GOOD TAX POLICY ON SHAKY GROUND? AN ASSESSMENT OF TAX POLICY RESPONSES TO NATURAL DISASTERS

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Abstract

Recent years have seen a series of natural disasters place significant social and fiscal strain on a number of economies. Determining the appropriate tax response to natural disasters involves multiple complex policy decisions, which often need to be made under significant time pressure with limited information. While natural disasters are predicted to become more frequent and costly, there has been little focus on the links between tax policy development and responses to natural disasters. In particular, no research has systematically compared international tax policy responses to natural disasters.

This thesis outlines the tax responses in the pre-disaster, disaster response, and post-disaster recovery stages of the 2010/11 Canterbury earthquakes in New Zealand and the 2010/11 Queensland floods in Australia. By summarising the responses in this way, a useful resource for future tax policy makers has been created. These tax responses are evaluated against the standard economic principles of good tax policy, and an investigation is made into the relationship between the responses and the strength of the existing tax policy system, as measured by OECD, World Bank and other expert reviews. As part of that investigation, individual case studies are presented that dissect 44 semi-structured interviews with tax policy makers from Australia and New Zealand, selected to represent the views of government officials, tax practitioners and tax academics. A large number of legislative documents, policy reports, formal reports, technical guidance, submissions, academic literature and media items prepared by these policy makers are also analysed.

The analysis shows that both countries had a range of pre-existing rules for dealing with natural disasters but there were gaps and a lack of consistency, which were more pronounced in New Zealand. The immediate response in both countries involved significant administrative effort, and in New Zealand there were a large number of legislative changes which reflected the comparative lack of pre-disaster tax settings. New Zealand also made a large number of changes to support post-disaster recovery. Such changes were not required following the Queensland floods, because timing issues for revenue expenditure and the timing or taxation of capital expenditure had previously been addressed by earlier generic tax changes and Australia's comprehensive capital gains tax (CGT). While both countries were forced to consider funding options for recovery, pressure was mitigated in New Zealand by high levels of public and private insurance, allowing the New Zealand government to rely on existing taxes and increased debt. The Australian government, which did not have a disaster fund or insurance scheme,

implemented a one-year flood levy. New Zealand also supported reconstruction through tax incentives. In contrast, no such measures were proposed or enacted in Australia, due to existing rules, Australia's comprehensive CGT, and the extensive range of Australian government disaster recovery grants which reduce pressure for tax incentives to aid recovery.

The empirically-based patterns from the two case studies suggest that countries with stronger existing tax policy systems have tax responses to natural disasters which align more with the standard economic principles of good tax policy, even when they are less prepared for an event. However, any weaknesses will also be reflected in the tax responses made.

Glossary

ACC	Accident Compensation Corporation. New Zealand's universal no-	
7100	fault accidental injury scheme.	
AGDRP	Australian Government Disaster Recovery Payment. A non-means	
710DIG	tested payment of A\$1,000 for adults and A\$400 for children who	
	are affected by a major disaster (Productivity Commission, 2014).	
ATO	Australian Tax Office	
BBLR	Broad base low rate approach to tax policy. The approach involves	
BBER	lowering tax rates and widening tax bases to avoid creating tax	
	preferred investments or income sources in order to reduce the	
	economic harm of raising revenue. It is a rule of thumb rather than a	
	strict principle as there can be exceptions for a variety of reasons,	
	such as, externalities.	
CBD	Central Business District	
CDEM	Civil Defence Emergency Management	
CERA	Canterbury Earthquake Recovery Authority (NZ)	
CGT	Capital Gains Tax	
COAG	Council of Australian Governments	
CPI	Consumer Price Index	
DIRS	The Disaster Income Recovery Subsidy. An income replacement	
Ditts	payment for individuals in who lose their main source of income as	
	a direct result of a natural disaster, including small businesses and	
	farmers. The payment was announced by the Australian government	
	following the Black Saturday bushfires in Victoria in February	
	2009. It is an income-tested payment equivalent to the	
	unemployment benefit or Youth Allowance benefit and was payable	
	for a maximum period of 13 weeks from the start of the flooding in	
	Queensland (Social Security Legislation Amendment (Disaster	
	Recovery Allowance) Act 2013).	
Earthquake Job	The New Zealand government provided a benefit for six weeks for	
Loss Cover	employees whose employers were un-contactable or who indicated	
	their business was closed permanently.	
EQC	The Earthquake Commission (NZ)	
ESS	Earthquake Support Subsidy (NZ)	
FBT	Fringe Benefit Tax	
GDP	Gross Domestic Product	
GFC	Global Financial Crisis. The financial crisis of 2007/09 is	
	considered by many economists to have been the worst financial	
	crisis since the Great Depression of the 1930s.	
GST	Goods and Services Tax	
GTPP	Generic Tax Policy Process	
IRD	Inland Revenue Department. New Zealand's tax authority.	
KiwiSaver	A voluntary, work-based savings initiative with a range of	
	membership benefits. Employees contribute automatically from	
	their wages and may also receive contributions from their employer	
	and the New Zealand government. (NZ)	
MSD		
	Ministry of Social Development (NZ)	

NDRRA	Natural Disaster Relief and Recovery Arrangements. The NDRRA were established in 1974 and assist Australian state governments with the fiscal burden of large scale expenditure on disaster relief and recovery (Australian Treasury, 2012c). They operate by reimbursing states for a portion of their expenditure on eligible disaster recovery activities and measures, once particular thresholds have been exceeded (Attorney-General's Department, 2012).
NSW	New South Wales (Australia)
OCTC	Office of the Chief Tax Counsel (NZ)
PAYG	Pay as you go is an Australian system for businesses and individuals to pay instalments of their expected tax liability on their income from employment, business, or investment for the current income year.
Pooled assets	These are low value assets which have been grouped together and depreciated for tax purposes as if they were a single asset.
Red-zone	Engineers mapped residential land damage in Canterbury into four zones – red, orange, green and white. Land so badly damaged that it is unlikely to be rebuilt on was characterised as residential red zone. For owners of property with insurance in the residential red zones, the Crown made an offer of purchase (Brownlee, 2011).
RMA	Resource Management Act 1991 (NZ)
Self-assessed	A fire, flood, drought or other natural event, or sickness or disease
adverse event	among livestock which materially affects the taxpayer's business. (NZ)
SME	Small Business Enterprise
Sundry benefits	Benefits made available to affected Canterbury employees where uptake did not depend on an individual employee's specific circumstances and where the employer could not estimate the value of benefits provided to each employee.
UOMI	Use-of-money interest. Levied when a taxpayer underpays or overpays their provisional tax obligations in New Zealand.
WfF	Working for Families (NZ)

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1. Introduction

1.1. **Background**

Recent years have seen a series of natural disasters place significant social and fiscal strain on a number of economies. Two such events, which are the focus of this thesis, were the 2010/11 Canterbury earthquakes in New Zealand and the 2010/11 Queensland floods in Australia, as illustrated in Table 1.1.

Table 1.1 – Impact of the Canterbury earthquakes and Queensland floods

	Canterbury Earthquakes ¹	Queensland Floods ²
Human impact	185 deaths	33 deaths
	220,000 residences affected	136,000 residences affected
Economic impact	20 percent of GDP	1.1 percent of GDP

The global financial crisis (GFC) has been a critical stress test of contemporary fiscal policy, challenging countries to re-examine settled doctrines and established practices (Schick, 2012). In the same way, determining the appropriate government response to a natural disaster involves multiple complex policy decisions that often need to be made under significant time pressure with limited information. One area where governments are called to respond is tax policy.

1.2. Research problem

While natural disasters are predicted to become more frequent, more intense and more costly in coming years (Freeman, Michael, & Muthukumara, 2003; Laframboise & Loko, 2012), there has been little academic focus on the links between tax policy development and responses to natural disasters, including the complex interactions amongst those involved in the formation of tax policy. The literature that does exist focuses on single disaster tax issues (Omura & Forster, 2011; Watanabe, 2013), the taxation implications of individual disasters (Farmer, 2011a; Maples & Sawyer, 2015), or the taxation experiences of a single country (Vosslamber, 2012; Watanabe, 2008). As well as being limited in terms of breadth, the current literature is also not based on the views of actual policy makers involved or the full range of tax policy documents behind the actions taken, and does not consider the three phases of a natural disaster (Todd & Todd, 2011). As a result it can miss

¹ (Smart, 2012; Tompkins et al., 2012). ² (Arklay, 2012; Howes et al., 2013; Smart, 2012).

the full range of tax responses made. In response to this gap in the literature, this thesis has two objectives:

- To provide a narrative of tax responses to natural disasters, focusing on the 2010/11
 Canterbury earthquakes in New Zealand and the 2010/11 Queensland floods in
 Australia.
- To assess how the tax responses related to the strength of the existing tax policy systems.

In seeking to understand more about tax policy responses to natural disasters, the research questions for this thesis are:

- What tax responses were made in response to the 2010/11 Canterbury earthquakes in New Zealand and the 2010/11 Queensland floods in Australia?
- How did the tax responses relate to the strength of the existing tax systems?

