

LAND VALUE TAXATION: OPPORTUNITY AND CHALLENGES FOR FUNDING REGIONAL AUSTRALIA AND NEW ZEALAND

Vince Mangioni

Associate Professor, School of the Built Environment, University of Technology Sydney, Ultimo, NSW, 2007, Australia. Email: Vincent.Mangioni@uts.edu.au.

ABSTRACT: Australia and New Zealand have highly centralised tax systems and are low taxing countries, they are both in the bottom quartile of Organisation for Economic Co-operation and Development (OECD) countries in tax collection effort as a percentage of Gross Domestic Product (GDP). A common fiscal reform stemming from national tax reviews in Australia and New Zealand recommend improving tax effort from recurrent land value taxation. This paper examines the status of the administration of recurrent land and property taxation, how it has evolved and how it might be reformed in achieving additional revenue that would benefit regional New Zealand and Australia.

A simulation approach is used to examine how land value is determined and define the factors that have resulted in the transition to alternate bases of value, used by local government in parts of Australia and New Zealand, to assess council rates. The paper finds that while challenges exist in the determination of value in highly urbanised locations, a codified approach can be used to create a uniform basis of value on which land may be taxed. The paper concludes that challenges confronting the determination of land value should not deter an impost on land and that land is a base among other forms of taxation that may be equalised to assist funding in regional Australia and New Zealand.

KEY WORDS: Land value determination; land value taxation; tax reform; urban land use.

1. STATUS OF TAXATION AND REGIONAL OPPORTUNITIES FOR LAND TAX REFORM

In the majority of Organisation for Economic Co-operation and Development (OECD) countries recurrent land taxation operates as a local government tax. In Australia however, this tax operates at both local and state government levels and is predominantly assessed on land or site value. The dual imposition of this tax has advantages over its sole imposition by local government, where the evolving rationale has become a quid pro quo tax for services provided (Bird and Slack, 2004). The

operation of land tax at state and national levels provides opportunity for land tax revenue to be equalised across regional locations where limited capacity exists to raise the levels of revenue raised in metropolitan locations. The trade-off in centralising land tax imposts at state or national level is that the tax is viewed by taxpayers as a consolidated revenue, with little or no relationship to the services provided by higher tiers of government.

The impost of land tax by different tiers of government has fluctuated over the past century in Australia and New Zealand. The states of Australia ceased taxing land soon after federation, strengthening local government's opportunity to collect this tax in conjunction with the Commonwealth (Simpson and Figgis, 1998). In 1942 the Commonwealth removed the States powers to collect income taxes and ceased imposing land tax in 1952, allowing the States to resume collection of this tax in conjunction with local government (Smith, 2005). New Zealand moved away from a dual centralised and local land tax system abolishing its national land tax in March 1992 (*Land Tax Abolition Act 1990 (NZ)*), when it introduced a goods and services tax. This move handed sole responsibility for the impost of land tax collection to local government in the form of council rates.

The challenge confronting regional locations of New Zealand and Australia is the limited tax available to local government. Table 1, shows that in contrast to the OECD average, where lower tiers of government have three tax sources, local government in Australia and New Zealand is solely reliant on one tax, namely council rates. The challenge for local government in regional locations is further amplified by the percentage of revenue collected by central government. This figure is 80 per cent in Australia and 88 per cent in New Zealand, with the OECD average revenue collection for central government at 53.4 per cent. This centralisation of tax revenue results in Vertical Fiscal Imbalance (VFI) also known as fiscal federalism, in which revenue distribution from higher to lower tiers of government is achieved through the Grants Commission.

Further adding to fiscal collection pressures, is the status of total tax collected in Australia and New Zealand, which is low at 28.2 and 32.1 per cent of Gross Domestic Product (GDP) for Australia and New Zealand, respectively (Campbell and Murray, 2018, p.2). Both countries are below the OECD average of 34.3 per cent. A summary of own source local rate revenues in Table 1, shows that in contrast to city and fringe local areas, rural and regional locations are far more dependent on grant revenue from central government, which is distributed to local government at twice the level in regional parts of Australia and New Zealand.

Table 1. Fiscal Revenue in New Zealand and Australia.

Country	New Zealand	Australia	OECD
Government Structure	Unitary	Federated	N/a
Percentage of tax collected by National / Central Government	88%	80%	53.4% average
Total National Tax collected as a percentage of GDP	32.1%	28.2%	34.3% average
Ranking of country for total tax collected as % of GDP	23	28	35 OECD Countries
Rate Revenue 2013/14	\$4 693m	\$14 870m	N/a
Land Tax Rev 2013/14	N/a	\$6 364m	N/a
Rate revenue split regional vs city local governments	45% Regional : 55% City	35% Regional : 65% City	Not available
Number of taxes levied by Local Government	1	1	3
Impost on increase in annual rate revenue impost	No	Yes	3 of 35 Countries impose some limit

Source: OECD Tax Statistics (2015); Local Government New Zealand (2015); Local Government Annual Reports 2013/14 Wellington, Auckland, Hamilton and Christchurch; Campbell and Murray (2018).

