

## **Analytical note 3 – Property data**

## Purpose and introduction

This analytical note provides an overview of the data and methodology used to create the land values used in Chapter 6 of Inland Revenue's 2025 Long-term Insights Briefing (LTIB). Box 9 in Chapter 6 presents a graph of the value of individuals' land ownership by income decile for the purpose of describing how the incidence of a land tax could be distributed across individuals according to their level of income.

The note outlines the key sources of data used and the transformation of the data to create statistics on the value of land and property ownership by individuals.

## Data sources

Information for the development of valuations used in the analysis was obtained from publicly available information from Valocity, Land Information New Zealand, and the Companies Office, as well as property valuation models developed by Inland Revenue. Information on the incomes of individuals was obtained from information held by Inland Revenue.

The following data sources were used in the analysis:

- **Property information** pertaining to land holdings in New Zealand was obtained from publicly available information available from Valocity. This information includes a unique property ID for each property in New Zealand, the address of the property, the property type (eg, residential, commercial), recent sale values, and rating valuations for land and improvements. Information on 2,225,000 properties was obtained.
- **Land title information** for all property ownership and sales in New Zealand was obtained from publicly available information from Land Information New Zealand. This information includes property title numbers, property addresses, names of individuals and entities listed on titles, as well as information on the sale of property obtained from land transfer tax statements.

This information describes the direct owner of a property. There are 4,150,000 individuals and entities listed on the titles of the 2,225,000 properties in New Zealand. It should be noted that an individual or entity can be listed multiple times in this data when the individual or entity is listed on the title of multiple properties.

- **Company shareholder information** was obtained from publicly available information from the Companies Office provided by the Ministry of Business, Innovation and Employment. This information includes company names, shareholder names and the percentage of the shares in a company that each shareholder has.

This information is used to identify individuals' indirect ownership interest in a property. When a property is owned by a company or series of companies, the ownership of the companies is looked through to identify the individuals that ultimately benefit from ownership of the underlying property. These individuals are classified as indirect owners in the analysis.

It is not possible to identify all individual indirect owners of property that is owned by a company. This is because companies listed on property titles may not be registered with the Companies Office (eg, overseas companies) or companies may not have their shareholders listed on the company's registration details at the Companies Office (eg, for publicly listed

companies). Furthermore, information on land and property that an individual controls via a partnership, trust or incorporated society is not available.

There are 1,543,000 shareholder records from the Companies Office matched to the 2,225,000 properties in New Zealand.

- **Individual's income** is defined as the taxable income declared on the taxpayer's income tax return or income tax auto-assessment. Information for the 2022 - 2023 tax year was used in the analysis. The property owner's details from the Land Information New Zealand record were matched to Inland Revenue's data via a matching process that includes using IRD numbers when available or otherwise names and addresses. A match rate of 90% to Inland Revenue income information was achieved.

## Data transformations

Several data transformations were undertaken to derive the market value of a property and to attribute a share of the market value of the property to the direct owner or indirect owner.

### Calculating the market value of the property

The market value of the property was estimated internally by Inland Revenue through the development of a property valuation model. The model uses a combination of sales values in the last six months and rating valuations to determine the market value of the property.

When the property has been sold within the last six months, the sale price of the property was used as the property's market value. Otherwise, Inland Revenue developed an estimate of the market value of the property by using the sales-price to appraisal ratio (SPAR) approach. In the SPAR approach, properties are grouped into geographic locations. A regression model is then used to identify the 20 most comparable properties to the property being valued in the same geographic location that have sold in the last six months. The market value for the property being valued is then calculated by multiplying the SPAR of the median comparable property identified through the regression model to the rating valuation of the property being valued.

The estimated market value of land has been calculated based on the ratio of the ratable value of land relative to the ratable value of land and improvements multiplied by the estimated market value of the property.

There were approximately 4,000 properties for which a market value of land could not be calculated using the above methods. For these properties the market value of the land has been calculated as either:

- the median percentage of land to property value of all properties in the same post code with the same property classification (eg, 6012 post code and commercial property), multiplied by the estimated market value of the property, or
- the median percentage of land to property value of all properties in the New Zealand with the same property classification (eg, commercial property), multiplied by the estimated market value of the property.