1.3. Methodology

A qualitative approach is adopted to answer both research questions because it aids interpretation of tax policy responses by allowing a picture to be formed of the features of the environment in which they were made. In addition, it creates awareness of the full range of factors that led to the particular tax policy outcomes and caters for the complexity of the situation, where it is not possible to hold everything else constant while only the tax treatment of a particular area is tested. It is also suited to investigating exploratory and descriptive questions which are not covered in the existing literature.

The primary data source for the study is 44 semi-structured interviews with tax policy makers from Australia and New Zealand, selected to represent the views of government officials, tax practitioners and tax academics. As well as providing data for analysis, the interviews offer insights into the policy environment and clarify details in the large number of legislative documents, policy reports, formal reports, technical guidance, submissions, academic literature and media items prepared by these policy makers, which are also analysed.

The study adopts an 'interpretive-descriptive' approach to qualitative analysis. This approach is appropriate where the research is primarily concerned with accurately describing what was understood and reconstructing the data into a recognisable reality for

the people who have participated in the study (Maykut & Morehouse, 1994; Strauss & Corbin, 1990). In this case, the aim is to understand more about and describe the tax responses to the Queensland floods and Canterbury earthquakes. Specifically, Glaser and Strauss's (1967) constant comparative method of data analysis is adopted.

A key limitation that arises from qualitative research is the potential for subjectivity in the analysis, with subjects selected by the researcher (such as the focus in this thesis on policy makers as opposed to individuals affected by natural disasters) and data interpreted with the particular beliefs of the researcher (such as the experience of this researcher as an advisor on the New Zealand tax policy changes). However, it is acknowledged that researcher awareness of these limitations may assist in reducing their influence on the research output.

The research design for this thesis also incorporates procedures for data collection and analysis to increase the validity of this qualitative research. These include multiple methods of data collection, with data gathered from original policy documents in combination with interviewing the policy makers involved. Using multiple data sources helps address subjectivity within particular sources and improves the external validity of the research. Member checks (Maykut & Morehouse, 1994) were also conducted with research participants.

1.4. Importance of the proposed research

The topic of natural disasters and their impact on tax policy is a neglected area, with scarce attention having been paid to natural disasters in the economics and political science literature (Cavallo & Noy, 2011; Cohen & Werker, 2008). In particular, there is limited discussion on business responses (Runyan, 2006; Webb, Tierney, & Dahlhamer, 1999) and the literature that does exist is dominated by work undertaken in the United States (Dahlhamer & Tierney, 1996; Runyan, 2006; Webb et al., 1999). In relation to the role of taxation, the literature that currently exists discusses the impact of natural disasters on government policy generally (Freeman et al., 2003; Todd & Todd, 2011; United Nations, 2007; World Bank, 2004, 2010). However, there is a gap in the literature considering the impact of natural disasters on tax policy.

This thesis addresses that gap. No prior research has systematically compared international tax policy responses over the three phases of a natural disaster, based on the full range of tax policy documents and views of the policy makers involved. By summarising the

responses in this way, a useful resource for future tax policy makers is created. In addition, assessing how tax policy responses to natural disasters relate to the strength of the existing tax policy framework adds to the current policy debate and provides lessons that are relevant to modern tax policy makers.

1.5. Thesis structure

After this introduction, chapter two continues with a discussion of the methodology used. Chapter three then situates the analysis within the relevant literature by outlining the principles of good taxation set out in the economic literature and recent high profile tax reviews, along with other situational factors that must be taken into account in applying these principles, with emphasis given to the natural disaster context. The third chapter also outlines the role of taxation in how agents respond to a natural disaster at each phase and how that role fits with the standard tax policy principles. Finally in chapter three the literature on whether standard tax policy principles should apply when responding to a natural disaster is examined. Chapter four outlines the 15 pre-disaster, immediate, and post-disaster recovery tax responses to the Canterbury earthquakes in New Zealand in order to provide a narrative of tax responses to natural disasters. In chapter five, a smaller subset of tax responses is selected for the New Zealand disaster in order to assess how tax responses relate to the strength of the existing tax policy system. The selected responses are evaluated against the standard economic principles of good tax policy, with an investigation made into the relationship between the responses and the strength of the existing tax policy system, as measured by OECD, World Bank and other expert reviews. Based on this analysis, conclusions are drawn about whether the principles of good tax policy still hold when a country is faced with a large economic shock, such as a natural disaster, and how the adherence to those principles is influenced by the strength of the existing tax system. The analytical approach of chapters four and five is repeated for the 10 Australian tax responses to the Queensland floods in chapters six and seven. Chapter eight then brings together findings from the two case studies and conducts a cross-case theme analysis for each research question. Finally, chapter nine outlines the lessons learnt from the research, as summarised below.

The analysis shows that both countries had a range of pre-existing rules for dealing with natural disasters but there were gaps and a lack of consistency, which were more pronounced in New Zealand. In particular, Australia had much more established administrative policies and procedures for dealing with natural disasters. There were also

different funding approaches, with New Zealand having a national insurance scheme and Australia employing a primarily pay-as-you-go model.

The immediate response in both countries involved significant administrative effort including actions to support charitable relief. In New Zealand there were also a large number of legislative changes which reflected the comparative lack of pre-disaster tax settings.

New Zealand also made a large number of changes to support post-disaster recovery. Such changes were not required following the Queensland floods, because timing issues for revenue expenditure and the timing or taxation of capital expenditure had previously been addressed by earlier generic tax changes and Australia's comprehensive CGT. While both countries were forced to consider funding options for recovery, pressure was mitigated in New Zealand by high levels of public and private insurance, allowing the New Zealand government to rely on existing taxes and increased debt. The Australian government, which did not have a disaster fund or insurance scheme, implemented a one-year flood levy. To promote recovery, New Zealand provided optional rollover relief. Tax incentives were also implemented at an individual employee level. In contrast, no such measures were proposed or enacted in Australia, due to Australia's comprehensive CGT which already incorporates rollover relief provisions, the extensive range of Australian government disaster recovery grants which reduce pressure for tax incentives to aid recovery, and existing rules for employee accommodation.

After comparing and contrasting the tax responses to the Canterbury earthquakes and Queensland floods, the second aim of this research is to assess how tax responses to natural disasters relate to the strength of the existing tax policy system. The empirically-based patterns from the two case studies suggest that countries with stronger existing tax policy systems have tax responses to natural disasters which align more with the standard economic principles of good tax policy, even when they are less prepared for an event. However, any weaknesses will also be reflected in the tax responses made.

2. Methodology

2.1. Introduction

Crotty (1998) outlines the four elements which make up a research process. These are:

- Assumptions about what kinds of knowledge are possible and the nature of reality.
- A theoretical perspective about how we understand.
- The design (methodology) lying behind the choice and use of particular methods and linking that to the research objective.
- The techniques or procedures (methods) used to gather and analyse data related to the research questions.

This chapter discusses the assumptions and theoretical perspective underpinning this thesis, outlines the research methodology and discusses the research methods adopted, including features to address limitations with the research approach.

2.2. Underlying assumptions and theoretical perspective

The theoretical perspective for this thesis is post-positivism, as described by Creswell (2013). Key assumptions and characteristics of this position are:

- inquiry as a series of logically related steps;
- cause and effect orientated;
- believes in multiple perspectives from participants rather than a single reality;
- advocates rigorous methods of data collection and analysis, including multiple methods of data collection;
- is reductionist;
- encourages the use of validity approaches;
- is exemplified in Yin's (2009) data analysis strategies of case comparison.

The theory of tax policy is a set of general principles with strong neo-classical economic foundations (Henry, Harmer, Piggott, Ridout, & Smith, 2010; Musgrave & Musgrave, 1989; Smith, 1904; Tax Review 2001, 2001; Tax Working Group, 2010). The economic theory of tax policy, while acknowledging the influence of factors like political influence

(Bird & Zolt, 2003; Mirrlees, 2011; Musgrave & Musgrave, 1989), assumes humans are rational decision makers.

However, the formation of tax policy is a social process. It involves politicians, treasury and tax administration officials, practitioners, representatives from professional organisations, and other interest groups including academics. Tax policy in practice is determined by real world context and the impact of human players. The meaning of tax policy principles and the way they are applied is open to different interpretations, likely to be influenced by social and political factors. This interpretation occurs at different levels: tax policy makers, legislators, implementers, and practitioners (Yanow, 2014). As such, tax policy principles are inevitably imbued with the assumptions, values, politics, patrons and priorities of their creators (Cooper & Morgan, 2013).

Analysing tax policy without considering its social context can mean that theory is somewhat divorced from the real world. For example, Mirrlees' optimal tax theory has been criticised because practical conclusions for policy cannot readily be drawn (Creedy, 2011; Kay, 1990), and Morgan (1988) argues that economic principles are unable to capture the complexity of real world policy decisions which involve many social and political choices.

2.3. Research methodology

The research methodology is the design that shapes the choice and use of particular methods in order to answer the particular research questions (Crotty, 1998). Richards and Morse (2013) note that the best methodology for a project is the one that helps the researcher think about and work with data in the way best suited to the research goals. The methodology selected will suggest what the researcher will want to do with the data, what will be required of the data records and what sort of inquiry they support.

