

Briefing note

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Subject: **High Wealth Individual Research Project –
Effective Tax Rate calculation**

Background

1. At a meeting on 9 June, the Minister of Revenue asked how effective tax rates (ETRs) will be calculated for the High Wealth Individual Research Project (the Project), and specifically how GST would be treated.
2. This note responds to those questions.

Effective Tax Rate calculation

3. Broadly speaking, individual effective tax rates are the amount of tax paid divided by income; $\frac{\text{Tax paid}}{(\text{pre-tax income})} = \text{ETR}$.
4. Estimating an individual's *tax paid* and *income* requires certain assumptions to be made. It is our intention, at a high level, to base both terms on the individual's ability to consume at a point in time. The definition of economic income will be used in calculating *income* (denominator). Economic income is equal to the amount an individual could consume in one year and maintain the same amount of wealth.¹ This is distinct from taxable and realised income.
5. The purpose of this ETR measure is to represent an individual's contribution to current government income from their ability to contribute (their ability to pay). At a point in time, the government requires income to pay for goods, services, and redistribution. The principles of *ability to pay* and *equal sacrifice* indicate that we

¹ In practice, an individual's wealth is not held constant and therefore a person's actual consumption is added to their change in wealth (their potential consumption).

would expect this ETR to rise with economic income, as those with high economic income have a greater ability to contribute and sacrifice relatively less from contributing.

6. *Tax paid* (numerator) will be attributed to the individual at the same proportion as income,² i.e. the proportion of company income attributed to the individual will be used to calculate the amount of company tax attributed to the individual. Later in this note we explore the treatment of GST paid within the tax paid calculation.

7. Example:

An individual owns 50% of Business A. Business A's value increases by \$100,000 in period 1. The individual is apportioned 50% of the income (\$50,000). Business A paid \$10,000 of tax in period 1. The individual will also be apportioned 50% (\$5,000) of the tax paid.

In this simple example the individual's ETR would be $\frac{\$5000}{\$50000} = 10\%$.

8. It is our desire to estimate and report on a range of ETRs, relaxing certain assumptions. Although these are yet to be finalised, they are likely to include:

- **Trusts, Charities and Private Foundations:** Changing which relationship determines the inclusion of trust net-assets and tax paid (settlers, appointees, trustees etc.).
- **GST:** The inclusion and exclusion of GST paid. (See below)

9. Appendix 1 provides a simple example of how an individual's economic income, tax paid and effective tax rate could be calculated.

Treatment of GST

Will GST be included within the ETR calculation?

10. GST will be included within the tax paid (numerator) but have no impact on income (denominator). Higher prices of goods and services leads to a reduction in the real consumption by the individual, thereby impacting the economic income of the individual. On these grounds, we plan on including GST paid within one of the ETR estimates. This will increase the effective tax rates for all individuals.

11. An ETR will also be provided where this assumption is relaxed, and no GST is included.

How will the amount of GST be calculated?

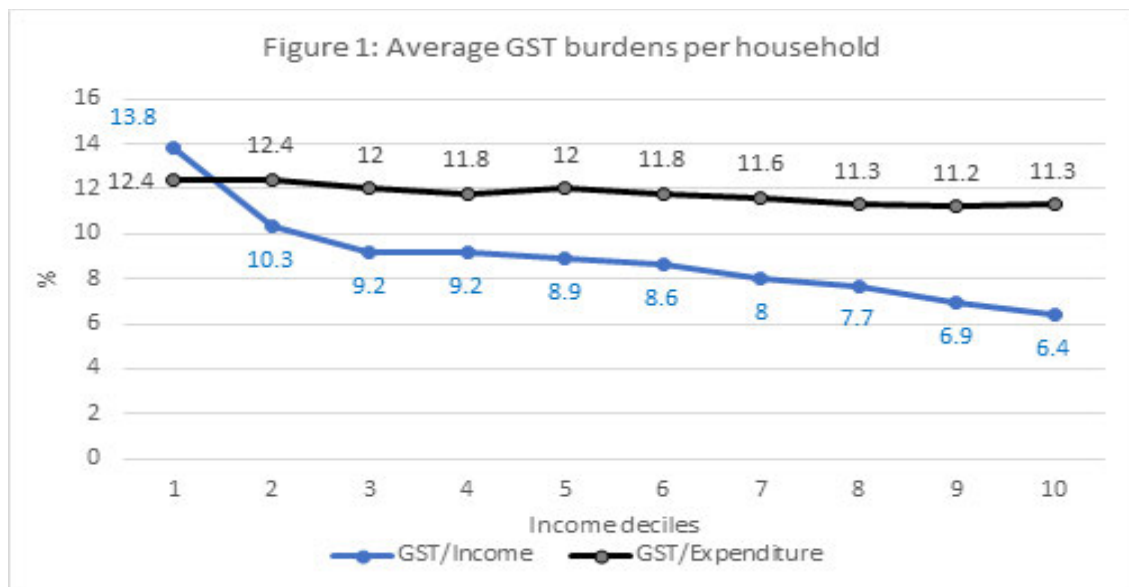
12. The amount of GST apportioned to individuals will be calculated by multiplying the GST rate to an estimate of the individual's gross expenditure. The amount of GST apportioned to individuals is not recorded and therefore needs to be estimated.