## Determining direct ownership interest in a property

A direct ownership interest represents the value of land and property held directly in the owner's name and therefore includes land and property ownership by individuals, companies, central and local government, trusts, societies and clubs, and Māori authorities.

Land Information New Zealand title holder records do not contain information on the percentage of the property owned by each title holder. Therefore, the value of the land and property assigned to the direct owner was calculated as follows:

- If the direct owner is an entity, then it is assigned an equal ownership interest in the property relative to all other direct owners including individuals. For example, if there are three direct owners in a property valued at \$750,000 comprising two individuals and an entity, then the entity direct owner will be allocated a 33.33% share of the value of the property, \$250,000.
- If the direct owner is an individual, then the owner's share of the value of the property is calculated based on the individuals' income relative to the total income of all individuals that own the property. This approach attempts to reflect how the incidence of a land or property tax may fall on individuals with different incomes in a household.

For example, if a property is owned by two individuals (with incomes of \$75,000 and \$25,000) and a company, the company will be attributed a 33.33% share of the value of the property, the individual with \$75,000 income will be attributed a 50% share of the value of the property ( $\$75,000 / \$100,000 * (100\% - 33.33\%)$ ) and the individual with \$25,000 income will be attributed a 16.67% share of the value of the property ( $\$25,000 / \$100,000 * (100\% - 33.33\%)$ ).

## Determining total ownership interest in a property

An individual's total ownership interest in land or property is the sum of their direct and indirect interest. This includes all land and property an individual holds as a direct owner as well as a share in the value of land and property owned via companies that the individual has a shareholding interest in. For example, if a company owns land and property valued at \$1 million, and the company is owned by four individuals with an equal share, then each individual will be allocated an indirect owner interest in the land and property values at \$250,000 each.

The total ownership interest does not include land controlled by individuals via a non-company entity that the individual may have a controlling interest in, for example, as a partner in a partnership, settlor or trustee of a trust, or member of an incorporated society. Information on this level of indirect interest is not available for most properties.

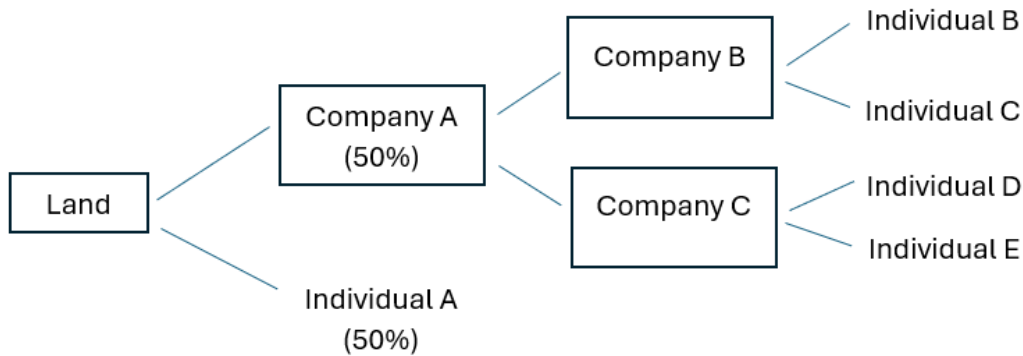
There are two approaches for calculating the indirect ownership interest in land and properties:

- For simple ownership structures (eg, a company owned by four individuals), the indirect ownership share of the value of the land and property is based on the ownership percentage of the company each shareholder has.
- For example, if a company has four shareholders with shareholder A holding 50% of the shares in the company, shareholders B and C holding 20% each of the shares in the company and shareholder D with 10% of the shares in the company, then shareholder A will be allocated 50% of the value of land and property owned by the company, shareholders B and C will be allocated 20% and shareholder D will be allocated 10%.

- For complex company ownership structures, when there are multiple layers of companies with an interest in the land, then all ultimate owners of the companies in the complex ownership structure are allocated an equal share of the value of the land and property.

For example:

Figure 1: Determining interests held through companies



In Figure 1, individual A has a direct ownership interest in 50% of the land. Individuals B, C, D and E have an indirect ownership interest in the land and are each allocated an equal share of the remaining value of the land, or a 12.5% share each.

## Treatment of nominee and trustee companies in calculating indirect ownership interest in land

Nominee and trustee companies are established to hold assets on behalf of another entity.