This study was conducted using qualitative research. This style of research is appropriate where the researcher wants to:

- explore a complex problem or issue with changing and shifting phenomena where variables cannot be easily measured;
- understand an area where little is known, or previously offered understanding appears inadequate;
- understand an issue deeply and in detail;

- learn from participants about the way they experience something, the meanings they put on it and how they interpret what they experience; or
- construct a theory or theoretical framework that reflects reality (Creswell, 2013;
 Richards & Morse, 2013).

As such it is appropriate for this thesis, where determining the appropriate tax response to natural disasters involves multiple complex policy decisions, there has been little focus in the literature on the links between tax policy and responses to natural disasters, and the formation of tax policy is a social process which means that analysing tax policy without considering its social context can mean that theory is somewhat divorced from the real world.

Creswell (2013) writes that a good qualitative study:

- Begins with the identification of a clear problem that needs to be studied and a clear aim for the research project. The purpose statement is then narrowed into questions that will be answered during the course of the study.
- Uses a recognised qualitative research method. The researcher selects a method
 based on what the study is attempting to accomplish, cites studies that employ it and
 follows the procedures outlined in the approach. Use of a recognised approach
 enhances the rigor and sophistication of the research design and provides a means to
 evaluate the qualitative study.

The research problem, objective, questions and method for this thesis are discussed below.

2.3.1. Research problem

As outlined in chapter one, no research has systematically compared international tax policy responses to natural disasters. As well as being limited in terms of breadth, the current literature is also not based on the views of actual policy makers involved or the full range of tax policy documents behind the actions taken, and does not consider the three phases of a natural disaster. As a result it can miss the full range of tax responses made.

2.3.2. Research objective

In response to this gap in the literature, this thesis has two objectives:

• To provide a narrative of tax responses to natural disasters, focusing on the Canterbury earthquakes in New Zealand and the Queensland floods in Australia.

 To assess how the tax responses related to the strength of the existing tax policy systems.

2.3.3. Research questions

In seeking to understand more about tax policy responses to natural disasters, the research questions for this thesis are:

- What tax responses were made to the 2010/11 Canterbury earthquakes in New Zealand and the 2010/11 Queensland floods in Australia?
- How did the tax responses relate to the strength of the existing tax systems?

2.3.4. Research method – case study approach

Research methods are the concrete techniques or procedures used to gather and analyse data for a particular research project (Crotty, 1998). A good qualitative study adopts a specific approach to qualitative research, with the method section describing the meaning of such an approach, why it was used, and how it informs the procedures of the study (Creswell, 2013).

A case study method has been selected for this thesis. While, Strake (2005, as cited in Creswell, 2013) considers case study to be a choice of what is studied rather than a methodology, many others present it as a comprehensive research strategy (Denzin & Lincoln, 1995, Merriam, 1998, as cited in Creswell, 2013; Yin, 2009). Both Richards and Morse (2013) and Creswell (2013) include case study as one of their five widely used qualitative methods. Other typographies of qualitative research also recognise this methodology (Lancy, 1993; Denzin & Lincoln, 2011 and Saldaña, 2011 as cited in Creswell, 2013).

This method is a good approach when the researcher has clearly identifiable cases within boundaries and seeks to provide an in-depth understanding of a case or a comparison of several cases (Creswell, 2013). It is a useful approach where the intent is to understand a specific issue (instrumental case study), with a case or cases selected to best understand the problem (Strake, 1995 as cited by Creswell, 2013).

In this thesis the cases are clearly definable, being the tax policy responses to two recent natural disasters. The choice of methodology is appropriate for the purpose of the research,

because the aim of both research questions is to understand the real world responses to natural disasters and how these relate to the strength of the existing tax system.

Case study research has a number of defining features, including: case identification and definition, extensive data collection, and a rigorous approach to data analysis to ensure presentation of an in-depth understanding (Creswell, 2013). The following section discusses the way these features have been approached in this thesis.

2.3.4.1. Case identification and definition

Case study research involves the study of a case or cases within a contemporary context or setting, which is usually described within certain parameters such as a specific place and time (Yin, 2009). Typically cases are current, real-life situations that are in progress so that the researcher can gather accurate information not lost by time.

In selecting and defining cases, the researcher needs to consider what type of case study is the most useful, for example: a single/within site study; a collective/multisite study; an intrinsic study focussed on a unique case; or an instrumental study focussed on an issue (Creswell, 2013).

This study is a collective instrumental case study. Yin (2012) argues that multiple-case designs are preferred over single-case studies as they provide a broader array of evidence, use the logic of replication and result in more powerful analytical conclusions than a single case. Multiple case-studies generally involve a small number of cases (no more than four or five), with a detailed description of each case and its themes (within-case analysis), and a thematic analysis across the cases (Creswell, 2013; Yin, 2012).

The two cases in this collective study (the New Zealand tax responses to the 2010/11 Canterbury earthquakes and the Australian tax responses to the 2010/11 Queensland floods) were chosen because of:

- Timeliness. Both were recent natural disasters where the responses were in progress.

 This meant it was possible to gather accurate information not lost by time.
- Generalisability. One of aims of this study is to provide a narrative of different tax
 policy responses to natural disasters as a useful resource for future tax policy makers.
 A collective study of some recent natural disasters in OECD countries was identified
 as the best approach for doing so. Both natural disasters occurred within a six month
 window meaning similar international economic and political conditions existed. As

developed countries and OECD members, these jurisdictions also have a generally agreed approach to the principles of good tax policy, allowing better cross-case analysis of their responses to natural disasters. The choice of New Zealand and Australia, in particular, supports the objective of being able to draw general lessons. New Zealand and Australia are well placed for comparative study. Both are firstworld southern-hemisphere Commonwealth countries with similar demographic profiles and social policy objectives. Both have parliamentary governments, small populations and relative ethnic homogeneity. The two countries also have close trade relationships and considerable trans-Tasman exchanges of populations due to their geographic proximity (Marriott, 2008). Claims of similarity between New Zealand and Australia have been made in several studies. Mclean (2003) comments that New Zealand and Australia have more in common with one another than any other country and are more alike than any other two separate nations. Other studies, for example Peetz (1998) and Marriott (2008), have successfully compared Australia and New Zealand, with Peetz (1998) arguing that there is only one country that is suitable for comparison with Australia and that is New Zealand.

Personal experience and motivation. New Zealand was chosen as one of the sites for
this study because of the researcher's personal experience as a tax policy advisor at
the time of the Canterbury earthquakes and their significant impact on the New
Zealand economy.

One feature which needs to be considered in selecting Australian and New Zealand cases for comparison are the different forms of government (federalism in Australia and unitary government in New Zealand). In a unitary government the power is held by one central authority but in a federal government, the power is divided between national (federal) government and local (state) governments.

Howes et al. (2013) provide an overview of the Australian system of government. This was shaped by a constitution drafted in the 1890s by a group of independent colonies that were reluctant to cede power to a new national government. The result was a compromise that blended institutions from the United States and United Kingdom. Local governments were not mentioned in the constitution and exist at the behest of state governments that were formed from the pre-existing colonies.

In contrast, New Zealand is a unitary state rather than a federation. Regions are created by the authority of the central government, rather than the central government being created by the authority of the regions. Local government in New Zealand has only the powers conferred upon it by Parliament (Wilson, 2005).

In recognition of this difference, this contextual feature has been incorporated into the case study analysis. In terms of disaster response, the role of federal and state governments in disaster response arrangements is discussed in section 8.3.3.3 as one of the potential rival explanations. In Australia, the responsibility for responding to natural disasters primarily resting with state governments. While New Zealand does not have a federal system, there is a similar high level devolution of disaster response and recovery arrangements. Therefore, in both cases there is a high level of devolution which is directed at response rather than prevention. This aspect therefore does not appear to be an alternative explanation of the differences in the tax responses made.

In respect of the Australian case study, the split between federal and state taxes is discussed in section 7.2 as part of the Australian policy framework. Tax responses at both the federal and state level, and the relationship between them, are then analysed in Chapters Six and Seven (for example, the state insurance taxes, flood levy, and federal and state administrative tax responses).

In New Zealand, tax policy is primarily set by central government, consistent with the unitary form of government. However, a paper by Local Government New Zealand (2015) highlights that the unitary system of government does not mean that the jurisdiction is free from the federal/state taxation challenges experienced in Australia, such as a vertical fiscal imbalance. As such, where relevant, these issues have been included in the analysis of tax responses made to the Canterbury earthquakes in Chapters Four and Five (for example, the split of funding between central and local government as part of considering whether an earthquake levy was required).

In selecting rival explanations, consideration was given to including the federal/state/local disaster funding arrangements in section 8.3.3 on disaster response arrangements. However, it was felt that these are so interrelated with the tax responses made (particularly the question of revenue adequacy) that they needed to be part of the case study analysis.

The scale and risk of natural disasters is also a factor that needs to be considered in selecting cases for comparison. The relative risk, frequency, and scale of natural disasters

are discussed in section 8.3.3.1 as a possible rival explanation for the differences in the tax responses made. On the World Risk Index, which measures the risk of becoming a victim of a natural disaster for 171 countries, New Zealand and Australia are ranked numbers 116 (4.55 percent) and 121 (4.22 percent) respectively (Bündnis Entwicklung Hilft & United Nations University, 2016). Therefore, the level of risk is similar, making the cases suitable for comparison. Similarly, Australia (an average of four per year) and New Zealand (an average of two per year) both suffer frequent natural disasters. In terms of the scale of the disasters, both events were substantial. The Canterbury earthquakes have been estimated to be the third most expensive insured natural catastrophe in history, according to Swiss Re (Wood, 2012). Similarly, Deloitte (2013) reported that of the last 30 years, 2011 was the most costly in terms of real annual insured losses in Australia due to the Queensland floods and Tropical Cyclone Yasi.