13. The rationale is that this is (approximately) the GST paid by the individual at the point in time. As a result, it measures the individual's contribution to fund current government expenditure.

14. Applying an estimate of GST paid based on consumption and not income more closely relates to what they contribute now.

² The project will not seek to explore economic incidence of taxes or income further than attributing all of the company value and taxes to owners/shareholders at the proportion of their ownership share.

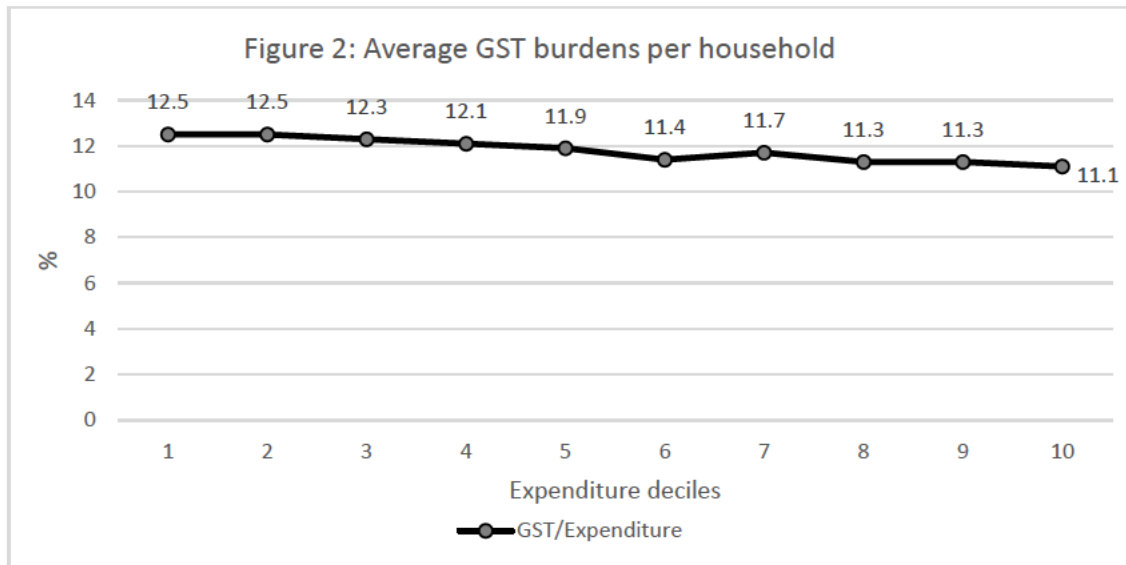
15. The amount of GST paid relative to income depends significantly on the savings or borrowings of an individual. An individual can, for a specific year, significantly reduce their GST liability relative to income by delaying consumption. Alternatively, an individual can significantly increase their GST liability relative to income by borrowing or by spending their savings/inheritance.
16. For individuals at different stages in their lifecycle this can have a significant impact on the timing of their tax paid – making the tax look more regressive than it is over the individual’s lifecycle. (See Appendix 2 for further analysis)
17. Figure 1 shows the average effective GST burden on households, ranked using income.³ The blue line shows, through the use of savings, that high-income earners in a particular year pay an effective GST rate that is less than half of the statutory rate. We would expect as a high-income individual changes from wealth accumulation (working age) to wealth de-cumulation (retirement) that their annual effective tax rate would shift from 6.4% closer to 13.8%.
18. The black line shows that GST on expenditure is reasonably consistent across income deciles.