In contrast to state land tax in Australia—which expends revenue through exemptions to the principle place of residence, primary production land and provides an investor tax free threshold in each State—council rates are imposed on all property with very few exceptions. Mangioni (2016, p.16) states that “state land tax is imposed on less than 20 per cent of all property across Australia.” Despite the imposition of a dual recurrent land tax in Australia, the tax revenue collected from both state and local government is low in comparison to other advanced OECD countries including the United States, Canada and United Kingdom where it is imposed solely by local government. As shown in Table 2, Australia is ranked 10th and New Zealand is ranked 7th among the 35 OECD countries for revenue raised from recurrent land taxation. This ranking is determined as a percentage of

GDP, which Bird and Slack(2004) define as the benchmark for assessing tax effort.

Australia's Future Tax System Review (AFTS) also known as the 'Henry Review' (AFTS, 2009, pp. C2-2) recommends that the states improve their tax effort from recurrent land taxation. More specifically, it should improve the tax effort of lower tiers of government (state and local). The recommendation to increase revenue from land tax is mirrored in New Zealand, where the Buckle (2010, p.67) has prompted recommendations for the reintroduction of a broad-based land tax as a fiscal reform. With recommendations to expand land tax, the question arises as to how this objective should be achieved and on what basis of value should this tax be assessed, in both urban and regional locations.

The rationale for expansion of land tax has been proposed by several sources including Infrastructure Australia (2016, p.8) which defines transport infrastructure as an evolving purpose. Further, PwC (2017, p.3) states that value capture is the solution to moving the burden from user-pay to beneficiary-pay in funding critical infrastructure in New Zealand. The Grattan Institute (2017), defines the primary issue confronting this form of land tax option, as how a value capture tax is to be applied and to what extent a recurrent tax on land would achieve revenue for sub-central government. The Productivity Commission (2014) states that the need for infrastructure exists in both metropolitan and regional Australia with benefits and opportunities for building local communities through physical and virtual connectivity options.

An example of removing physical boundaries of local government for funding the most basic services provided to communities is the development of Snowy Hydro 2.0 at an estimated cost of between \$3.5 and \$4.5 billion (Snowy Hydro Scheme, 2017). The ownership and funding is shared between the States of New South Wales and Victoria at 87 per cent, with the Commonwealth at 13 per cent. This scheme and its upgrade are stated by the Snowy Hydro Scheme (2017) to provide 32 per cent of renewable energy to Sydney, Melbourne, Canberra, Brisbane and Adelaide. The water used to operate the turbines of the expanded Scheme will be directed to service and irrigate regional rural sectors in assisting in the mitigation of drought.

The source of Snowy Hydro 2.0 is in regional NSW and Victoria, while the beneficiary local government areas are located far from the source of the project in city and regional locations. This project provides the rationale for a broad-based state land tax as one of the fiscal funding mechanisms. While this project provides a simple explanation for tax hypothecation, all spheres of government must work collectively in better educating the

taxpaying public of the need for staged expansion of the land tax net as one of the means of funding infrastructure projects.

Table 2. Recurrent Property Tax as a Percentage of Total Tax and of GDP.

Country	Percentage of GDP			Percentage of Total Tax			Ranking % GDP OECD
	1970	2014	% change	1970	2014	% change	
United Kingdom	3.36	3.08	-8.1	9.6	9.6	0.4	1
Canada	3.30	3.02	-8.5	10.9	9.7	-11.2	2
United States	3.17	2.62	-17.3	12.3	10.1	-17.7	3
France	0.94	2.58	173.8	2.8	5.7	102.4	4
Israel	..	2.06		..	6.6		5
Japan	0.84	2.05	143.6	4.4	6.4	45.7	6
New Zealand	1.94	1.96	1.4	7.7	6.0	-21.7	7
Iceland	0.36	1.63	346.7	1.4	4.2	207.1	8
Italy	0.27	1.56	478.9	1.1	3.6	228.9	9
Australia	1.25	1.56	24.9	5.9	5.6	-5.3	10
OECD- Total	0.93	1.09	16.7	3.8	3.4	11.2	

Source: OECD Tax Statistics Table 4100 at 2015.

