

Transfer Facts

A knowledge-based series by the
Tax and Transfer Policy Institute

How can EMTRs influence workforce participation?

In Australia, as an individual works more paid hours, it is expected they will also be subject to more tax. Combined with withdrawal of Government payments as income rises, the amount of forgone disposable income per dollar of additional income earned (that is the effective marginal tax rate (EMTR)) has significant implications for an individual's work choices [[see our related Transfer Fact #2 – "What are effective marginal tax rates \(EMTRs\)?"](#)].

EMTRs are often invoked in discussions regarding women's workforce participation. Research shows the greatest dip in female workforce participation occurs when a household is caring for one or more children under the age of five [1]. There are cultural and social reasons underlying mothers' employment decisions, however there is also an economic reason – mothers may not want to work as much (or at all) as a rational response to high EMTRs.

When do EMTRs create negative incentives to work?

High EMTRs disincentivise workforce participation, particularly for secondary income earners, most of whom are women. If those caring for young children return to work or increase their hours of work, their income tax payable increases, while the value of their family payments and childcare subsidies declines. Evidence also suggests that secondary income earners have a more elastic labour supply than primary income earners [2] and are therefore more likely to be deterred from increasing work hours when EMTRs are high.

Many secondary income earners make their marginal decision to work by day, not by hour. For this reason, EMTRs are calculated on a daily basis, although they are better described as workforce disincentive rates since the change in income is no longer at the margin of one additional dollar. To illustrate, consider a family with one person earning \$96,000 (about the average full-time male wage) and a secondary earner who could earn \$82,000 if working full-time (about the average full-time female wage) with two children aged 2 and 3. Neither member of the family has private health insurance and the family uses 10 hours of childcare per day at \$11.77 per hour. Family tax benefit (FTB) allocations are based on total family income. FTB amounts displayed in Table 1 refer to the FTB allocated to a household with \$96,000 plus the taxable income of the secondary earner displayed in column (a) of Table 1.

For example, Day 2's workforce disincentive rate has been calculated as follows:

Table 1. Workforce disincentive rate for working a second day per week, per year in 2021 - 22

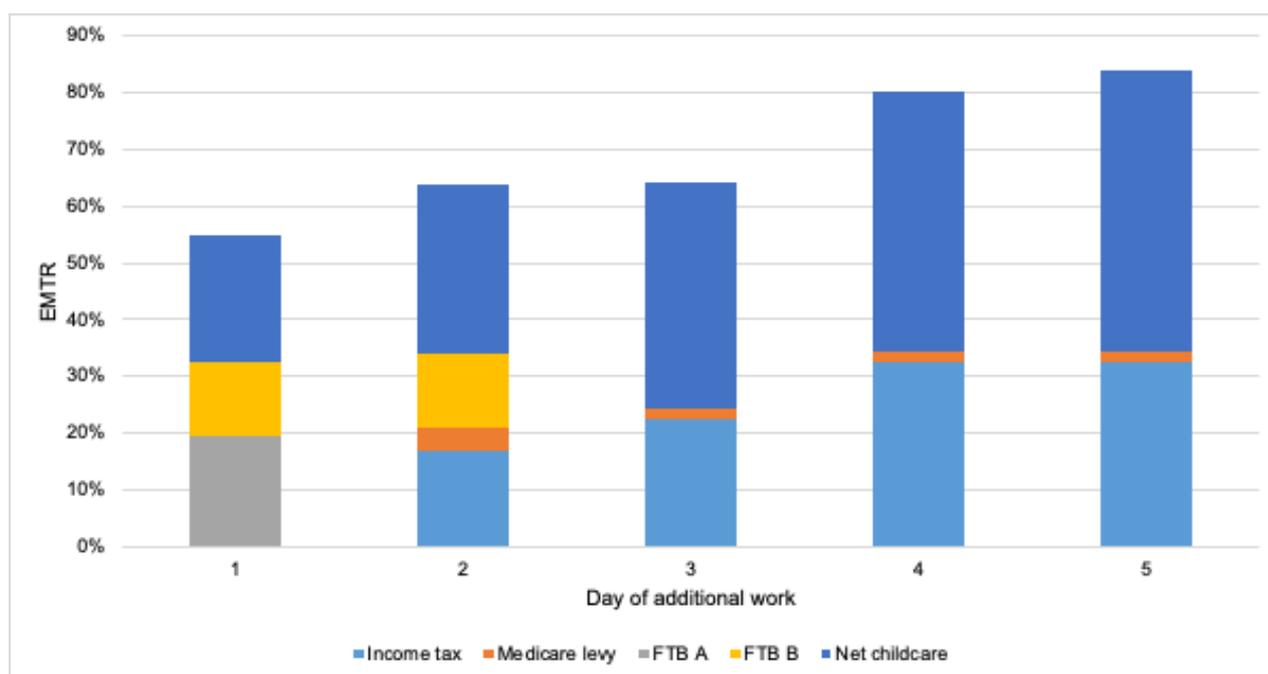
Days worked per week	Taxable income (a)	Income tax (b)	Medicare levy (c)	FTB Part A (d)	FTB Part B (e)	Net annual childcare cost (f)
1	\$16,400	\$0	\$0	\$0	\$2,125.65	\$3,672.24
2	\$32,800	\$2,774	\$656	\$0	\$0	\$8,568.56
Difference	\$16,400	\$2,774	\$656	\$0	(\$2,125.65)	\$4,896.32

Workforce disincentive rate for working a second day per week, per year =

$$\frac{b + c - d - e + f}{a} = \frac{\$2,774 + \$656 - \$0 - (-\$2,125.65) + \$4,896.32}{\$16,400} = \frac{\$10,451.97}{\$16,400} = 63.73\%$$

The calculation shows that by working a second day each week for one year the individual earns an additional \$16,400. However, the individual forgoes \$10,452, or 63.73%, of this income in additional income tax, higher childcare costs, and reduced FTB. When these rates are calculated for each additional day of work (see Figure 1), the highest workforce disincentive rate occurs when this individual works a fifth day, where they forgo 83.76% of their fifth day's income. These rates can impact a secondary earner's choice to work.

Figure 1. Workforce disincentive rate for each additional day of work in 2021 - 22



Other considerations

It is important to note there are other considerations made when choosing whether to work or how much to work. While high EMTRs are thought to provide a disincentive to earn additional income, it is hard to establish how important they are relative to other factors. Empirical studies allow identification of the effect of small changes to EMTRs, but there is no compelling way to test the overall effect of EMTRs across the entire potential workforce.

For example, an individual may prefer to work despite a high EMTR to attain relevant skills and experience in a particular field. Training opportunities and on-the-job learning may only be available whilst being part of the workforce. As another example, an individual may wish to work to obtain employer superannuation contributions to increase retirement savings. High EMTRs therefore raise a financial disincentive to work, particularly for women, but are not the only factor that influences labour force decisions.

Further, it is not guaranteed that removal of high EMTRs will result in greater levels of women's workforce participation. This is because cultural and social norms may play a large role in a mother's decision to return to work or increase hours of work.

TTPI appreciates the research assistance provided by Jesse Sondhu for the preparation of this Transfer Fact.

[1] Stewart, M. (2018). Personal income tax cuts and the new Child Care Subsidy: Do they address high effective marginal tax rates on women's work?. Canberra.

[2] Ingles, D., & Plunkett, D. (2016). Effective marginal tax rates. Canberra.

Cite as: TTPI (2022), How can EMTRs influence workforce participation?, Transfer Fact #3, Tax and Transfer Policy Institute, Canberra.

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