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## *DISCUSSION PAPER*

# RAISE TOP TAX RATES, NOT THE GST

Patricia Apps
University of Sydney Law School, ANU, UTS and IZA
Ray Rees
University of Munich, University of Warwick and CESifo

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ABSTRACT

This paper argues that increasing the GST, by raising the rate above 10 per cent while retaining the current tax base, or by broadening the base to include all forms of consumption expenditure, does not offer a solution to the widely perceived problems of the Australian tax system. The direct, regressive effects of such GST changes are well understood. We argue here that when we also take into account the effects of the measures, generally accepted as a corollary of the policy, that are required to compensate low income households, not only will the regressive distributional effects be exacerbated, but serious losses of economic efficiency will also result. Our analysis supports the proposition that raising tax rates across top incomes would be a far more equitable and less distortionary reform than raising the GST.

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Corresponding author:
Patricia Apps | Professor of Public Economics
The Faculty of Law | Level 6, Room 628, Law School Building (F10), University of Sydney
Eastern Avenue, Camperdown Campus, NSW 2006, Australia
Tel: +61 2 9351 0241 Fax: +61 2 9351 0200 | Email: patricia.apps@sydney.edu.au
Website:www.sydney.edu.au/law| Research Fellow IZA: http://www.iza.org

# 1    Introduction

Over the last three to four decades in many OECD countries, including the US, UK and Australia, there have been significant increases in the inequality of wages and incomes.[1] The share of the top 10% of the income distribution, and even more markedly, the share of the top 1%, has grown enormously. Somewhat paradoxically, in higher income countries, again including Australia, public policy has resulted in sharply reducing effective tax rates on top incomes. In this paper we show that this flattening of the effective rate scale on personal incomes has resulted in a major shift of the burden of taxation towards the middle range of the income distribution. Furthermore, because of the way in which the policy has been implemented, this has been accompanied by a concomitant redistribution of the burden towards two-earner families, the result being not only a less fair allocation of the tax burden but also a worsening in labour supply incentives for working women.

Against this background we identify proposals to expand the GST,[2] by raising the rate from its current 10% level or by extending the base to include currently exempt expenditures such as on food, education, and health, as reforms that would consolidate the ongoing shift in the tax burden towards the "middle". It is generally well-understood that a tax on consumption has a regressive effect, reducing the real disposable incomes of lower and middle income earners more than proportionately, and will therefore require compensation to be paid to those on lower incomes, which will in turn imply a further increase in the tax burden on the middle. Given the effects of this on both the equity and efficiency of the tax system, this paper argues that a far preferable alternative policy is to raise tax rates on the highest income earners, while at the same time strengthening measures to limit tax evasion and avoidance. We base the argument for this policy both on economic theory and on an analysis of Australian Bureau of Statistics (ABS) income, consumption and labour supply data.

The paper is structured as follows. Section 2 compares incomes reported in two recent ABS Household Expenditure Surveys to give an indication of the growth in inequality in the form of a continuing concentration of income gains towards the top of the distribution. Section 3 outlines the sequence of strategies used to implement a flatter rate scale and presents evidence on the regressive impact across the distribution of middle and upper incomes. Section 4 goes on to explain that an individual income tax is superior to a consumption tax because it a less constrained policy instrument and, with a progressive rate scale, can achieve more efficient outcomes. Section 5 highlights the highly regressive nature of the GST and the necessity to combine a rise in the rate or an extension of

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[1] See, for example, Atkinson et al. (2011) and Piketty and Saez (2003).
[2] See, for example, the repeated recommendation from former Treasury Secretary Ken Henry for an increase in the GST. He also calls for lower company and income tax rates (see Australia's Future Tax System Review Panel, 2009). The same recommendations appear in a report by the Grattan Institute (see Daley et al., 2012).

the base with compensation for those on low incomes. The compensation would inevitably take the form of targeted cash transfers or credits that would raise effective marginal rates at low income levels and on the labour supply of married women as second earners already facing excessively high rates. Given the evidence on female wage elasticities, an expanded GST would therefore be highly distortionary. Evidence on the unresponsiveness to tax changes of the labour supply of higher income earners suggests that raising top tax rates would be far less distortionary, and would go some way to reverse the loss of fairness of the Australian income tax system. Section 6 provides a concluding comment.