2.3.4.2. Data collection

Creswell (2013) writes that in conducting qualitative research, a good study employs rigorous data collection procedures. This means the researcher collects multiple forms of data and spends adequate time in the field. Data collection needs to be structured to be consistent within the assumptions and characteristics of qualitative research such as: evolving design, the presentation of multiple realities, uses the researcher as the instrument of data collection and has a focus on participants' views.

A case study's in-depth understanding is achieved through collecting many forms of qualitative data. Yin (2009) recommends collecting six types of information: documents, archival records, interviews, direct observations, participant observation and physical artefacts. Creswell (2013) classifies the forms of qualitative data into four types: observations, interviews, documents and audio-visual materials. Relying on one source of data is not usually sufficient.

A key factor in the data collection strategy in this study was the desire to provide a unique angle on the tax policy responses to natural disasters by interviewing the actual tax policy makers involved. For this reason, individuals affected by the respective disasters (other than where they also played a role in the policy advice provided) were not interviewed for the research. A survey of the tax policy literature finds many examples which discuss tax policy in practice. For example, Kay (1990), McLure and Zodrow (1994), Messere, de Kam, and Heady (2003) and Slemrod (1999). However, despite the fact that the formation

of tax policy is a social process and analysing tax policy without considering its social context can mean that theory is somewhat divorced from the real world, research on tax policy does not generally engage with those involved in the formulation of policy in practice. The few examples that do exist are predominantly limited to environmental tax policy (Barradale, 2010; Beuermann & Santarius, 2006; Deroubaix & Lévéque, 2006; Dresner, Jackson, & Gilbert, 2006; Kasa, 2000; Stigson, Dotzauer, & Yan, 2009), or only capture the perspective of one group involved in the policy process such as legislators (Hahn, Toumey, Rayens, & McCoy, 1999; Manley, 1968), officials (Bergman, 2003), taxpayers (Hasseldine & Li, 1999; Hessing, Kinsey, Elffers, & Weigel, 1988), businesses (Dresner, Dunne, Clinch, & Beuermann, 2006; Tassey, 2007), or tax practitioners (Rabino, 1980; Spilker, Worsham Jr, & Prawitt, 1999).

There are no studies which look at tax policy making from the perspective of tax policy makers in periods of economic and social instability like a natural disaster. As such, there is a gap in the literature regarding the real life experiences of tax policy makers. This is where the approach in this thesis has advantages. It offers an understanding of tax policy in action, located in the everyday language of tax policy makers and using case studies to understand real life experiences (Chua, 1986). The approach complements traditional tax research which constructs rigorous but abstract models of tax policy. Conducting research from multiple perspectives allows researchers to seek multiple facets of complex and ambiguous phenomena, like tax policy (Lewis & Kelemen, 2002).

The timeliness of the cases selected and the researcher's personal experience as a New Zealand tax policy advisor, allowed access to the relevant tax policy makers in order to gain sufficient information to present an in-depth picture of each case from the perspective of the policy makers involved.

The primary data source for this thesis was therefore semi-structured interviews with those involved in the development of tax policy advice for these events, such as tax policy officials (who formulated and provided advice on the responses), representatives from professional accounting organisations and the Big Four accounting firms (who raised policy issues, were consulted on possible responses and submitted on draft responses) and tax academics (who commented on the responses and/or who had a detailed knowledge of policy development in the particular jurisdictions). The respondents are referred to in this thesis as policy makers. In terms of tax policy officials, policy representatives from both

the Australian and New Zealand Treasuries and Tax Authorities, including state officials, were interviewed. In Australia, as discussed in section 7.3, the Treasury, in conjunction with Australian Tax Office (ATO) officials, formulates and provides tax policy advice to government. In New Zealand, as discussed in section 5.3, both Treasury and the Inland Revenue Department (IRD) play a role in tax policy development. Operational staff involved in the tax responses were also interviewed in both jurisdictions so that data on the full range of tax responses (both administrative and legislative) was collected.

Initially a wider range of participants in the policy process were considered and interviewed, including politicians, representatives from wider government and the insurance industry. However, the spread of respondents was unequal between the two jurisdictions (e.g. it was possible to interview political contacts in New Zealand but not Australia) making cross-case comparison more difficult. In addition, while those in the wider group had a view on the tax responses made they were not closely involved in the policy advice given. For this reason, following discussion at a PhD colloquium, a decision was taken to limit the analysis to tax policy officials, tax practitioners and tax academics involved in providing advice and commenting on the tax policy responses. These categories are also consistent with those used in the few cases where comparisons have been made of professional opinions about tax policy (for example, see Lim, Slemrod, & Wilking, 2013; Slemrod, 1995).

The main participants in the policy process for these events were identified and contacted with the aim of collecting a "purposive sample" (Berg, 2009, as cited in Archel, Husillos, & Spence, 2011, p.333). This strategy is based on informational rather than statistical considerations with the purpose being to maximise information as opposed to facilitating statistical generalisation (Archel et al., 2011). Participants were selected on the basis of their differing roles in the tax policy development process to expand the variability of the sample, recruited through a personal network of tax professional contacts and interviewed in their places of work. The aim was to try and gain as complete a picture as possible of how tax policy principles were applied in responding to the two natural disasters and whether the ability to respond in line with standard tax policy principles was linked to the strength of the existing tax policy framework. At the end of each interview participants were asked if there were other 'policy makers' who should be interviewed for the study as a check to ensure that all relevant policy makers were included.

An emergent design (and sampling strategy) approach was applied. Interviews were undertaken after an initial analysis of policy documents produced at the time of each natural disaster and subsequent to undertaking a pilot interview. After analysing the first round of interviews, further interviews were held to interrogate the reliability of initial interpretations, go into more detail on specific themes and expand the sample group. The interviews were guided by an interest in exploring the rationale behind the policy responses adopted, the dynamics of the policy process and actor perceptions regarding policy outcomes.

Interviews were semi-structured in order to allow the interviewer "to ask a series of regularly structured questions, permitting comparisons across interviews, and to pursue areas spontaneously initiated by the interviewee" (Berg, 2009, as cited in Archel et al., 2011, p.333). An interview guide was developed and followed during each interview so that "the same basic lines of inquiry [were] pursued with each person interviewed" (Patton, 2002, as cited in Archel et al., 2011, p.333). The guide was developed following an analysis of literature on the development of tax policy, pilot interviews, and an initial analysis of the related policy documents.

As well as interviewing tax policy makers, it is also important for the researcher to have contextual information available to describe the setting for the case (Creswell, 2013). The secondary data sources for the case studies included a range of documents prepared by tax officials, tax practitioners and tax academics on the tax policy responses. These were also identified through an emergent design, aided by the personal experience of the researcher as an advisor on the New Zealand tax policy changes. Table 2.1 summarises the primary and secondary data sources used for this thesis (collected until five years after each event).

Table 2.1 – Summary of data sources

	Interviews	Legislative documents	Policy advice	Formal reports and evaluations	Technical guidance	Submissions	Academic literature	Media	Total
Canterbury earthquakes:									
Tax Officals	10	3	70	3	4	0	9	0	99
Tax Practitioners	10	0	0	1	0	1	20	2	34
Tax Academics	8	0	0	3	0	0	17	0	28
Total	28	3	70	7	4	1	46	2	161
Queensland floods:									
Tax Officials	7	7	11	4	5	0	1	0	35
Tax Practitioners	4	0	0	2	1	2	5	0	14
Tax Academics	5	1	0	0	0	1	10	0	17
Total	16	8	11	6	6	3	16	0	66
TOTAL	44	11	81	13	10	4	62	2	227

The focus of this research is on policy responses to specific events. In Australia, the last relevant policy change was in 2015. In New Zealand, the last relevant policy changes were enacted in July 2016. Data collection has therefore been undertaken up until these dates.

2.3.4.3. Data analysis

The aim of the case study method is to present an in-depth understanding of a case or cases. This includes a case description (history, chronology of events or a day-by-day portrayal of the activities involved). After this description, the analysis focusses on key issues or themes in order to understand the complexity of each case.

A good study employs a rigorous approach to data analysis (Creswell, 2013). The researcher conducts multiple levels of data analysis, from the narrow codes or themes to broader interrelated themes to more abstract dimensions. The analysis is rich in the context of the case or setting in which the case presents itself (Merriam, 1988, as cited in Creswell, 2013). Following completion of analysis, the researcher validates the accuracy of the account using one or more procedures for validation, such as member checking, triangulating sources of data or using a peer or external auditor of the account.

This thesis has adopted an 'interpretive-descriptive' approach to data analysis. This approach is appropriate where the research is primarily concerned with accurately describing what was understood and reconstructing the data into a recognisable reality for the people who have participated in the study (Maykut & Morehouse, 1994; Strauss & Corbin, 1990). In this case, the aim is to understand more about and describe the tax responses to natural disaster. Specifically, Glaser and Strauss's (1967) constant comparative method of data analysis was adopted. This methodology also draws on the work of Lincoln and Guba (1985) and Taylor and Bogdan (1984).