2. ASSESSING LAND TAXATION AND COUNCIL RATING

The economic rationale for the assessment of land tax determined on land value is primarily driven by the tax principle of economic efficiency, also known as neutrality. In applying this principle, excluding improvements on land from the tax base results in any inefficient uses being disregarded and value being determined on the highest and best use of land. This is regardless of whether the existing use is highest and best. The need to establish efficiency of a tax imposed by a higher tier of government distinguishes it as an additional source of revenue from local government rating with a different fiscal objective.

In contrast to local government rating of land, which embraces a number of mechanisms including differentials, rates-in-the-dollar for different classes of property and rate pegging or capping of increases in revenue

from one year to the next, state land tax is a tax purely determined on value. The primary limitations of state land tax in Australia are the carve-outs for the principle place or residence, land used for primary production and the investor tax free threshold. In the case of Australia, with extensive concessions for land tax and the limitations that apply to annual increases on local government rating, the Henry Review (AFTS, 2009) recommends a flat rate applied to all land across Australia by the states.

In contrast to state land tax, local government rates are assessed on a number of different bases across Australia of which local government in some states have options to assess rates on more than one basis of value. In South Australia and Victoria rates are predominantly determined on Capital Improved Value (CIV), with assessed annual value the basis of value used in Melbourne City as shown in Table 3. In contrast, New South Wales and Queensland assess local government rates on land and site value, the same basis of value on which state land tax is assessed. The primary rationale for not introducing alternate bases of value in these states is the additional resourcing cost of producing and maintaining more than one basis of value.

Up until 1985, land value was the preferred base on which land tax was assessed in New Zealand; however by the 2006-2007 fiscal year, CIV had become the tax base for the large city local authorities (Franzsen, 2009, p.37). The rationale for the transition to CIV in the cities of New Zealand was due to limited vacant land transactions (McCluskey, 2006). Despite the transition to CIV in the capital cities of New Zealand, the use of land value as the base of the property tax remains strong in regional New Zealand (Shand, 2007). Four of the main cities of New Zealand (Auckland, Wellington, Christchurch and Hamilton) all utilize a capital or annual value rating system (Ibid:389). Improved value is said to be the best means of achieving equity between ratepayers based on their ability to pay; however, it does not embrace highest and best use or maximal productivity principles.

Table 3. Bases and Premise of Value Used to Assess Recurrent Land Taxes.

Land and Property Taxation			
State / Country	State Land Tax	Local Government Rates	Valuation Cycle
New Zealand	N/a	Site and Improved Value	3 yearly
New South Wales	Land Value	Land Value	Annually
Queensland	Site Value	Site Value	Annually
Victoria	Site Value	Improved, Site & Assessed Annual Value	2 yearly
South Australia	Site Value	Improved Value/Site Value	Annually
Western Australia	Site/Unimproved Value	Gross Rental Value*	Up to 5 years
Tasmania	Land Value	Gross Rental Value *	Up to 3 yearly
Northern Territory	N/a^	Unimproved Capital Value	5 yearly
ACT	Unimproved Value^	Unimproved Value	Annually
United States	N/a	Improved Value	2 to 5 yearly
Canada	N/a	Improved Value	3 to 5 yearly
Denmark	Transitioned from land to Improved value in 2016	Imposed by local government on behalf of regional government.	2 yearly

Sources: State Valuation of Land legislation across Australia. **Note:** *Denotes the option of assessing council rates on more than one basis across different LGA's.

3. LAND VALUE TAXATION: THE EMERGING CHALLENGE AND FRAMEWORK FOR REFORM

Considerable confusion surrounds the measurement in practice of land value and, in particular, its determination on highest and best use. In the early twentieth century, the use of land value as the basis of taxing property was determined on the sufficiency of undeveloped (unimproved or vacant) land sales as the basis for assessing value (McCluskey *et al.*, 2010, p.122). This approach was underpinned by the fact that vacant land transactions reflected the potential highest and best use of land. However, with the development of highly urbanized locations where vacant land sales have

become the exception, valuers can no longer rely on vacant land sales as a measure of land values (NSW Ombudsman, 2005).

The evolution of land value taxation in urbanised locations provides an insight into the challenges confronting cities when imposing land tax. This has resulted in an additional layer of complexity which requires consideration of the added value of improvements in the valuation of land process (NSW Ombudsman 2005:7). With this approach has come a lack of 'transparency' and 'simplicity' and increasing pressure for the adoption of alternate bases of value for the assessment of recurrent property taxation. The lack of land transactions on these two principles of 'good tax design' are clearly defined as the rationale for the move to CIV in other international jurisdictions including New Zealand (Franzsen, 2009).