## 2        Rising income inequality: 2003-04 to 2009-10

We draw on data for couple income units from the ABS Household Expenditure Surveys (HES) for 2003-04 and 2009-10. We define *primary income* as that of the partner with the higher private income[3] and select a sample from each survey on the criteria that the primary income partner is employed for at least 25 hours per week and aged from 20 to under 60 years, and neither partner reports a negative income.[4] The data for both samples show almost no change in primary earner hours of work between the two financial years (see Table 3 below), which suggests that it is reasonable to assume that primary income, unlike household income,[5] strongly tracks the underlying primary wage distribution. We therefore make inequality comparisons based on the change in the distribution of primary income over the period.

Table 1 reports the data means[6] of primary income for each financial year and the percentage change between the two years, by quintiles of primary income. The results show the following:

(i)        Primary income is relatively flat across the distribution until the top quintile. The mean of quintile 5 is almost double that of quintile 4.

(ii)       Inequality has risen over the period. The nominal increase in the average primary income of quintile 1 is 28.85 per cent and in quintiles 2 and 3, 29.78 per cent and 33.93 per cent, respectively. In contrast, the rise in quintile 5 is 48.84 per cent.

When quintile 5 is split into deciles and percentiles, the gains can be observed to rise steeply towards the top percentile. In decile 9 the nominal increase in the average primary income is 43.27 per cent and in decile 10, 52.17 per cent. The rise in the top percentile is 71.02 per cent.

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[3] For the definition of private income, see ABS (2011, p 4). We use the data for total current weekly income from all sources (2005-06 basis), excluding government pensions and allowances, for each person record.
[4] The sample from the 2003-04 HES contains 2447 couple income unit records and from the 2009-10 HES, 2408 records.
[5] Inequality measures defined on household income give misleading results when there is a high degree of heterogeneity in the labour supply of married women as second earners, as discussed at length in Section 4.
[6] All data means are weighted.

Table 1    Distribution of primary income: HES 2003-04 and 2009-10

| Primary income quintile | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 2009-10 Primary income  $pa | 37185 | 53452 | 68382 | 88733 | 166632 |
| 2003-04 Primary income  $pa | 29083 | 41187 | 51057 | 63656 | 111951 |
| **Rise in nominal incomes %** | **28.85** | **29.78** | **33.93** | **39.39** | **48.84** |

Income tax simulations in Apps, Long and Rees (2011) show that the optimal degree of progressivity in a piecewise linear tax system of the type existing in Australia rises as inequality increases, which suggests we should find more steeply rising average tax rates on incomes over the period.

## 3    Shifting the tax burden towards the "middle": 2003-04 to 2009-10

Far from introducing a more progressive income tax system, successive Australian Governments have introduced reforms that increase the share of the burden on average income earners.  This has been achieved by the following changes in the rate scale applying to personal incomes.

From 1984-85 to 1990-91 the top rate of the Personal Income Tax (PIT) scale of 60 cents in the dollar fell to 47 cents, funded largely by accumulated revenue from bracket creep.[7]  From 1994-95 to 1999-2000 there was no change in the PIT scale.[8] This allowed an accumulation of revenue from bracket creep[9] that subsequently funded major changes to the rate scale that again gave the greatest gains to those in the upper percentiles of income.  From 2004-05 to 2008-09 the top bracket limit rose from $70,000 to $180,000 and the top marginal rate fell a further two percentage points. At the same time, individuals on very low incomes gained from an effective rise in the zero rated tax threshold.  The full benefit of a higher zero rated threshold was denied to the majority of middle income earners by the less than transparent strategy of using the Low Income Tax Offset (LITO) to increase the threshold while simultaneously raising marginal rates across the middle by withdrawing the offset at 4 cents in the dollar above $30,000.[10]

The effects of these changes on the rate scale are indicated by the distribution of data means for imputed income taxes[11] and average tax rates (ATRs) on primary income reported in Table 2.  The

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[7] The threshold for the top rate rose from $35,788 to $50,000 over this period. The zero rated threshold rose from $4,594 to $5,249.