A nominee company holds shares in a company on behalf of the underlying investors in the business, receives dividends on behalf of the investors and votes at the annual general meetings based on the instructions of the investors. They also buy and sell shares following the instructions of the investors. The shareholders of the nominee company do not have a beneficial interest in the underlying shares held in the nominee company's name.

A trustee company holds the ownership of the land and property or shares on behalf of a trust and its beneficiaries. It is relatively common in New Zealand for trustee companies to be listed on land and property titles and to be included in the complex land and property ownership structure described above. The shareholders of a trustee company are typically the partners in the law and/or accounting firm that established the trustee company. Therefore, the shareholders of the trustee company do not have a beneficial interest in the underlying land and property held by the trustee company.

Our goal is to assign the ownership of land and property through to the ultimate owners of the land or property. The shareholders of nominee and trustee companies are not the beneficial owners of the land and property, and our data does not allow us to identify who is, so nominee and trustee companies have been removed from the analysis.

## Deriving individuals' income deciles

An income value for the 2022 - 2023 tax year has been calculated for all individuals registered in Inland Revenue's systems. The income value has been sourced from:

- filed income tax returns
- income tax auto calculations performed by Inland Revenue, or
- if neither an income tax return nor auto calculation exist, the income estimate is derived from third party information provided to Inland Revenue (eg, wages and salary, interest, dividends, beneficiary distributions, etc).

Individuals have been placed into an income decile based on their 2022 - 2023 incomes with decile 1 representing 10% of individuals with the lowest income while decile 10 represents 10% of individuals with the highest income. Individuals aged 16 or younger have been removed before the deciles were created.

The income and decile information were matched to 1,972,300 direct owners and 2,031,000 owners in total and distributions of land and property values were created. There are 86,000 direct owners and 88,000 owners in total that were not matched to Inland Revenue income information because these individuals did not have a record in Inland Revenue systems for the 2022 - 2023 tax year.

## Results

Table 1 provides an overview of the valuation of land and property in New Zealand by direct ownership and total ownership, and by the type of owner.

**Table 1: Property valuation by owner segment**

Type of property owner	Direct ownership			Total ownership		
	Estimated land value (\$billions)	Estimated property value (\$billions)	Number of direct owners (000s)	Estimated land value (\$billions)	Estimated property value (\$billions)	Number of owners (000s)
Central & local government	103	169	120	108	178	123
Company	483	772	490	157	277	151
Individual	1,084	1,726	3,125	1,401	2,205	4,289
Māori authority	2	3	2	2	3	3
Partnership	14	25	7	16	28	9
Society/club	18	28	13	18	29	13
Trust	13	22	9	15	25	12
Unknown	104	168	384	104	168	383
<b>All</b>	<b>1,821</b>	<b>2,913</b>	<b>4,150</b>	<b>1,821</b>	<b>2,913</b>	<b>4,983</b>

The following graphs outline the value of land and property held by each income decile, with the unknown decile representing those owners for which a match has not been possible within the Inland Revenue systems.