One consequence of the lack of sufficient vacant land transactions in a particular location is the practice of valuers being forced to use land transactions from adjoining locations (Bahl, 2009, p.9). Another practice has been for land value to be determined by deducting the added value of improvements from improved property sales (NSW Ombudsman, 2005). This emerging latter valuation process, and in particular the determination of the added value of improvements on land value, has raised questions about its potential to compromise the economic efficiency, simplicity and transparency of land tax (Arnott and Petrova, 2002, p.3).

Hefferan (2012, p.159) concisely summarises the difficulty of assessing land value using direct comparison in highly urbanised locations as follows;

“The more developed and complex the property becomes, however, the more difficult it is to arrive at that simple comparison. With single unit residential properties, the valuer can compare one (total) property with another – with the assessment move involving more significant financial adjustments than, say, between vacant residential allotments.”

The New South Wales Ombudsman (2005, p.iv), when reviewing several local government areas, summarised the extent of the issues arising from the lack of consistency of sales analysed, and in some locations, the limited number of vacant land sales as follows;

“We found only 31% of sales on average met the strict 5% margin of error and only 66% of sales across the sample were within the acceptable 15% margin of error. We found 21% of the sample districts had more than half their sales outside the acceptable 15%”

standard and 44% had more than 40% of their sales outside the range”.

In New Zealand a very similar observation was noted by Shand (2007:136) in the review of land values used to assess local government rates, in the following;

“In the case of land value (LV) rating, in most areas (particularly urban ones), there are very few land sales upon which rateable values can be generated. This raises questions about the reliability of assessed values under LV rating. Capital value (CV) rating, on the other hand, benefits from the availability of much richer sales information.”

In response to a lack of primary evidence (vacant land sales) for determining land values, valuers were forced to either use land (or site) transactions from adjoining locations, or to deduct the added value of improvements from improved property sales. For taxpayers, the use of land sales outside of the location of their land meant that LV or SV was potentially inaccurate as it did not sufficiently account for the location value of their land (Bahl, 2009, p.9). The alternative approach was to deduct the added value of improvements from improved property sales, but this approach potentially compromises the simplicity and transparency of the resulting land value used to assess land tax.

Earlier in this paper it was highlighted that the taxation of land has been imposed and administered by the various tiers of government in Australia and New Zealand over the past century. This tax has evolved and is imposed by local government in New Zealand and predominantly imposed by local government in Australia. The exemptions of state land tax in Australia has resulted in its application to less than 20 per cent of property. It was further shown that one of the key factors that has impacted the use of land as the base of the tax in both Australia and New Zealand is the lack of directly comparable evidence.

Despite the challenges that have confronted and shaped this tax, land tax has been identified as an important source of revenue to improve tax effort in Australia and New Zealand, a rationale further exists for its hypothecation to infrastructure. This is particularly the case in regional locations of both countries where local government revenue from land is limited and may be boosted through equalisation of future revenue across urban and regional locations. Figure 1 is a summary of the factors that have

been addressed and have shaped the impost of this tax both historically and potentially into the future.

As an important potential revenue source this paper now turns to the examination of how land value may be determined in the assessment of land tax. This is fundamental in maintaining and restoring the integrity of measuring land value and ensuring that a sound rationale exists to overcome challenges to expanding this tax on the premise that land value cannot be measured. In supporting land as the base of this tax, two key questions have been determined from the review of factors examined:

- Question 1 Does a structured process for analyzing improved sales result in a simpler, transparent and economically efficient land value?
- Question 2 What can New Zealand and Australia (NSW) learn from one another in reforming the respective bases of value that underpins a land tax system in boosting tax effort?