[8] In 2000 the LITO was $150, withdrawn at 4 cents in the dollar on a threshold income of $20,700. It therefore had only a small effect on the rate scale up to that time.

[9] Together with revenue from changes to the Fringe Benefit Tax.

[10] For a detailed analysis, see Apps (2010).

[11] The data means are based on imputed income tax payable under the Personal Income Tax, Low Income Tax Offset and Medicare Levy.

table includes the percentage point cut in the ATR between the two financial years and the "nominal tax cut" in each quintile of primary income due to a lower ATR.[12] We see that:

(i)     Despite rising inequality, the ATR in the top quintile fell by 3.73 percentage points while the ATR for the middle quintile fell by only 0.88 percentage points.

(ii)    The nominal tax cut of $6223 in quintile 5 is larger than the sum of tax cuts across quintiles 1 to 4.  Almost 60 per cent of the total nominal tax cut went to the top quintile.

When the top quintile is split into deciles and percentiles, most of the gains from the change in marginal tax rates are found to have gone to the top percentiles. The nominal tax cut in decile 9 is $3748 and in decile 10, $8698. The gain in the top percentile is almost $40,000.

While overall the ATR on primary income dropped by 2.53 percentage points, it is important to keep in mind that the introduction of the GST brought with it a tax mix change, from income to consumption. Those who gained least from subsequent income tax cuts may therefore be found to have lost overall when the GST is taken into account.  Full compensation for a tax mix change requires a more progressive income tax, which clearly did not happen.

| Table 2 | Income taxes by primary income: HES 2003-04 and 2009-10 | | | | |
|---|---|---|---|---|---|
| **Primary income quintile** | **1** | **2** | **3** | **4** | **5** |
| 2009-10 Tax $pa | 4242 | 9096 | 13915 | 20363 | 48067 |
| 2003-04 Tax $pa | 4405 | 7992 | 10839 | 15619 | 36475 |
| 2010-09 ATR % | 11.41 | 17.02 | 20.35 | 22.95 | 28.85 |
| 2003-04 ATR % | 15.15 | 19.40 | 21.23 | 24.54 | 32.58 |
| **Percentage point cut in ATR** | **3.74** | **1.62** | **0.88** | **1.59** | **3.73** |
| **Nominal tax cut $pa** | **1391** | **866** | **602** | **1411** | **6215** |

Support for lower tax rates on top incomes is usually based on the argument that there are efficiency gains from reduced disincentive effects.  This argument requires convincing evidence of significant labour supply responses to wage rises at high income levels. It is, however, difficult to construct an empirical analysis that can provide this evidence, because neither cross-section nor panel data indicate a sufficiently large increase in labour supply with rising top wage rates.[13]  A key stylized finding in the literature is that the elasticity of male labour supply tends towards zero, especially at higher wage

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[12] The "nominal tax cut" is therefore with reference to rate scale changes over the period that would have left the ratio of income tax revenue to total income, and the distribution of the tax burden, unchanged.

[13] In response to the lack of evidence of high wage elasticities at the top, it has been argued that the rise in *earnings* in the top percentiles (e.g., the rise in CEO pay) reflects a greater input of *unobservable* effort, and that effort is responsive to marginal tax rates. See, for example, Brewer et al. (2008), which appeared shortly before the GFC.

levels.[14] This is not surprising in the light of the data on hours and earnings available in repeated cross sections. To illustrate, Table 2 reports data means of primary earnings and hours of work by quintiles of primary earnings based on the HES 2003-04 and 2009-10 samples for couples.