The constant comparative method of data analysis provides an audit trail of the research (research journal, focus of inquiry outline, original interview transcripts and field notes, original policy documents, unitized data from interviews and policy documents, and category analysis) which allows others to follow the research approach taken from outset to outcomes.

Using NVivo software, each source has been separately recorded and then coded by unit (individual sections of meaning) using prior theory on the phases of natural disaster responses, and recurring phrases and themes in the data. After preliminary coding, the

provisional categories (nodes) were refined by developing a category rule which captured the meaning contained in coded units. The remaining data was then coded based on these rules for inclusion. Once all units had been categorised, categories were reviewed for any overlap and ambiguity. Tools from NVivo were then utilised to test the coding structure (for example, word frequency checks) and comparative queries were run to contrast the interview responses by classification (role within the policy process).

An interrogation of the related policy documents was undertaken in the same manner as for the interview transcripts. Following analysis, draft findings were presented to interviewees who were asked to comment (see the discussion on Member Checks below).

The final interpretative phase is where the researcher reports the meaning of the case study (Creswell, 2013; Lincoln & Guba, 1985; Yin, 2009). In a collective case study, one analytic strategy is to identify issues within each case and then look for common themes that transcend the cases (Yin, 2009). A typical format is to first provide a detailed description of each case and its themes (within case analysis) followed by a thematic analysis across the cases (cross-case analysis). This is the strategy adopted in this thesis.

The within-case analysis was completed in two parts. As the first aim of this research was to provide a narrative of responses to natural disasters as a useful resource for future tax policy makers, a case context and the full set of tax response nodes is summarised for each case study (in chapter four for the Canterbury earthquakes, and in chapter six for the Queensland floods). This provides a rich thematic description of the complete set of tax responses made to each natural disaster and is consistent with a study investigating an under-researched area (Braun & Clarke, 2006).

The second aim of this research was to assess how responses to natural disasters relate to the strength of the existing policy framework. For this section of the study, a smaller subset of nodes was chosen. This allowed for more in depth analysis and description of the tax policy approach taken for key responses in each case study (Braun & Clarke, 2006; Thomas, 2006) to help answer this second research question. This analysis is set out in chapter five for the Canterbury earthquakes and in chapter seven for the Queensland floods.

Selection of nodes or themes requires researcher judgement, with the importance of a theme not necessarily dependent on quantifiable measures but rather on whether it captures something important in relation to the specific research question (Braun & Clarke, 2006;

Thomas, 2006). For each case study, nodes for further analysis were selected to provide a maximum variation sample (Maykut & Morehouse, 1994) to understand how tax responses to natural disasters relate to the strength of the existing tax policy system. This involved selecting nodes to represent responses at all three phases of a disaster (pre-disaster, immediate response and recovery) and to show examples of good and bad tax policy. Selection was also based on those responses of most importance to policy makers (determined by the number of sources and references), and by the ability to separate out policy makers' comments on individual responses. This meant that those nodes with multiple tax policy responses were not selected. Finally, the links between nodes were considered, for example, where responses were related, only one of these was selected for further analysis.

The cross-case analysis was also completed in two parts. The first aim of this research was descriptive - to provide a narrative of responses to natural disasters as a useful resource for tax policy makers (Yin, 2012). An analytic strategy for a descriptive case study question involves developing a descriptive framework for the analysis, with ideas for the framework coming from an initial review of the literature (Yin, 2009). The data is then systematically organised into hierarchical relationships, matrices or other arrays (Miles & Huberman, 1994, as cited in Yin, 2012). This is done by assembling word tables to display data from the individual cases and searching for patterns across them.

The second aim of this research was to assess how tax responses to natural disasters relate to the strength of the existing tax policy system. This aspect of the research has an explanatory purpose – to present data on a cause-effect relationship and explain how or why events happened (Yin, 2012). The recommended analytic strategy for an explanatory case study question is to:

- outline the expected relationship (in this case between the strength of the existing tax policy framework and policy process, and the types of tax responses made to natural disasters);
- compare this to the findings from each individual case study; and
- examine possible rival explanations (Mills, Durepos, & Wiebe, 2010).

The cross-case analysis for both research objectives and questions is set out in chapter eight.

2.3.5. Limitations of the research methodology and features to address these

This final section of the research methodology outlines potential limitations along with measures built into the research design to address these.

Research which is based on understanding an issue from the perspective of the participants is criticised for its assumption of social order, lacking an evaluative dimension other than the extent of agreement amongst participants (Chua, 1986), and the potential for subjectivity in the analysis. Subjects are selected by the researcher (such as a focus on policy makers as opposed to individuals affected by natural disasters) and data is interpreted with the particular beliefs of the researcher (such as the experience of the researcher as an advisor on the New Zealand tax policy changes). Researcher awareness of prejudices, viewpoints or assumptions which may be influencing what one is trying to understand assists in reducing subjectivity. In addition to this, measures such as triangulation and member checks have been built into the research design to mitigate limitations and increase the validity of the research results. These are discussed below.

2.3.5.1. Triangulation

In qualitative research, the criteria of internal and external validity, reliability and objectivity are replaced by terms such as credibility, transferability, dependability and confirmability (Denzin and Lincoln, 1994, as cited in Armstrong, Gosling, Weinman, & Marteau, 1997). One strategy for addressing these concepts is triangulation, where diverse confirmatory instances lend weight to findings.

One form of triangulation involves the use of a variety of data sources (Denzin, 1978, as cited in Armstrong et al., 1997). This study collects data from original policy documents in combination with interviewing the policy makers involved. Using multiple data sources helps to address subjectivity within particular sources (Maykut & Morehouse, 1994). The simultaneous analysis of interviews and policy documents is a reliability test (Archel et al., 2011). "The intertwined analysis of both the interviews and the documents allows us to understand the approaches adopted by the social actors involved ... and offers an explanation for institutional outcomes" (Archel et al., 2011, p.327).

Another form of triangulation is the replication of analysis. Qualitative methodologists stress the transparency of their technique, carefully documenting all steps so that they can be 'checked' by another researcher. While the ability to replicate the analysis is an agreed part of the qualitative approach, and is provided for in this study, the literature is less clear

on when and how any reanalysis of data might be done. Denzin (1978, as cited in Armstrong et al., 1997) discusses the use of different researchers or evaluators. Mays and Pope (1995, as cited in Armstrong et al., 1997) claim that the analysis of qualitative data can be enhanced by organising an independent assessment of transcripts and comparing agreement between the raters. The degree of agreement amongst raters (inter-rater reliability or inter-rater agreement) can then be measured statistically to score how much homogeneity, or consensus, there is in the ratings given by judges.

A contrary position is taken by Morse who argues that the use of 'external raters' is more suited to quantitative research as expecting another researcher to have the same insights is unrealistic: "No-one takes a second reader to the library to check that indeed he or she is interpreting the original sources correctly, so why does anyone need a reliability checker for his or her data?" (Morse 1994, as cited in Armstrong et al., 1997, p.599). Armstrong et al. (1997, p.598) reviewed the literature on the place of inter-rater reliability in qualitative research and concluded that in general qualitative methodologies do not make explicit use of the concept of inter-rater reliability to establish the consistency of findings. They then conducted an empirical study assessing inter-rater reliability in qualitative research. While demonstrating consensus in the themes identified by different researchers, they concluded that "all accounts are unique in that they represent the differing perspectives of different observers" and the:

...technique of triangulation – at least by using different researchers - is limited by the processes inherent in qualitative data analysis. ...all analysis is a form of interpretation and interpretation involves a dialogue between the researcher and data in which the researcher's own views have important effects. (Armstrong et al., 1997, p.605).

This would be particularly true in this case given the experience of this researcher as an advisor on the New Zealand tax policy changes. As such, consistent with the majority position above, this thesis provides for future analysis by other researchers but does not incorporate this analysis within the current study.

2.3.5.2. Member checks

Another technique used by qualitative researchers to help improve the accuracy, credibility, validity, and transferability of a study is member checking (Maykut & Morehouse, 1994). This is undertaken during the interview process and at the conclusion

of the study to increase the validity of a qualitative study. Member checks serve to decrease the incidence of incorrect data and the incorrect interpretation of data, and help to provide findings that are authentic, original and reliable. Member checks also offer an opportunity to volunteer additional information which may be stimulated by the review process.

In an informal sense, member checks have been carried out throughout the conduct of the fieldwork for this study. During an interview, the researcher has constantly checked her understanding by utilising techniques such as paraphrasing and summarisation for clarification. After the conclusion of each interview, research participants were asked if draft interview transcripts accurately described their experience.

More formal member checks were also completed at the conclusion of the study by sharing the interpretive findings with the participants involved. This was a useful exercise as it allowed participants to analyse the findings and confirm that they reflected their views, feelings, and experiences. It also led to the discovery of some additional information regarding the tax responses made in response to the Queensland floods.