Source: Data from Thomas (2020, p.47)

19. Figure 2 below shows the average GST burden on households, ranked using expenditure. This is similar to the ranking used in this project, but does not include potential expenditure.

³ Data from the 2016 Household Expenditure Survey, source Thomas, A. (2020), "Reassessing the regressivity of the VAT", *OECD Taxation Working Papers*, No. 49, OECD Publishing, Paris, <https://doi.org/10.1787/b76ced82-en>.



20. The slightly regressive trend is linked to higher expenditure households spending more, in proportion, on GST exempt goods and services. Exempt goods and services include international travel, financial services, residential accommodation and transactions that are not reported.
21. It could be argued then that a rate of 11.1% (or 12.5%) should be used in calculating the GST incurred by high wealth individuals. However, many of the exemptions incur tax costs that are not captured in the data (because the costs are incurred overseas, or delayed):
 - **International travel** – the individual’s overseas expenditure is exempt from New Zealand GST but, as in New Zealand, it is customary for overseas travellers to incur GST (or VAT) in the overseas country.
 - **Financial services** – many financial services are used as a store of wealth or are investment vehicles, they are very rarely final consumption. When the wealth is spent on final goods and services GST would apply. GST is simply delayed until the wealth is spent on final goods and services. This is similar to savings.
22. It would be expected that if the costs are included the average GST burden for households would be closer to the GST rate. However, due to the exemption of GST from residential property (rents) it is unlikely average GST rates will equal the GST rate, even if the data reflected all lifetime GST/VAT.
23. For calculating the ETRs, in addition to assuming high-wealth individuals incur GST at a rate of 15% on all expenditure (on a GST exclusive basis), we will calculate ETRs using alternative GST rates based on the data above.

Consultation with Treasury

24. Treasury was informed about this briefing note.

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Appendix 1: Indicative ETR calculation

It should be noted that the example below is designed to be a very simple guide of the type of calculations that will be completed. Sensitivity analysis will be completed on several assumptions that underlie the basic headings and calculations below. A range of effective tax rates will be provided. For simplicity the example assumes no income is distributed (dividends) from the entities.

Steve is a high-wealth individual who owns and is an employee of Private Practice Ltd. He is also a majority shareholder of another 3 businesses, and appointee and settlor of 2 trusts. Steve holds a large art collection and share portfolio.

A simplistic personal comprehensive income statement and tax total is provided below, alongside an estimated effective tax rate.

Comprehensive income statement			
	Change in value	Ownership (%)	
Unlisted companies			
Steve'O Ltd	\$ 500,000	50%	\$ 250,000
Steve and Family Co	\$ -	20%	\$ -
Private Practice Ltd	\$ 2,000,000	100%	\$ 2,000,000
			\$ 2,250,000
Non-corporate businesses	\$ -	0%	\$ -
Listed Companies (with interest of >10%)	\$ -	0%	\$ -
Trusts			
Steve and Family (Trust)	\$ 250,000	100%	\$ 250,000
123 Fake Street (Trust)	\$ 1,000,000	100%	\$ 1,000,000
			\$ 1,250,000
Value of investments incl. personal items	\$2,000,000	100%	\$ 2,000,000
Total change in wealth			\$ 5,500,000
Net saving			\$ 250,000
Personal taxable income (salary)			\$ 1,000,000
Steve's estimated economic income			\$ 6,250,000
Consumption (Personal taxable income - saving)			\$ 750,000
Tax			
	Tax paid	Attribution	Attributed tax
Unlisted companies			
Steve'O Ltd	\$ 50,000	50%	\$ 25,000
Steve and Family Co	\$ -	20%	\$ -
Private Practice Ltd	\$ 250,000	100%	\$ 250,000
			\$ 275,000
Non-corporate businesses	\$ -	0%	\$ -
Listed Companies (with interest of >10%)	\$ -	0%	\$ -
Trusts			
Steve and Family (Trust)	\$ 25,000	100%	\$ 25,000
123 Fake Street (Trust)	\$ -	100%	\$ -
			\$ 25,000
Value of investments	\$ 200,000	100%	\$ 200,000
Total attributed tax			\$ 500,000
Tax paid on taxable income			\$ 250,000
Estimated GST paid (based on consumption)			\$ 97,826
Steve's estimated tax on economic income			\$ 847,826
Effective tax rates (ETR)			847826 / 6250000
			13.6%