| Table 3 | | Primary earnings and hours of work: HES 2003-04 and 2009-10 | | | | |
|---|---|---|---|---|---|---|
| Primary earnings  quintile | 1 | 2 | 3 | 4 | 5 |
| 2009-10 Primary earnings $pa | 37207 | 54868 | 70191 | 91401 | 164982 |
| 2003-04 Primary earnings $pa | 28075 | 40166 | 50157 | 61908 | 106133 |
| 2009-10 Hours pa | 2080 | 2220 | 2297 | 2409 | 2515 |
| 2003-04 Hours pa | 2131 | 2245 | 2302 | 2390 | 2532 |

The data means for hours of work show no significant changes over the period. This suggest that the disproportionate rise in earnings in quintile 5 reflects higher nominal wage rates and, therefore, that labour supply elasticities tend to zero across the top percentiles. The relatively small change in hours as earnings rise steeply from the 4th to the 5th quintile also indicates very low to zero labour supply elasticities towards the top of the wage distribution.[15] These data support the view that higher taxes on top incomes would not have significant disincentive effects on labour supply or the pre-tax earnings of primary earners.[16]

Table 4 reports the second income and ATRs on the second income by quintiles of primary income, drawing on data from the HES 2009-10 sample. ATRs are lower than on primary income because under a progressive individual income tax, the second earner on a lower income than her partner faces on average a lower marginal tax rate.  This is an important feature of a progressive individual based income tax. Under a system that taxes couples progressively on the basis of joint income, as for example in the US and Germany,[17] the marginal tax rate faced by a second partner contemplating entering the workforce is that on the last dollar earned by her husband. For this reason a progressive individual tax system has long been recognised as creating lower work disincentives and therefore smaller losses in economic efficiency.[18]  In contrast to the findings for males, the available evidence suggests significant wage elasticities for married females as second earners.  Lower tax rates on second earners under an individual income tax are therefore consistent with the Ramsey rule for efficiency: lower tax rates should apply to the earnings of individuals with higher (compensated) wage elasticities.

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[14] For a survey of the literature on labour supply and gender differences in wage elasticities, see Blundell and MaCurdy (1999).

[15] The decline in elasticties becomes more accentuated towards the top percentiles. From deciles 9 to 10, for example, the average wage rises by 63.3 per cent while hours increase by 3.7 per cent.

[16] This view is supported by a number of recent studies. See, for example, Piketty et al. (2011).

[17] For a detailed analysis of the income tax systems of these countries, see Apps and Rees (2009).

[18] See Rosen (1977), Munnell (1980), Boskin and Sheshinski (1983) and Feldstein and Feenberg (1996).

| Table 4 | Second incomes and taxes: 2009-10 | | | | |
|---|---|---|---|---|---|
| **Primary income quintile** | **1** | **2** | **3** | **4** | **5** |
| Second income $pa | 16959 | 24515 | 31161 | 35704 | 42607 |
| Tax on second income $pa | 1424 | 2816 | 4161 | 5458 | 8127 |
| **ATR %** | **8.40** | **11.49** | **13.35** | **15.29** | **19.07** |
| Second hours pa | 1076 | 1188 | 1351 | 1313 | 1182 |

# 4 Taxing Consumption vs. taxing earnings: the equivalence fallacy

It is widely accepted in the public economics literature that, in a perfectly competitive capital market, a tax on earnings and a tax on consumption are equivalent. This is a fallacy, the origin of which can be traced to the convention of treating the household as a single person in modeling life cycle consumption and saving behavior.[19] The convention ignores the readily observable fact that most adults live in households comprising a couple, with or without children. In a couple income unit, as we see from the data above, individual earnings can be observed. In contract, we cannot observe individual consumptions.[20] A broad based GST is therefore a more constrained policy instrument. The tax base is limited to *joint* consumption. No such constraint applies to a tax on earnings. For this reason a tax on consumption cannot be superior to a well designed earnings tax.