2.3.5.3. Case identities

A challenge with this type of research is whether a case study and its informants should be identified. Yin (2009) in discussing the issue notes that the most desirable option is to disclose the identities of both the cases and the individuals as it allows the reader to recall other information about each case and for the cases to be more readily reviewed. However, anonymity may be justified to protect a case and its participants or where the issuance of the case report could impact those studied (such as tax policy officials). In these situations a compromise can be to only name the case but not the participants, name the participants but not attribute comments to a single individual or report only the cross-case comparison.

A key aim of this study is to provide a unique angle on the tax policy responses to a natural disaster by interviewing the actual tax policy makers involved. As part of gaining human ethics approval it was agreed that respondents would be offered a choice as to whether their opinions would be attributed and opinions and data would be reported in a way so that such individuals were not identifiable. Refer Appendix A for a copy of the human ethics approval, interview guide, information sheet and interview consent documents. There was a mix of respondents who chose anonymity versus those who were comfortable with their views being identified. This raised a consistency issue and also meant, given the

small community of tax policy makers, that by identifying some but not all those involved that it might be possible to identify those respondents who had opted for anonymity. There was also risk that identifying views from certain participants could impact on how the analysis was interpreted due to individual influence in the policy making process. For this reason, a choice was made to identify the cases and the type of policy maker (official, practitioner or academic) but not the specific person commenting on the tax policy responses.

2.4. Summary

This chapter has outlined the research design, including the underlying assumptions and theoretical perspective, research methodology, research methods and limitations of the approach, including features to address these. The next chapter situates the analysis within the relevant literature.

3. Literature Review

3.1. Introduction

Before considering the extent to which Australia and New Zealand followed the principles of good tax policy when responding to the Queensland floods and Canterbury earthquakes, it is necessary to understand what constitutes such policy under normal circumstances. This chapter outlines the principles of good taxation set out in the economic literature and recent high profile tax reviews, along with other situational factors that must be taken into account in applying these principles, with an emphasis on the natural disaster context. This chapter also outlines the role of taxation in how agents respond to a natural disaster at each phase and how that role fits with the standard tax policy principles. Finally, the chapter examines the literature on whether standard tax policy principles should apply when responding to a natural disaster.

3.2. Principles of good taxation

Connolly and Munro (1999) recognise Musgrave's (1959) seminal work on public finance as identifying a set of generally agreed principles for a 'good' tax system. Musgrave's principles of revenue adequacy, equity, efficiency, ease of administration and compliance, and consistency with fiscal policy have been broadly accepted as those defining good tax policy. "The theory of public finance: a study in public economy" (Musgrave, 1959) has been cited over 5000 times, by authors such as Auerbach and Hassett (1999), Heady (1993), Steinmo (2003) and Stern (1984). Recently, a number of high profile tax reviews have also largely adopted these same principles, as illustrated in Appendix B. This demonstrates that Musgrave's principles remain relevant for assessing tax policy. However, in applying these one must take account of political influences, practical limitations and policy intent, as standard policy principles are insufficient guidance on their own (Bird & Zolt, 2003; Musgrave & Musgrave, 1989).

3.3. Political influences

It is important to consider the policy process, as economic theories seldom take context into account (Hansen, 1983) and tax policy reflects political factors (Bird & Zolt, 2003; Mirrlees, 2011). Similarly, natural disasters occur in a political space and the literature on disaster prevention and response has acknowledged the political dimension of disasters (Cohen & Werker, 2008). In respect of a natural disaster, political commitments can influence choices over whether to fund or incentivise risk mitigation activities, and impact

judgements over the tax treatment of immediate relief measures and decisions on how to fund recovery, rehabilitation, and reconstruction activities in the post-disaster phase. Where a country has a decentralized political tax system there will be specific implications for tax policy (Bird & Zolt, 2003; Kay, 1990). For example, the distinction between a federal and unitary government has implications for tax policy in terms of the level of political decentralization in a particular country. Natural disasters are geographic events. Local choices in the pre-disaster phase (for example, local building and land use regulations, local attitudes to insurance and decisions about whether to invest in risk reduction measures) can greatly impact the fiscal cost of a natural disaster. Depending on the level of tax decentralization, the cost of the natural disaster, affected by these local decisions, may need to be borne by central government.

The extent of tax decentralization depends on the degree of local (or regional) control over four factors: ownership of tax revenue, choice of tax base, choice of tax rate, and tax administration (Bird & Zolt, 2003). True tax decentralization requires control over the amount of revenue (tax rate and tax base) and means by which this is raised (tax administration) and is seen as having a number of potential benefits:

- better service delivery, as local officials have better information on what people want.
- improved local voice in deciding the level and quality of services and in demanding improvements where they are needed;
- better accountability, as local officials can be held more accountable by the local population; and
- improved ability to accommodate the varying interests of different ethnic groups (Bird & Zolt, 2003).

However, political decentralization also has disadvantages, including limited capacity to generate sufficient revenues, difficulties of taxing economic activity that can flee from the local area or be easily hidden, and challenges with determining which authority has the right to tax a transaction (Kay, 1990). Local and regional governments, like national governments, must have adequate resources. Unfortunately, this is an area in which practice falls far short of what is needed, particularly when countries are really attempting

to devolve significant public sector responsibilities to sub-national levels of government (Bird & Zolt, 2003).

In respect of preparing for and responding to natural disasters, the level of tax decentralization could have a number of effects. It may impact on the ability and willingness of local or state governments to take preventative measures. For example:

- Does the local region have the revenues to fund preventative infrastructure?
- Is the local region incentivised to fund preventative measures if funding for post disaster responses will come from central government?
- Does the local region have sufficient funds to support citizens in the immediate aftermath of a disaster and longer-term in terms of rebuilding key infrastructure?

The need to factor in political influences has been addressed in this work by the choice of a qualitative research approach. In particular, as discussed in chapter two, the use of semi-structured interviews with those involved in the development of tax policy advice provides an understanding of the social and political context in which the policy changes were made. The role of tax decentralization has also been factored into the case study analysis, with both federal and state officials interviewed in the research and tax responses at both levels of government considered in the research.

3.4. Practical limitations

Tax design must also take into account practical limitations and administrative capacity because economic concepts differ in how easily they may be applied in real life (Kay, 1990). Practical considerations include the robustness of the tax system, risk of tax avoidance and tax evasion, and the costs of tax compliance and administration. The level of electronic capability within a particular jurisdiction is also relevant as this opens up new ways that tax authorities can administer tax law, collect tax revenues and interact with the wider community (OECD, 1998). The need to take practical settings into account applies generally but is particularly relevant to natural disasters. Settings which might operate well under normal conditions might not do so when responding to a natural disaster; e.g., restrictions on information sharing between government departments, reliance on face-to-face interactions between tax authorities and taxpayers, and strict record-keeping requirements.

3.5. Intent

Design choices are also influenced by the purpose of a particular tax. In general, taxes can be categorised into two types: revenue and corrective taxes, with both types relevant when considering tax policy responses to a natural disaster.

Revenue taxes are necessary to fund preventative activities and restore public finances and meet the public cost of natural disasters. Revenue taxes fund government spending by raising sufficient funds (Bird & Zolt, 2003; Kay, 1990; Tax Review 2001, 2001; Tax Working Group, 2010). In doing so, a long-term view is advocated. Tax systems should not normally be altered on a temporary basis to meet current year shortfalls, as frequent tax changes increase administration, compliance and efficiency costs (Bird & Zolt, 2003).

Corrective taxes may be relevant when considering risk reduction measures that might be taken in advance of a natural disaster (such as earthquake strengthening or taking out private flood insurance) or as part of economic redevelopment in the post-disaster phase. Corrective taxes are designed to pursue social or economic outcomes by promoting or discouraging certain behaviours (Kay, 1990; Tax Review 2001, 2001). This makes sense where the level of a particular activity is not socially desirable. When this occurs, governments may regulate, legislate, introduce direct subsidies or use corrective taxes (Bird & Zolt, 2003).

Corrective taxation is commonly applied in response to market failures associated with externalities or public goods (Kay, 1990). It usually takes the form of tax incentives to deliberately distort market signals about the relative attractiveness of activities (Tax Review 2001, 2001). However, there are concerns that the use of tax incentives may derive from paternalism (Kay, 1990) leading to over investment in subsidised activities (Bird & Zolt, 2003; Tax Review 2001, 2001), increased administrative and compliance costs, lobbying for further incentives and opportunities for tax avoidance (Bird & Zolt, 2003; Tax Review 2001, 2001), meaning costs may outweigh potential benefits.

3.6. The role of taxation in how agents respond to a natural disaster

In thinking about the role of taxation in how agents respond to a natural disaster, the literature generally identifies different stages in individual and government responses, each with a range of activities.³ For example see Kerstein (2006), Runyan (2006), Skoufias

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³ These phases do not have clear boundaries but overlap chronologically as well as in terms of ongoing activities (Todd & Todd, 2011).

(2003) and Webb et al. (1999). While there are some differences in terminology and debate about when a response begins, most writers discuss prevention, response and recovery phases.

Appendix C provides a summary of the issues that individuals and governments face in each phase, using Todd & Todd's (2011) three phase model (pre-disaster, disaster response, and post-disaster recovery). As natural disasters expose the cumulative implications of many earlier individual and collective decisions (World Bank, 2010), this summary of issues is helpful for identifying the role of tax policy in a disaster response. The Todd & Todd (2011) model was chosen as it was consistent with the general literature on phases of a disaster response and also from a recent World Bank report so suitable as the basis of an international comparison of disaster responses.