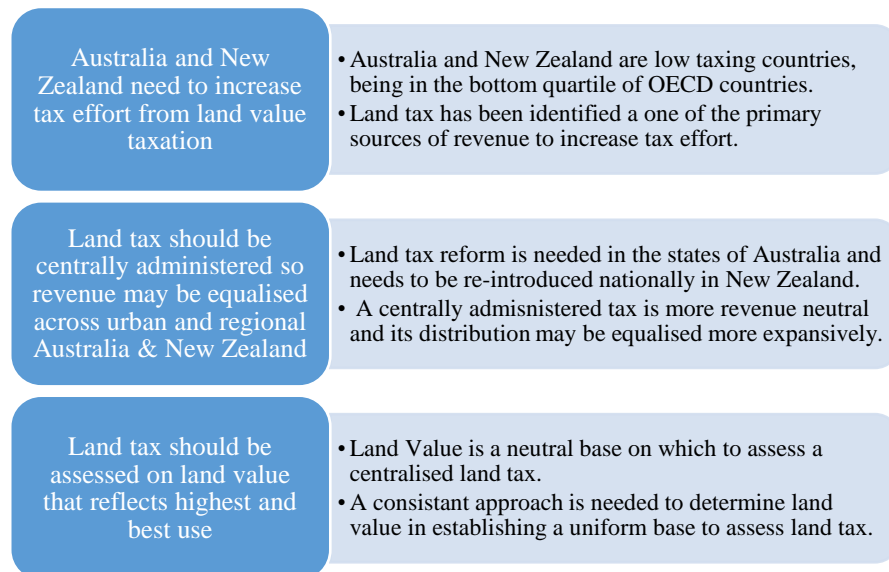


Figure 1. Framework for Reform. Source: the Authors.

4. RESEARCH METHOD

The research method used in addressing the questions posed is a simulated experiment designed to measure the outcomes derived from the processes used by valuers following the NSW Ombudsman 2005 Inquiry. In the social sciences, simulations in the form of experiments are used to monitor and test outcomes of a particular situation. This method transports the key aspects of a situation to an experiment setting as defined by Jones (1996). Cavana *et al.* (2001) further defines that a simulation lies somewhere between a lab and field experiment, insofar as the environment is artificially created but not very different from reality. The experiment developed in this study uses a pre and post simulation that assists the researcher to isolate the factors that impact the determination of value for the same property across a population of valuers.

In developing this method, an initial and a revised simulation in the form of a pre-study / post-study or before and after study design is used. Kumar (2014) explains that a before-and-after design can be described as two sets of cross-sectional observations on the same population to find out the change in the phenomenon or variable(s) between two points in time. In the simulations developed, this approach has been adapted to measure changes in value resulting from variability in information and valuation approach. Parigi *et al.* (2017, p.2 in referring to Zelditch, 1969) states “the purpose of most experiments in general is to ‘construct and test theories’ by creating ‘theoretically relevant aspects of social situations under controlled conditions.’” The refinement of controlled data in the simulation allows the researcher to define factors that adversely impact the determination of value.

Research Approach

In undertaking this research, the Valuers-General of New South Wales and New Zealand were advised of the proposed objectives and scope of the project in 2010. The project was developed during 2011 and the experiment undertaken during 2012 engaging statutory valuers in NSW. There are 85 contract valuers in NSW that specialise in undertaking statutory valuations for the Valuer General each year for the assessment of rates and taxes. There are approximately 2.5 million parcels of land valued annually by these contract valuers at a common date of 1 July each year. Computer Assisted Mass Appraisal (CAMA) techniques are used to produce these values, this is followed by valuers selecting samples of the

values determined. An inspection of a sample of properties is then undertaken to validate the values in each local government area. The number of valuations produced per valuer equates to an average of 29 400 valuations per valuer per annum. This CAMA technique is used across the states of Australia and New Zealand to produce the values that rates and land tax are assessed on.

The Australian Property Institute (NSW Division) assisted by issuing invitations, to the chairs of the Institutes study groups, seeking participation by statutory valuers (valuers qualified in rating and taxing valuations) to participate in an experiment to observe how values were determined. In addition, the participating valuers were asked a number of questions through a survey about the valuation process and frequency in NSW. The simulation in this paper was conducted in Sydney Australia and involved 23 of the 85 statutory valuers that participated, the participation rate is set out in Table 4.

The valuation simulation comprised a main street retail strip with shops and one level of offices above. The properties were located on land zoned for their existing use. To assess requirements for consistent valuations across valuers of the retail land, the simulation comprised an initial and a revised task. A plan of the simulation, with the properties that have been valued highlighted, is provided (Appendix 2).

In the simulation valuers participated in an initial simulation followed by a revised simulation. In the initial simulation there were no vacant land sales and three improved sales, each with improvements at varying degrees of dilapidation. Valuers were informed of the sale price and sale date, land area and dimensions, permitted use, gross building area, net lease area, lease details, age/last upgrade of improvements and cost \$/m² for new improvements. All premises are highest and best use, but each with improvements of varying degrees of dilapidation. One sale with improvements that were structurally and cosmetically refurbished within the past seven years; a second sale which had improvements similarly refurbished approximately 15 years ago; and the third sale was dilapidated, requiring total refurbishment and upgrade.

Once the initial simulation was completed, valuers were required to re-assess their initial values in the simulation, but now incorporating additional sources of information. Firstly, an additional sale, a fully refurbished property (structurally and cosmetically) which sold within 3 months of the date of valuation, this is highlighted as No 22 Main Street in the plan. Secondly, information was provided on the area average of how the added value of improvements degrades with time and thirdly, on the area average ratio of land value to the added value of improvements. The

objective of this revised simulation was to provide insight into how the sale of a recently improved property combined with information on the level and degradation of improvements could inform valuers of the underlying value of land. A plan of the experiment is included at the end of this paper.