Figure 2: Direct and total land ownership by income decile

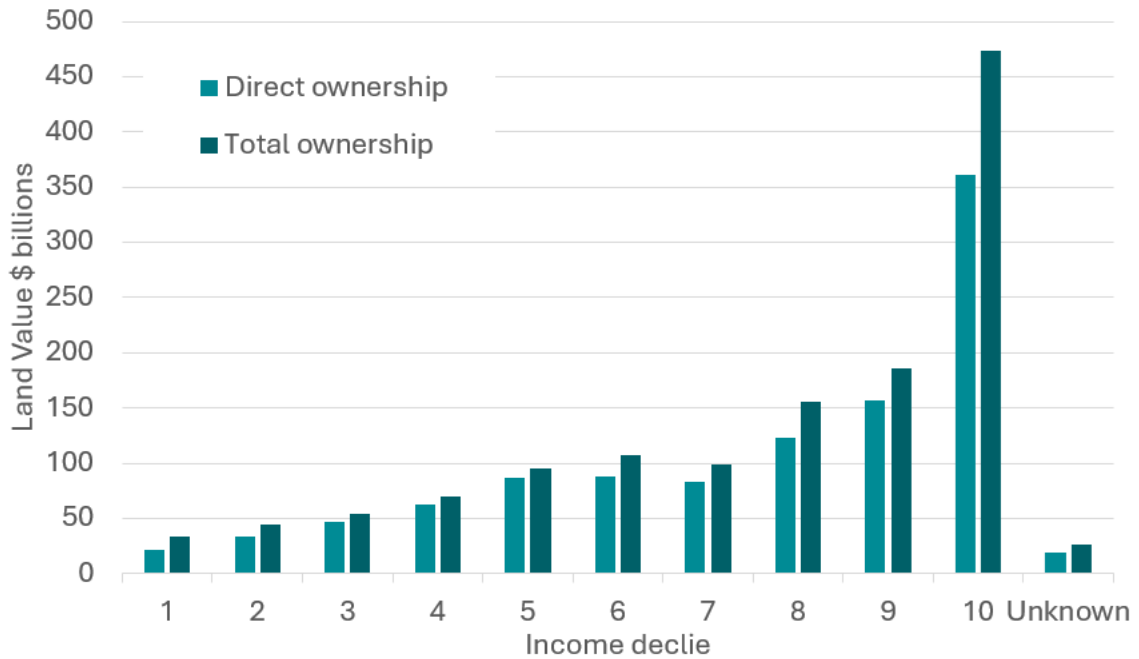
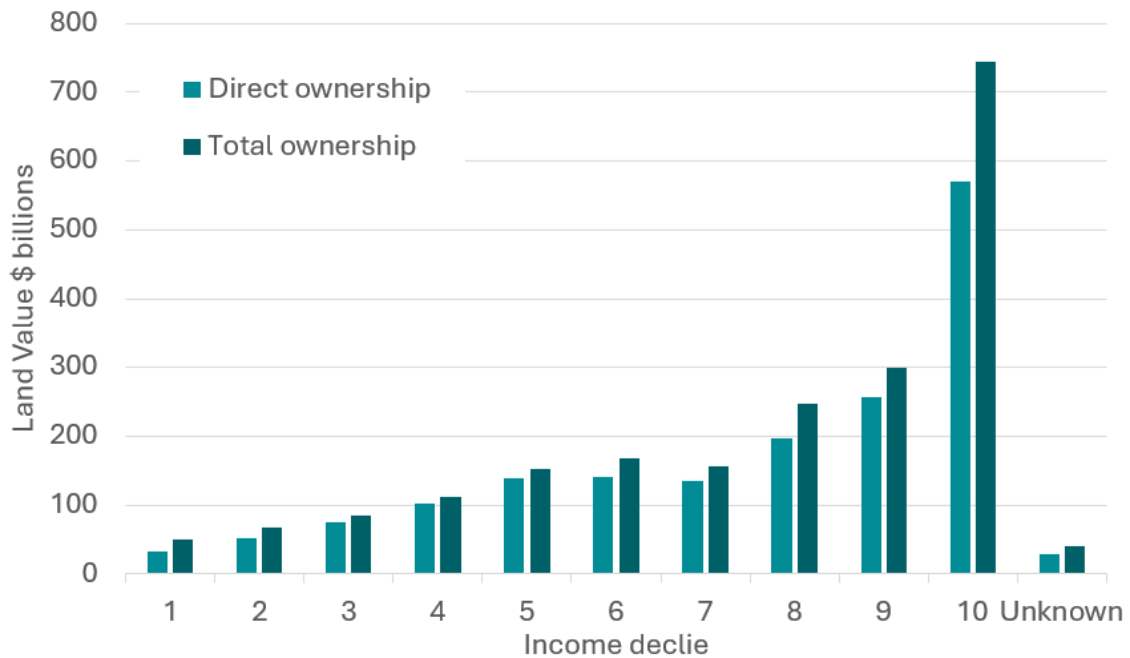


Figure 3: Direct and total property ownership by income decile



The graphs display a decrease in the value of land for decile 7 relative to deciles 6 and 8. Decile 6 includes the \$48,000 personal income tax rate threshold and decile 8 includes the \$70,000 personal income tax rate threshold. The drop in the value of land ownership in decile 7 therefore

represents clustering of individuals around the \$48,000 and \$70,000 personal income tax rate thresholds, as is seen in income distributions published elsewhere by Inland Revenue.<sup>1</sup>

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<sup>1</sup> Refer <https://www.ird.govt.nz/about-us/tax-statistics/revenue-refunds/income-distribution>