3.6.1. Pre-disaster preparation

Disaster reduction and mitigation activities can lessen disruption caused by a natural disaster, save lives and protect property. For this reason, a variety of measures should be taken in advance. These include: risk identification, risk reduction, and risk transfer measures (Laframboise & Loko, 2012; Todd & Todd, 2011), as outlined in Appendix C. However, a general theme in the literature is the lack of disaster preparedness by private firms and individuals (Spittal, McClure, Siegert, & Walkey, 2008). Governments may be able to reduce losses where individuals under-prepare for disasters (Sawada & Shimizutani, 2008). However, this requires governments to act in advance, rather than waiting until after a natural disaster has occurred (Phaup & Kirschner, 2010; Popp, 2006). In doing so, there may be a role for tax policy.

Specifically, taxation has two distinct roles in the pre-disaster phase. The first is to raise revenue to fund future disaster responses, including mitigation activities. In this case, revenue should be raised as efficiently as possible (a tax system which is efficient, with minimal impact on economic decisions, and which is easy to administer and comply with). A key question in doing so is who should bear the burden of tax revenue? Disaster reserves must be paid for by current taxes, which may impact on the amount that individuals and firms invest in disaster mitigation. Where governments choose to finance the cost of disasters by borrowing, this will need to be repaid from future taxes. If local and state governments are responsible for making preventative infrastructure investment, funding

and maintenance decisions (Phaup & Kirschner, 2010), the tax system should provide sufficient revenue to fund these activities.

The second role that taxation might play is to incentivise property owners and others to make the desired level of pre-disaster investment. In this case, tax policy deliberately aims to distort the investment decision by choosing tax settings that shift investment in the desired direction and by the desired amount. Considering the types of pre-disaster preparation, the role of tax policy with respect to risk identification by firms and households is likely to be limited. Where tax policy choices are likely to have real impact (and may therefore be either consistent or inconsistent with standard tax policy principles) is on the risk reduction and risk transfer activities that private households and firms take; for example, governments may choose to promote insurance coverage at an individual and firm level through the tax system (Laframboise & Loko, 2012; United Nations, 2007).

3.6.2. The immediate response phase

Tax policy's role in the response phase is to fund immediate relief.⁵ Governments must make decisions regarding the tax treatment of emergency support payments and may also allow individuals or firms to defer (or disregard) tax payments (Phaup & Kirschner, 2010; Venn, 2012). Tax policy settings also play a role in charitable relief, for example tax incentives for donations and tax exemptions for charitable entities. There are unique challenges arising from delivering policies and programmes in the aftermath of a natural disaster. Similar challenges are likely to apply to delivery of tax responses, and are discussed below.

3.6.2.1. Communication

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When large numbers of people have been displaced from their homes and communication facilities have been damaged, one of the first challenges for policy implementation is to let people know about the types of assistance (including tax relief) that are available and ensure that contact with existing clients is not lost (Venn, 2012). Typically a multi-pronged communication strategy is used (Frost, 2013; Venn, 2012). Information on assistance programs should be clearly communicated, recognising firms and individuals are dealing with many other challenges arising from a natural disaster (Frost, 2013). It is also

⁴ Governments may also choose to obtain insurance at a national level, the cost of which will need to be financed from tax revenues.

⁵ This phase begins immediately after a disaster strikes and encompasses both immediate relief and medium-term responses which attempt to begin to re-establish functionality of systems and infrastructure (Todd & Todd, 2011).

important that there is good communication between agencies (Frost, 2013; Laframboise & Loko, 2012; Todd & Todd, 2011; World Bank, 2010). Agencies should have coordinated arrangements for administering funding, application processes and points of contact (Frost, 2013). This means flexible administration and modern tax communication systems which help citizens cope with a natural disaster, including the ability for tax authorities to share taxpayer information and work with other government agencies to assist in responding to a natural disaster.

3.6.2.2. Resourcing

It is important to have an adequate number of service-delivery staff to quickly process a large number of requests for assistance, including requests for tax relief. As existing staff or assets may have been damaged in the disaster, agencies may need to bring in staff from non-affected regions and set up temporary offices (Venn, 2012).

3.6.2.3. Identification

The process of establishing identity and eligibility for assistance can be hampered if documents have been destroyed or are inaccessible. As most claimants apply in good faith, it is important to avoid cutting off assistance for those who genuinely need it but are unable to establish their identity or eligibility. Governments have helped people without documents access assistance by temporarily suspending usual procedures, using existing government databases to cross-check eligibility (such as taxpayer records), replacing government documents free-of-charge, relying on personal testimony and allowing claimants extended periods to confirm their identity and eligibility (Venn, 2012). However, despite these steps there is a risk that people will fraudulently claim assistance. Governments have responded to this risk by post-event auditing of claimants, legal prosecution and public naming of those caught making fraudulent claims (Venn, 2012).

3.6.3. The post-disaster phase

An assessment of whether disaster responses follow standard tax policy principles needs to take account of the wider fiscal position. Natural disasters can place huge cash demands on governments at short notice and policymakers must decide to finance emergency-related spending and balance-of-payments shortfalls, or to reduce or divert spending to cover immediate needs (Laframboise & Loko, 2012). Despite measurement challenges, knowing a disaster's effects on fiscal sustainability is important for making informed decisions. Even if a country can borrow to fund a disaster response, the debts must later be serviced

by future taxpayers (Phaup & Kirschner, 2010; World Bank, 2010). Where governments have unsustainable fiscal positions, increasing borrowing in response to a disaster can also increase the pain and necessity for future policy adjustment (Anderson & Sheppard, 2009; Auerbach & Gale, 2009). Similarly, seignorage has a number of negative consequences (Blanchard, 2009). The alternative (or in combination with the above options) is for governments to rely on taxation.

As a result, following a natural disaster, national and local governments need to establish a macroeconomic management scheme to tackle fiscal and current account effects, such as lower tax revenues, higher public spending, lower exports and higher imports (World Bank, 2004). In general, the macroeconomic policy response to a major catastrophe will involve some combination of reserves drawdown, new financing and macroeconomic adjustment (Laframboise & Loko, 2012). The right mix will depend on a range of factors, including whether the government had taken steps to self-insure or privately insure, whether the impact of the natural disaster is expected to be temporary or permanent, the strength of the country's fiscal position and external balance, the exchange rate and the availability of domestic and external financing (Laframboise & Loko, 2012).

3.7. Fit with standard tax policy principles

Having understood the role that tax policy might play in a natural disaster, it is possible to stand back and consider how that role fits with the standard tax policy principles.

3.7.1. Revenue adequacy

Revenue adequacy is important when considering the funding of mitigation activities. Post disaster, it is an important consideration for governments contemplating how to finance both initial responses and longer-term rebuilding activities. Natural disasters also have a more general impact on public finances, which raises questions as to whether, post disaster, the revenue yield remains adequate.

3.7.2. Equity

The principle of equity needs to be considered as part of assessing tax responses to a natural disaster as those with less resources are especially vulnerable to natural disasters. They are more likely to live in areas known to be vulnerable (as they may be priced out of safer areas), with their assets more likely to be exposed to catastrophic risk (Freeman et al., 2003). As such, tax policy choices over the level of redistribution play a role in how natural disasters affect lower socio-economic groups. Equity also needs to be considered

when assessing post-disaster tax responses. The way funds are raised to finance initial and longer-term responses will have distributional impacts, including whether, post disaster, the revenue yield remains adequate to provide services to those on lower incomes.

Adam Smith (1904) identified equality as a key principle of tax design. Musgrave interpreted this as the principal of equity – that the distribution of the tax burden should be equitable (Musgrave & Musgrave, 1989). Later tax reviews have described this as the principle of fairness and stressed the need to understand who bears the consequences of a tax in practice, as the economic impact will often be different from its statutory impact (Tax Review 2001, 2001).

In adopting and expanding on Musgrave's principle of equity, recent tax reviews have identified a number of characteristics of an equitable or fair tax system:

- *Vertical equity*. The tax system should reflect differences in ability to pay. This generally requires that tax burdens be distributed at least somewhat progressively (Henry et al., 2010; Tax Review 2001, 2001).
- *Horizontal equity*. This requires that people in the same economic position should bear the same tax (Henry et al., 2010; Tax Review 2001, 2001).
- *User pays or the 'benefit principle'*. Taxes should be allocated in accordance with the benefits received. However, there can also be practical challenges in identifying the primary beneficiaries of many government expenditures and the principle has limited application where explicit policy decisions are made to redistribute income or provide universal entitlement (Tax Review 2001, 2001).
- *Transitional fairness*. This concept expands the concept of horizontal equity to require a tax system to be fair, not only in terms of avoidance of discrimination, but also in terms of procedure. The tax system should not impose unexpected losses and should minimise windfall gains (Tax Review 2001, 2001).
- Temporal equity. The Tax Working Group introduced a temporal element, noting that the timeframe is also important, including how equity compares over peoples' life-times (Tax Working Group, 2010). Equity may be applied across generations as well as across individuals (Musgrave & Musgrave, 1989).