Table 4. Participation Rate.

Response Type	Retail
Gross simulations issued	40
Completed/returned simulations	23
Non-returned	14
Returned & incomplete	3
Net responses	23
Response rate completed & returned	57.5%

Source: the Authors.

5. RESULTS AND DISCUSSION

Simulation Results

Question 1: Does a structured process for analyzing improved sales result in a simpler, transparent and economically efficient land value?

A review of the standard deviations of the three sales in the initial simulation shows that all three sales are within the acceptable margin of error of +/- 15 per cent. This margin is used within rating and taxing valuation practice (NSW Ombudsman, 2005). The property at 20 Main Street resulted in a standard deviation of 8.19 per cent, 5 Bank Rd, 9.79 per cent and 15 Main Street 10.18 per cent. A summary of these results is included in Appendix 1. In adopting a codified approach to the analysis in accounting for the added value of improvements a different outcome resulted across all three properties. The property at 15 Main Street resulted the lowest standard deviation of 4.44 per cent and the largest improvement of 56.4 per cent of the three sales in the revised simulation. This was followed by 5 Bank Rd resulting in a standard deviation of 6.52 per cent, an improvement of 33.5 per cent and finally 20 Main Street resulted in a reduction of the standard deviation to 5.97 per cent, an improvement of 27.2 per cent.

A review of the results from the second task of the initial simulation qualifies the processes and judgment adopted by the valuers in the sales selection process. As set out in Table 5, a review of the sale valuers ranked as the most relevant in deducing the underlying value of land was 20 Main Street. Overall, 17 of 23 valuers, representing 73.9 per cent, selected 20 Main Street as the most relevant, followed by 6 valuers, representing 26.1 per cent, who selected 15 Main Street as the second most relevant sale. The property at 5 Bank Street was not selected by valuers as the most relevant sale. The third task valuers were instructed to undertake, was to rank the most valuable to least valuable location of the three sales. It is reiterated that all of the parcels of land are the same size and shape and sold within the same time period, close to the date of valuation. Once the added value of improvements is accounted for and deducted from the sale price, the deduced land value ultimately reflects the value of the location of the land. It is noted in Table 5, that 7 valuers, representing 30.4 per cent, did not assign the highest land value to the property selected as the most valuable location in the initial simulation.

The results from the revised simulation show that a structured approach to accounting for the added value of improvements enhances transparency in demonstrating how land values are determined. This provides the ability for valuers to explain to taxpayers and taxing authorities how land value is deduced, and how the direct comparison method of valuation is applied in assigning land values. This in turn improved the consistency and economic efficiency of the tax in addressing the under valuation noted by the NSW Ombudsman (2005) where vacant land sales are limited.

Question 2: What can New Zealand and Australia (NSW) learn from one another in reforming or introducing a land tax system in boosting their respective tax effort?

On the question of the valuation cycle and frequency, it was found that the present annual valuation cycle used in NSW was considered too frequent by valuers. The valuers highlighted that distinguishing the value of each parcel of land at 1 July (base date) each year was challenging under the Computer Assisted Mass Appraisal system. This was due to the fact that one in four values of 2.5 million parcels of land across the state were required to be verified by inspection each year by 85 NSW statutory valuers that valued the. The valuers most frequent response to the most relevant frequency for undertaking statutory valuations was 2.5 years, being between New Zealand revaluation frequency of 3 yearly and Victoria's biennial revaluation cycle.

In contrast to New South Wales, South Australia and Queensland; Victoria re-value land every two years and Western Australia has a five yearly cycle. While land tax in Australia is a state-based tax, the frequency of its re-valuation cycle of land is not consistent. Unlike New Zealand which adopts a three-yearly cycle, Australia may learn from New Zealand in standardising its valuation cycle. NSW like Queensland has one basis of value on which recurrent property taxes are assessed for both state land tax and local government rating. While land is an important basis of value used to assess a centralised land tax, alternate options serve New Zealand and other jurisdictions including the United States and Canada for a local government rating system.

It is clear that the basis of value of some states in Australia for local government rating is limited and inconsistent. In contrast, New Zealand retains the options to levy rates and taxes on either land or improved value. In addition, New Zealand has a coordinated approach to applying their rating system within their four largest cities which is based on CIV. However, land value remains the dominant basis of value in regional New Zealand. Further, it was observed that the split in revenue raised between regional and rural locations in New Zealand is more even than that in Australia. However, the availability of data in defining revenue splits across geographic locations is not as readily compiled or available from taxing authorities.