The importance of this constraint on the base for a consumption tax is due not only to the efficiency merits of being able to tax married women as second earners at a lower rate as discussed above, but also to considerations of fairness. The data means for second hours in Table 4 conceal a very high degree of heterogeneity in each quintile of primary income. The overall median of second hours is 1244 pa. Average hours of those below the median are 414 pa and of those above the median, 2074 pa. This high degree of heterogeneity begins with the arrival of the first child because that event creates an additional work choice: at least one parent, typically the mother, can work at home providing child care as an alternative to working in the market and buying in care and related services.[21] Empirical studies find that very little of the observed heterogeneity is explained by wage rates or demographic characteristics.

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[19] The influence of this convention is evident in the discussion of the taxation of savings in Mirrlees et al. (2011, ch. 13) and Banks and Diamond (2010). The equivalence fallacy also underpins widely cited models of the optimal taxation of consumption and saving, such as Atkinson and Stiglitz,(1977), Charmley (1986) and Erosa and Gervais (2002). In addition, the perfect capital market assumption underpinning these models is not supported by the data, as shown in Apps and Rees (2010).

[20] Data are available for some items of assigned consumption spending, such as clothing, but not for the major components of consumption expenditure.

[21] This fact is also frequently missed in the literature due to defining the life cycle on the age of head of household. For a model in which life cycle phases are defined more realistically on the presence and age of children, see Apps and Rees (2009, Ch 5) and (2010).

Under these conditions, neither joint consumption nor joint income (with or without an equivalence scale adjustment) is a reliable indicator of a family's standard of living. The reason is straightforward. Consumption expenditure includes the costs of working and buying in child care while joint income excludes the contribution of child care and other household services provided by a partner who works at home. By taxing earnings separately at progressive marginal rates, a low wage two-earner family in which both parents work full time to earn a given joint income pays less tax than a high wage family that can earn the same income with only one parent working in the market and the other working full time at home.

The failure of a ranking of households on the basis of joint income to give an accurate picture of their ranking in terms of differences in living standards can be especially acute when the distribution of primary income is at first relatively flat across much of the distribution and then rises steeply towards the top, as in Table 1. Consider, for example, a relatively low income single-earner family with an income of $60,000 in the quintile distribution of household income reported in Table 5 for the 2009-10 sample. The upper income limit of quintile 1 is $63,493 and so this family will be located in quintile 1. The lower limit of quintile 4 is $111,541. If the second parent goes out to work for the same income, the family will be re-ranked to quintile 4. If the family has a preschool child much of the after tax second income may be spent on child care, in addition to the associated costs of entering the workforce. Therefore its real standard of living will be well below that of a household in that quintile whose total income is solely that of the primary earner.

**Table 5  Household income and quintile limits: HES 2009-10**

| Household income quintile | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Household income - data mean $pa | 45942 | 75444 | 98731 | 128477 | 219554 |
| Lower income threshold $pa | - | 63493 | 86841 | 111541 | 149553 |
| Upper income threshold $pa | 63492 | 86840 | 111540 | 149552 | - |

The illusion that joint income is an accurate indicator of household living standards has underpinned arguments used to support Australia's gradual shift from an individual to a "quasi-joint" income tax system for families since the 1980s.[22] The shift has been introduced non-transparently by gradually replacing universal family payments with joint income targeted payments, now Family Tax Benefit Part A (FTB A). The FTB A system, by withdrawing payments on the basis of joint income, raises effective marginal tax rates faced by married mothers as second earners in average wage families to rates that are well above the top marginal rate of the PIT scale.[23] Given the commitment of the Government to this system (as evidenced by the education tax rebate and carbon tax compensation

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[22] This is documented in Apps (2010).
[23] The Australia's Future Tax System Review Panel (2009) (Henry Review) contains recommendations that consolidate the system. For a critique, see Apps (2010).

package) we can expect that, with an expansion of the GST, income thresholds for compensation will be linked to those of FTB A. This will raise the already excessively high marginal tax rates on many second earners. This issue, and its longer term implications in the context of demographic change, is discussed further below.