Appendix 2: Why income can be a poor way of measuring GST progressivity.

Academic literature

Mirrlees et al. (2011), 'Tax by Design': The Mirrlees Review, Oxford: Oxford University Press for Institute of Fiscal Studies (IFS), (<https://ifs.org.uk/publications/5353>)

"It can be misleading to look at current payments of all taxes as a percentage of current income: in general, a better guide to the lifetime distributional impact is to look at income taxes as a percentage of current income and expenditure taxes as a percentage of current expenditure. In the absence of data on whole lifetimes, snapshots of current income and expenditure must be used judiciously to give a rounded impression of the distributional impact of taxes."

Example

To see why it can be misleading to look at current payments of all taxes as a percentage of current income, consider an extremely simple example.

Suppose that a country consists of people who earn \$100 of labour income (e.g., wages) in period 1 and spend half of this income while saving the rest. The amount saved earns interest at a rate of 10%. People spend what they have saved plus any after-tax interest in period 2. Consider four possibilities.

Situation A. – No tax. In the absence of any tax, people would spend \$50 in period 1 and save \$50. In period 2 they would spend \$55.

Situation B. – Proportional. If we had tax at a rate of 20% on all income (labour plus interest income), they would earn \$100 in period 1 and pay tax of \$20 on this income. They would consume \$40 and save \$40. This would earn \$4 of interest income on which \$0.80 of tax would be paid. They would spend \$43.2 in period 2. *The tax would be proportional.* Individuals in both period 1 and period 2 would be paying 20% of their incomes in tax. People in period 1 would be paying \$20 on \$100 of income and people in period 2 would be paying \$0.80 on \$4 of income.

Situation C. – Progressive. Now suppose instead we have tax at a rate of 20% on labour income but not interest income. In this case people in period 1 would once more earn \$100 in period 1 and pay tax of \$20 and consume \$40 and save \$40. In period 2 they would earn \$4 of interest on which no tax is paid and have consumption of \$44. *This would be a progressive tax.* People in period 1 who are on a high income of \$100 would be paying 20% of their income in tax. People in period 2 who are on a low income of \$4 would be paying no tax. Those on higher incomes are paying high average rates of tax.

Situation D. – Regressive? Finally suppose instead that we have a GST at a rate of 25% (and no tax on income). Once again people earn \$100 of income in period 1 and spend half and save half. The \$50 that is spent attracts \$10 of GST so they end up consuming \$40 of real goods and services. The GST is 25% of \$40. They save the other \$50 and this earns \$5 of interest in period 2. They spend the \$55 and pay \$11 of GST which allows them to purchase \$44 of real goods and services. **Note that this leaves them with exactly the same consumption as people in situation C.**

But tax collected in period 1 is \$10 which is a tax of 10% of their income. Tax collected in period 2 is \$11 which is 220% of their income of \$5. A very simple analysis of this case might suggest that this *tax is regressive* because it results in a very high tax rate on low incomes in period 2 and a much lower tax on the higher incomes in period 1. But it makes little sense to describe situation C as having a progressive tax system and situation D as having a regressive tax system. In both cases the same consumption possibilities are open to people.

A problem with expressing taxes like GST as a proportion of income being earned in particular periods is that measures of progressivity or regressivity would end up being influenced by the timing of when people choose to spend their incomes and the incomes they have at this time. As mentioned in the body of this briefing note, we intend to report on both bases.