What emerges as important for New Zealand to establish in building its tax effort, from the potential re-introduction of a national land tax, is the need to resist large scale concessions and exemptions as is the case in Australia. It is clear from the land tax revenue raised in Australia that this is less than half of the revenue raised through its local government rating system as shown in Table 1. The strength of New Zealand's structure in its present split in revenue between its regions and cities, provides a more equitable means to progressively phase in a national land tax. While beyond the scope of this paper to address, it is important to briefly state that the success of any tax reforms is highly contingent on the way reform is transitioned.

In summary, it was highlighted that land value is a more neutral base and is not distorted by obsolete improvements and land uses that are captured when improved value of existing use is adopted to assess this tax. Despite New Zealand discontinuing its national land tax, it was recommended that a land tax be considered again by its tax review Buckle (2010) Working Party, particularly as a means of funding infrastructure projects that serve or link multiple local government areas and are funded by central

government. This is an important means of revenue for this tax base to be more equitably raised and applied across regional and urban locations. New Zealand, should it consider reintroducing a land tax, would benefit from the lessons and experiences in administering this tax in Australia, which continues to evolve as work in progress.

6. CONCLUSION

The definition of value is a well-defined concept within the property profession. However, within taxation, the meaning of value requires additional care in ensuring that it is applied in a consistent and uniformed manner. In summary, the value determined and used to assess recurrent property tax is a manufactured process in the absence of vacant land sales. While requiring resemblance to market value, the standard defined state of value and its manufacture is the key to an economically efficient recurrent land tax in Australia and potentially in New Zealand. This brings to the fore, the importance that all bases of value are assessed on the same footing and more specifically, all land or property in the case of capital improved value is assessed on the highest and best use when that is not the existing use.

The primary rationale argued for land over other bases of value, is that improvements are accounted for in the sales analysis process. This is in contrast to including improvements in the tax base and hence attempting to communicate to the taxpayer that CIV, is not what is on their land, but what should be on their land where improvements are not maximally productive. The conclusion drawn is that a codified process of selecting, analyzing and determining value (the valuation process) results in a more consistent result across a population of valuers, of which the process is communicable and able to be explained to taxpayers. This process ultimately conforms to the principles of 'good tax design', and results in a simpler and more transparent tax while maintaining economic efficiency.

In the first instance, it has been observed that the success of taxing land on its highest and best use depends largely on the valuation practices adopted (Gaffney, 1975; Hudson, 2008; Oates and Schwab, 1997). If land value is to remain the basis of recurrent land taxation, it will be necessary to ensure that valuers firstly define the land's highest and best use before the added value of improvements can be determined in a simple and transparent manner improving the economic efficiency of the tax. A framework for determining the highest and best use of land therefore has

the potential to facilitate the application and harmonization of a recurrent tax on land within and across land use categories and jurisdictions.

The additional complexity of valuing land requires a standard in accounting for the added value of improvements in the absence of vacant land sales. It is shown in the experiment results, that the selection of sales of which improvements are maximally productive and are of highest and best use, is an important step in the valuation process. This paves the way for the second step of the valuation process to be further explored, that is defining a standard for the added value of improvements. Using this approach, the tax principles of consistency, economic efficiency and transparency will be strengthened considerably and add integrity into the administration of this tax.

It is noted that in both Australia and New Zealand, that further revenue is needed from this source in funding infrastructure projects and in funding its regions. With potential uplift in land value resulting from infrastructure projects, a rationale for increased revenue exists and is saleable and reasonable to employ. Regional Australia and New Zealand would make some contribution towards this revenue in line with benefits received. A centralised land tax system paves the way for revenue to be collected and distributed more broadly than local government rates that might facilitate smaller and more localised infrastructure. While the impost of such a tax is the domain of policy makers and administrators, the success of its application will be the test for its expansion and longevity across Australia and New Zealand nationally.