## 5    Impact of the GST

We draw on income and consumption data from the HES 2009-10 sample to investigate the distributional and incentive effects of the GST and proposed changes. The analysis is based on a ranking of households defined on primary income on the assumption that it is strongly correlated with household living standards and therefore represents a reliable indicator of household welfare.[24]

Table 6, panel 1, presents data means of household income (obtained by adding primary and second incomes in Tables 1 and 4 above) and of total income taxes, by quintiles of primary income. The resulting ATRs, calculated as the ratio of total income tax to household income, show that the system is progressive, as we would expect.

| Table 6 | Income taxes and the GST, by primary income: HES 2009-10 | | | | |
|---|---|---|---|---|---|
| **Primary income quintile** | **1** | **2** | **3** | **4** | **5** |
| **Panel 1** | | | | | |
| Household income $pa | 54144 | 77967 | 99544 | 128477 | 209243 |
| Total income tax $pa | 5667 | 11912 | 18076 | 25821 | 56194 |
| ATR % | 10.47 | 14.78 | 18.14 | 20.29 | 26.44 |
| **Panel 2** | | | | | |
| Expenditure on food $pa | 11954 | 13153 | 13243 | 14932 | 18261 |
| Additional ATR % | 2.21 | 1.69 | 1.33 | 1.20 | 0.73 |
| Exp. on all goods and services $pa | 66134 | 74625 | 81919 | 93731 | 125442 |
| Additional ATR % | 12.21 | 9.57 | 8.22 | 7.53 | 5.99 |

The second panel reports an estimate of the percentage point increase in the average tax rate on household income that would result from a reform that broadened the base of the GST by including expenditure on food. The sharply declining ATRs with rising income reflect the obvious fact that food is a strong necessity. The percentage point increase in quintile 1 is almost three times that of quintile 5. The increase in the middle quintile is close to twice that of the top quintile. To highlight the overall regressive impact of a broad based consumption tax, the table includes the data means of expenditure on all goods and services and an estimate of the percentage point increase in the ATRs in each quintile for a 10 per cent rate of GST. The percentage point increase for the bottom quintile is well over twice that of the top.

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[24] This assumption is supported by the widely accepted evidence of a high degree of assortative matching.

Many studies report the effects of taxes and benefits across households ranked by *household income*, on the mistaken assumption that it is a reliable indicator of living standards. Superficially, a ranking by household income appears to give results that closely match those in Table 6. This is illustrated by Table 7, which reports the data means for the same variables as in Table 6, together with the resulting ATRs, by household income. We observe a slightly more unequal distribution of income, taxed at much the same degree of progression across quintiles. Taxing expenditure on all goods and services appears marginally more regressive.

**Table 7  Income taxes and the GST, by household income: HES 2009-10**

| Household income quintile | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| **Panel 1** | | | | | |
| Household income $pa | 45942 | 75444 | 98731 | 128471 | 219554 |
| Total income tax $pa | 5239 | 11303 | 17840 | 26040 | 56084 |
| ATR % | 11.40 | 14.98 | 1807 | 20.67 | 25.54 |
| **Panel 2** | | | | | |
| Expenditure on food $pa | 11888 | 12859 | 14002 | 14578 | 18255 |
| Rise in ATR % | 2.59 | 1.66 | 1.42 | 1.13 | 0.83 |
| Exp. on all goods and services $pa | 62849 | 76200 | 80741 | 95392 | 127596 |
| Rise in ATR % | 13.68 | 10.10 | 8.18 | 7.43 | 5.81 |

However, the data means and tax rates in Tables 6 and 7 are not for the same set of households in each quintile. Over half of the FT two-earner households in the lower quintiles of the primary income ranking have been re-ranked to higher quintiles, and over half those in the middle quintile have been moved to the upper quintiles. As emphasised above, a household income ranking misrepresents low and average wage two-earner families as "high income". This allows their treatment under a system of joint-income targeted compensation to be portrayed paradoxically as desirable on grounds of fairness.

