Dynamic Heterogeneity in the Australian Tax System

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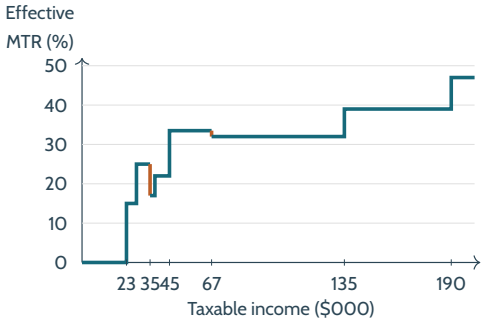
Income timing matters when marginal tax rates differ across years

Australia, 2026–27: effective marginal tax rate

Income tax after LITO plus Medicare levy; single resident without dependants



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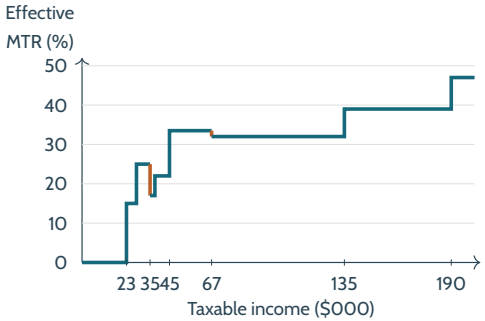

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Vickrey (1939): Shift $1 from high-income year y_s to low-income year y_t:

$$\text{tax saving} = T'(y_s) - T'(y_t)$$

⇝ tax penalties when income fluctuates around kinks in the tax schedule.

How large are these penalties in practice, and who bears them?

Annual assessment creates a large annual tax penalty at lower incomes

Empirical exercise. Using Australian tax records (PLIDA) for 2012–2022, compare each person's observed ten-year average tax rate with the rate on the same total income allocated smoothly across years.

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Where dispersion comes from

- Ten-year average tax rates **vary** substantially among people with similar average income.
- From the bottom through roughly the **70th percentile**, income timing and volatility account for most of the variation.
- The key mechanism is crossing the **$18,200 tax-free threshold**.
- At the top, the treatment of capital gains and selected deductions matters more.

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How averaging compares

- At existing rates, around **80%** of taxpayers would pay less.
- The average reduction exceeds **3 percentage points** for parts of the distribution below $50,000 in average real income.
- With revenue neutrality—an average rise of about **2 percentage points** in marginal rates—around **40%** pay less, concentrated in the lower half.

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The paper shows how large the annual tax penalty is and who pays it. What are the welfare interpretations?

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Whether annual tax variation improves welfare depends on the rationale for progressivity, raising a basic design question: over what period should tax liability be assessed?

Weighing the case for tax smoothing

In favour of tax smoothing

- Temporary fluctuations may leave lifetime resources and underlying ability unchanged.
- Smoothing improves horizontal equity and reduces distortions to work and income timing.

Against tax smoothing

- Current income may reveal need or liquidity constraints, so low current tax provides timely insurance.
- Annual variation can preserve incentives and limit planning when income changes reflect ability, work or reporting choices.
- Smoothing creates behavioural and administrative challenges (Vickrey, 1939; Australian experience).

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The balance between these cases can change across the income distribution.

At low incomes, annual taxation's costs may outweigh its benefits

A meta-Mirrleesian proposal: carry forward the unused tax-free threshold

Policy. If taxable income is below the threshold, bank the unused amount for a fixed period and add it to the threshold in later years. Higher brackets remain annual.

- **Annual benefits retained.** Low tax in low-income years supports social insurance, liquidity and automatic stabilisation.
- **Costs reduced where they matter most.** Threshold-crossing penalties fall on people with high welfare weights; the bank can lower tax on re-entry, especially after care or unemployment.
- **Proposal for authors:** Estimate how much of the paper's penalty is removed, who benefits, the fiscal cost and return-to-work effects, and how it depends on the carry-forward horizon.

A simple, limited reform may capture much of the dynamic welfare gain while constraining top-end timing and avoidance.