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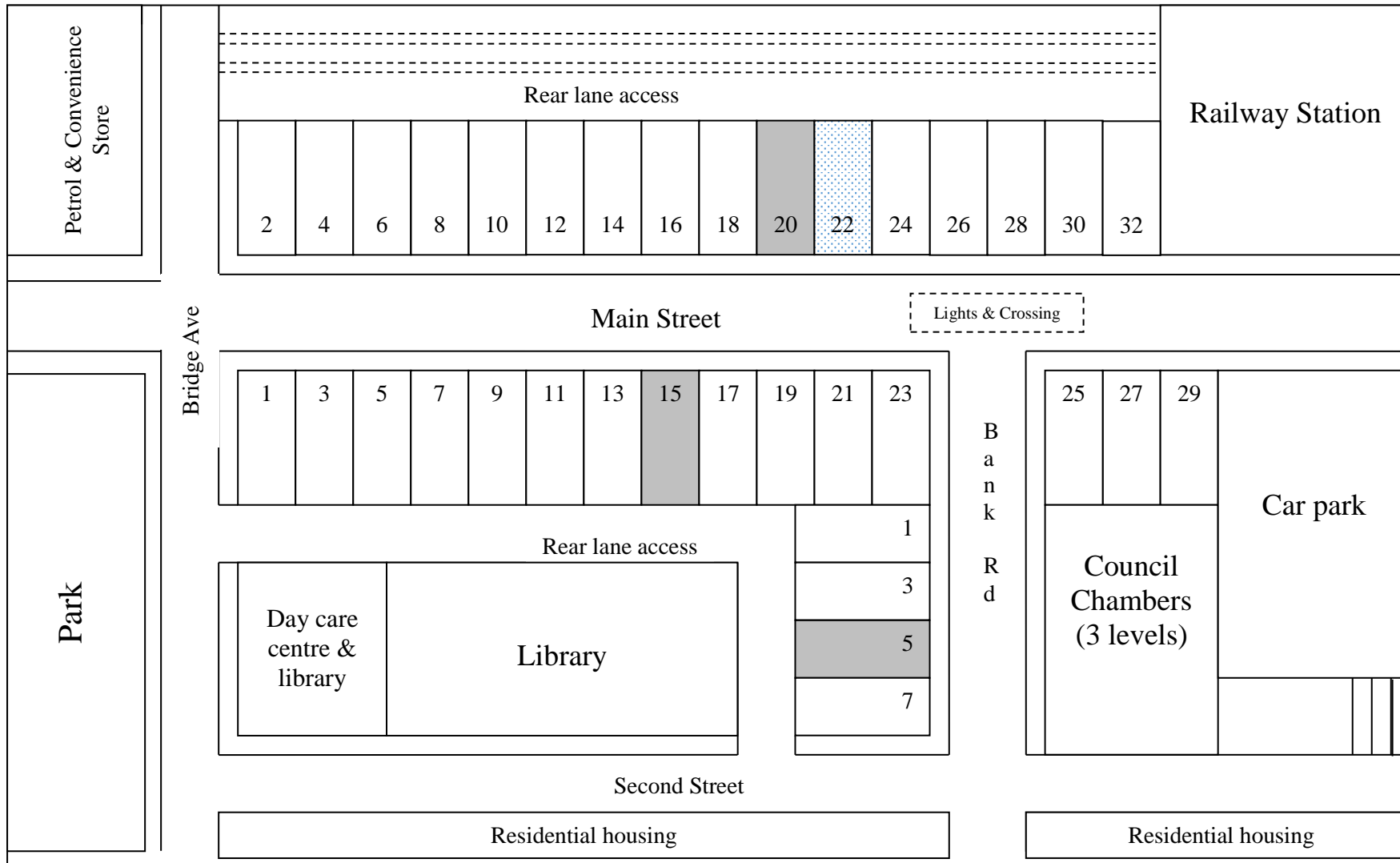
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Appendix 1. Retail Experiment Results Summary.

	22 Main Street		20 Main Street		5 Bank Road		15 Main Street	
Sale Price	\$900 000		\$640 000		\$830 000		\$860 000	
Land Value Mean Initial Sim	N/a		\$566 989		\$583 889		\$566 467	
Land Value Mean STDEV Initial Experiment	N/a		8.19%		9.79%		10.18%	
Land Value Mean Revised	\$542 152		\$531 439		\$541 939		\$549 890	
Land Value Mean STDEV Revised Sim & Add Sale	1.89%		5.97%		6.52%		4.44%	
Land : Improved Value Ratio Revised Mean	60%		83%		65.3%		63.9%	
Age / last upgrade of improvements	1 month		50 years		15 years		7 years	
Size m² of improvements	130m ²		130m ²		130m ²		130m ²	
	Not available in the initial experiment		20 Main Street		5 Bank Road		15 Main Street	
			No	%	No	%	No	%
Most relevant sale			17	73.9%	0	0	6	26.1%
Least relevant sale			4	17.4%	12	47.8%	7	30.4%
Most valuable location			11	47.8	8	34.8	4	17.4
Valuers who identified most valuable location but did not assign highest land value	Total No	Total %	4	17.4%	0	0%	3	13%
	7	28						

Source: the Authors

Appendix 2. Main Street Retail Sales & Land Value Assessment Plan.



Source: the Authors.