting policy recommendations, also indicate areas of future research in order to extend and deepen the analysis, methodology and conceptual understandings that inform this work.

Although the studies have limited the analysis to personal income taxes and VAT, excises and fuel taxes, there is clearly significant scope for extending the analysis to consider the gender issues associated with other forms of taxes, such as local and regional government taxes, trade taxes, taxes on capital, land taxes and corporate taxes, among others. The current development policy focus on decentralization of governance structures has been associated with increased powers of taxation being given to local and regional governments. In a number of countries, local and regional tiers of government raise much of their revenues though property and land taxes, as well as consumption taxes. The comparative analysis of personal income taxes has shown that the taxation of household income earned from jointly-owned assets such as property and land is complex and sometimes gives rise to gender bias.

As discussed earlier, following the adoption of trade liberalization policies, many developing countries have had to introduce VAT in order to counter the fall in revenues from trade taxes. The gender implications of these reforms and the possible impacts on, for example, women's employment is another fruitful research avenue to pursue.

An important area for further research to move beyond the inter-household analysis undertaken in this volume is to extend the analysis to consider the intra-household dimensions of taxation. The issues here are complex because household income, expenditure and consumption would have to be disaggregated among household members. In short, it requires moving away from the implicit equal sharing rule used in this volume. This requires overcoming serious methodological and data challenges. Although there is a promising emerging literature on collective models and sharing rules (see Apps and Rees 2004; Bargain *et al*. 2006; Couprie 2007), exploring tax issues requires very detailed information about household behaviour. Even if expenditure data for individual members of the household were available, which currently to the best of our knowledge is not, information on who in the household consumes what is purchased will be

required. It may therefore, in the first instance, be more appropriate to explore these issues using anthropological and sociological approaches to generate detailed case study evidence of how tax policies impact on gender relations inside the household.

The analysis here explores only one dimension of fiscal policy, namely, taxation. Yet, most analysts would point out that the effects of tax policy should be seen in conjunction with government expenditure. Many social policy instruments are designed by policy-makers to 'work' on both the revenue and expenditure sides of the budget. In order to provide comprehensive evidence we need to examine both sides of the budget. Supplementing the analysis done in this volume and incorporating assessments on the expenditure side will provide a more complete picture of the gender equality issues associated with public finance.

The analysis in each of the chapters would also benefit from a fuller consideration of taxation in the informal economy. There are a number of reasons why this is so. First, the informal economy is not only very large but likely increasing in most developing countries. Second, in most of the developing world, a disproportionate number of the poor, especially women, earn their incomes in the informal economy. While most of the tax literature is concerned mainly with the inability of the tax authorities to reach those operating in the informal economy, there are some grounds for concern about how those operating in the informal economy may be affected by the tax system. A practical example in India is quite illustrative. There, a reduction in tax rates on tobacco significantly reduced demand for *bidis*, a popular substitute for tobacco, thereby causing a fall in demand for *bidis*. Significant numbers of women in India earn their incomes as *bidi* rollers, and their livelihoods would have been negatively affected by the tax policy changes. This example suggests that tax policies that do not take account of interactions between the formal and informal economy may significantly misread the impact of tax policy measures.

Here the work of Emran and Stiglitz (2005) is sobering. The mainstream policy advice to developing countries has been to liberalize trade, and to compensate for losses in revenues from trade taxes by introducing VAT, or increasing the VAT rate. Emran and Stiglitz argue that VAT is essentially a tax on the formal sector, and that its coverage in the informal economy is very limited. In their model, the introduction of VAT in a setting with a large informal economy induces a shift toward informal and home production, resulting in negative welfare outcomes. Thus, Emran and Stiglitz argue that trade taxes in these settings may be preferable to VAT. Keen (2007) disputes this conclusion, arguing that since VAT is imposed on all imports, its effect is similar to that of a trade tax. In other words, for those in the informal economy that are not registered under the VAT regulations, and can therefore not claim an input credit, VAT is in effect an import tariff. Bird (2008), on the other hand, argues that VAT may be effective at making it more attractive for enterprises to operate in the formal economy rather than remaining informal because they can claim VAT credits. It is not the purpose of this chapter to take a view on this debate, but rather to demonstrate the importance of systematically considering the impact of tax policies on the informal economy.

## Conclusion

Taxation is ultimately part of a political process, revealing significant insights into the legitimacy of the state and the power of different interest groups, both in the private sector and in civil society. Tax policy is shaped not only by state institutions and various social interests, but also by *ideas*. As argued earlier, tax policies are also influenced by preconceived mindsets about what the objectives of tax policies ought to be. Evidence-based research, such as that presented in this volume, can go some way toward challenging these ideas and mindsets, and influencing thinking about what are appropriate goals for taxation policies and how these may be best achieved.

The current policy consensus is that tax policies should focus on raising revenue in a manner that broadens the tax base, and improves and simplifies tax administration and promotes compliance, thereby generating sufficient resources to fund expenditure on public services and social safety nets that can address poverty and inequality. Tax regimes that effectively raise revenue do create the fiscal space for addressing gender inequality. However, the approach in this volume has been to suggest that in order to promote gender equality in taxation, policy-makers also need to consider the equity dimensions of taxation. Such considerations need to move beyond formal equality to substantive equality by adopting a conceptual framework aimed at transforming existing inequalities. For tax policy-makers, this implies considering how taxes reinforce or challenge current gender and other social inequalities and how to design tax instruments so that such inequalities are overcome.

The evidence presented in this volume suggests that there is scope for policy-makers and analysts to shape tax policies to both raise revenue and address and overcome gender inequalities. In terms of PIT, the studies have uncovered some explicit bias and a significant amount of implicit bias. Addressing these requires some amount of legislative amendments and careful design of tax instruments. Consistent with most empirical analysis and contrary to popular perceptions, the evidence presented in this volume suggests that indirect taxes in the countries studied do not place an undue burden on women. This is largely due to exemptions and zero-rating, which effectively protects vulnerable groups. The evidence presented points to a number of ways in which policy-makers can improve the design tax policies so that they both promote gender equality and raise additional revenue.

The analysis also highlights the need for further research on the gender dimensions of tax policies and tax reforms. It is hoped that this volume will lay the basis for research that extends and deepens the analysis presented here, so that tax instruments may be more effectively designed to challenge and potentially transform existing gender inequalities.

## Note

1 In Argentina, the difference in incidence between male-breadwinner and dual-earner households is not statistically significant. In Mexico, fuel taxes in the year of the study were actually a subsidy (see Chapter 5 for more explanation). Thus, in Mexico, female-breadwinner households received the lowest subsidy compared to other households.

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# Index