Full compensation for the regressive impact of expanding the GST could be provided most efficiently through a more progressive income tax, as noted previously.[25]  More realistically the compensation will take the form of income targeted payments or tax credits, linked to FTB A for families with dependent children, with the effect of raising marginal tax rates for those with the most response labour supplies: low income earners and many, mostly female, second earners.

An expanded GST with compensation linked to FTB A can be expected to add to the negative impact of the family tax system on female labour supply during the child rearing years, and with persistent effects for the remainder of the life cycle, as indicated by the data on employment status reported in

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[25] An implication of this is that a GST is far from a "simple" tax. It offers no opportunity for simplifying the tax system.

Table 8.  The table reports the employment status and annual hours of work of all prime aged[26] males and females in the HES 2009-10, and for subsamples of those with dependent children and those in which the children are no longer present.

| Table 8 | Employment status:  HES 2009-10 | | | |
|---|---|---|---|---|
| | **Males** | **Females** | **With kids** | **Post kids** |
| Full time (FT) % | 82.9 | 35.4 | 27.4 | 35.1 |
| Part time (PT) % | 7.5 | 35.2 | 40.4 | 34.5 |
| Not employed (NE) % | 9.6 | 29.4 | 32.2 | 30.4 |
| Hours pa | 2059 | 1169 | 1045 | 1153 |

Overall, the participation rate of prime aged males is 91 per cent and of prime aged females, 71 per cent – only 20 percentage points lower.  However female hours are less than 57 per cent of male hours. The mismatch between the female participation rate and average female hours is due to a low rate of female full time employment.  Almost 83 per cent of prime aged males are employed full time while only 35 per cent of prime aged females are in full time employment. Around 35 per cent of females are in part time work. In households with dependent children the participation rate is 68 per cent, only 3 percentage points below the rate for the full sample, and average female hours are also close to the average for the full sample.

The figures of most concern appear in the final column labeled "Post kids".  This column gives the distribution of female employment status for a sub-sample selected to represents households in which the children are no longer dependent or have left home. The sample is selected on the criteria that the female partner is aged at least 40 years (to exclude those who have not yet had children) and under 60, and there are no dependent children present.[27]  While the FT category rises from 27 per cent (with kids) to 35 per cent (post kids), most of it comes from the PT category.  The NE category falls by less than two percentage points, and the ratio of average female to male hours rises by only 6 percentage points.  These results reflect a high degree of persistence of the labour supply decisions made in the child rearing years. As argued in Apps (2010), Australia's system of quasi-joint taxation of families creates problems in dealing with the consequences of demographic change, through its disincentive effects on labour supply and human capital accumulation and its negative impact on the tax base.[28]

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[26] Defined as aged from 25 to 59 years.

[27] The sample includes a relatively small percentage of couples with a female partner aged from 40 to 59 who have never had children. These records cannot be excluded because they cannot be identified from the data.

[28] The data also indicate that high tax rates on female labour supply significantly reduce the level of saving across average wage families, see Apps (2010).

**6    Concluding comment**

It has long been understood that consumption taxes have regressive effects especially when the goods concerned, such as food, represent relatively higher shares of the expenditure of less well off households. However, it is less well understood that a proposal to raise the GST or broaden its base will include measures to compensate low income households that raise marginal tax rates across "middle" incomes.  Proposals to expand the GST therefore represent a continuation of an approach to tax policy that has shown remarkable consistency and continuity, as well as lack of transparency, in Australia over the last three decades, the policy of shifting the tax burden away from top income earners and onto wage earners in the middle of the distribution, and in particular to second earners, who are typically working mothers.

This long term policy agenda has had disincentive effects that damage saving and human capital accumulation and limit the capacity of the economy to respond effectively to the challenges presented by demographic change. Coming at a time of increasing inequality in wages and incomes, with top income earners taking an increasingly large share of total income, the policy can only be viewed as perverse. It is now time to reverse it, by raising top tax rates and making a serious effort to restrict tax evasion and avoidance.

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