• *Transparency*. The tax system should have a process and institutional context which is seen as fair (Mirrlees, 2011). To some extent, any tax will face charges of unfairness. However, rather than trying to resolve every complaint, policy makers should be transparent about the objectives, arguments, evidence and consequences of proposals (Mirrlees, 2011).

Neutrality between forms of activity is discussed under the concept of efficiency in Appendix B.

3.7.3. Efficiency

Where tax policy is not efficient it may impact on individual or firm decisions on whether to move or mitigate risk, thereby increasing the costs of a natural disaster. For example, property transaction taxes can reduce property sales and encourage undervaluation (World Bank, 2010). Governments also need to raise funds for responding and rebuilding in the most efficient manner, thereby minimising (as far as possible) impediments to economic growth.

3.7.4. Minimising compliance and administration costs

In the immediate response phase, tax compliance and administration costs need to be considered. There are unique challenges arising from delivering policies and programmes in the aftermath of a natural disaster, due to the scale and speed of the response required, as well as the difficult environment in which these must be delivered (Frost, 2013; Venn, 2012). Similar challenges are likely to apply to delivery of tax responses, with a well-operating tax system and its administration helping the economic and social recovery of the affected region and country (IRD, 2013a).

3.7.5. Consistency with fiscal policy

Finally, when thinking about tax responses to a natural disaster, it is important to consider tax policy design within the context of broader fiscal policy. Effects of a natural disaster on individuals and firms translate into large and long-lasting macroeconomic impacts (Freeman et al., 2003). Depending on how governments respond, natural disasters can have a negative impact on the fiscal accounts and levels of public debt. Typically, fiscal revenues (taxation) decrease as economic activity declines. At the same time, emergency relief and reconstruction lead to a surge in government expenditures. If governments borrow to fund the deficit, public debt ratios rise. Knowing a disaster's effects on fiscal sustainability is important for making informed decisions, as while governments can

borrow to fund a disaster response, they must ultimately pay these funds back, either from taxes or spending cuts elsewhere (World Bank, 2010).

3.8. Differing tax policy in response to a natural disaster

While it is possible to see how standard tax policy principles play a role in response to natural disasters, a key question in assessing whether Australia and New Zealand followed standard tax policy principles when responding to the Queensland floods and Canterbury earthquakes, is whether they should do so?

The topic of natural disasters and their impact on tax policy is an area which is neglected in the literature (Cavallo & Noy, 2011; Cohen & Werker, 2008). In particular, there is very limited discussion on business responses (Runyan, 2006; Webb et al., 1999), despite the issues identified for firms in Appendix C, and the literature that does exist is dominated by work undertaken in the United States (Dahlhamer & Tierney, 1996; Runyan, 2006; Webb et al., 1999).

The literature does discuss the impact of natural disasters on government policy generally (Freeman et al., 2003; Todd & Todd, 2011; United Nations, 2007; World Bank, 2004, 2010). However, there is a gap in the literature comparing international tax responses to natural disasters and considering the impact of natural disasters on tax policy.

The existing tax and natural disaster literature tends to focus on:

- A single disaster tax issue, such as: Omura and Forster (2011) on the relationship between charitable activities and tax; Watanabe (2013) on the relationship between disaster risk and the tax system; Maples (2012a), Nagasaka (2008) and Suganuma (2006) on the tax treatment of earthquake strengthening; and Eiby (1975), Kozuka (2012a, 2012b), and Steven (1992) on national disaster insurance.
- The taxation implications of individual natural disasters, such as: Burgess (2011), the IRD (2012i, 2013a, 2014a, 2014c), Maples (2012a); Maples and Sawyer (2015) and Poppelwell, Sun, and Bickers (2015) on the Canterbury earthquakes; Sherlock, Lunder, Liu & Klein (2010) on the Gulf of Mexico Oil spill; Baldwin, Plunkett & Herring (1990) in respect of Hurricane Hugo and the San Francisco earthquake; Bitter, Copeland & Dascher (2006), Burch (2013), Carr and Quinn (2006), Gardner (2006), Richardson (2006), Tolan (2010a, 2010b) and the United States Government Accountability Office (2007) in respect of Hurricanes Katrina and Rita; Farmer

(2011) and PricewaterhouseCoopers (2011) in relation to the Queensland floods; and Kashiwagi (2011), KPMG (2011b, 2011c), Tiefenbach and Kohlbacher (2015), Zeirishi-Hojin PricewaterhouseCoopers (2011a, 2011b, 2011c, 2011d, 2011e) on the Tohoku Japanese earthquake and tsunami.

• The taxation experiences of a single country, for example: Watanabe (2008) on the relationship between natural disasters and tax policy in Japan; and Vosslamber (2012) on the historical role of tax in responding to natural disasters in New Zealand.

As well as being limited in terms of breadth, the current tax and natural disaster literature is not based on the views of actual policy makers involved or the full range of tax policy documents behind the responses made, due to the difficulty in accessing both of these.

The current literature also does not consider the three phases of a natural disaster response. As a result, it can miss the full range of tax responses made. For example, while Maples and Sawyer (2015) is the most comprehensive discussion of Canterbury earthquake tax responses to date, it does not cover a number of the pre-disaster, immediate response and recovery tax issues, such as the existing disaster tax provisions, EQC scheme, full range of administration responses, charitable tax issues, employee welfare support, donated trading stock, social policy responses, extension of the redundancy tax credit, thin capitalisation exemption, capital contributions from insurance proceeds, Goods and Services Tax (GST) on reinsurance, and funding options both considered and utilised, such as an earthquake levy.

Some guidance is provided more generally as to whether the standard principles of tax policy apply equally in good and bad times. A substantial literature on war financing notes that unusual macroeconomic conditions prevail during war (Caplan, 2002). Cappella (2012) concludes that leaders choose between alternative means of war finance, including taxation, based on their bureaucratic capacity to extract revenue, currency reserves and leaders' preferences. Grossman and Han (1991) argue that a state's choice of war financing involves weighing the cost of spending in reducing consumption against the benefit of avoiding defeat. More recently, public finance literature has discussed responses to the GFC. Schick (2012) writes that a financial crisis takes more time and resources to resolve than a conventional recession and therefore generally requires different policies and remedies. LeBlanc, Mathews and Mellbye (2013) note that, following the GFC, tax policy has been shaped by shorter-term fiscal and macroeconomic considerations. Based

on this literature, there may be a case for tax policy responses to natural disasters to depart from standard tax policy principles.

One way that tax policy may differ when responding to a natural disaster is through a different weighting being placed on the standard tax policy principles, as while there is broad agreement on the principles, there is less accord about how to make trade-offs between the principles. Adam Smith (1904, V.2.29) suggested that nations should endeavour "to render their taxes as equal as they could contrive; as certain, as convenient, ... and, ... as little burdensome to the people". However, the only guidance he gave was to value certainty over equity. Musgrave similarly provides limited guidance, only noting that the objectives will not always be in agreement, and where they conflict, trade-offs will be required (Musgrave & Musgrave, 1989). It was not until Mirrlees developed optimal tax theory in 1971 that a framework for the careful analysis of tax policy trade-offs was developed (Kay, 1990). However, the Mirrlees framework is complex, relatively few general results emerge, and practical conclusions for policy cannot readily be drawn (Creedy, 2011; Kay, 1990).

The public finance literature discusses various approaches to distribution. For example Musgrave and Musgrave (1989) note that the distribution of income determined by the market (endowment-based distribution) will depend on the allocation of labour and capital and the prices that the application of these factors generate. While potentially efficient, this may not coincide with what is considered socially desirable, leading to adjustment by fiscal or other policy means. There are various approaches to doing so:

- Utilitarian views calls for distribution to maximise total satisfaction. An equal distribution of income is required if individuals are assumed to have the same utility functions.
- Egalitarian views support distributing income so as to equalize the welfare position of all individuals or to maximise that of the lowest.

Redistribution policies involve an efficiency cost. They also have limits as a high income earner may substitute leisure for income, reducing the amount available for redistribution.

In terms of tax policy, Musgrave and Musgrave (1989) discuss two approaches to equity:

• The benefit principle which is not readily implemented as it is difficult to tax individuals in line with their demand for public services. However, there are cases

where it may be used for specific services when benefits can be imputed to a particular user. However, this approach does not result in redistribution.

The ability to pay principle calls for distribution of the tax burden in line with economic capacity, taking into consideration vertical equity (taxpayers with unequal capacity should contribute different amounts) and horizontal equity (taxpayers with equal ability to pay should contribute equally), over a person's lifetime (picking up temporal equity). Taxation along this basis requires the specification of an index by which ability to pay is measured. While ideally the index should incorporate all forms of welfare, income is the most widely used measure. An alternative measure is consumption. Theoretically, vertical equity is based on equality of sacrifice using known and equal marginal utility of income functions. In practice ability to pay uses socially determined income utility or social welfare functions. In doing so, this may give rise to transparency and transitional fairness issues.

In response to the need for a practical approach to making trade-offs, various tax reviews have addressed the issue. The need to make trade-offs was recognised in the Tax Review 2001; however, they argued that the conflict can be overstated (Tax Review 2001, 2001). Henry et al. (2010) acknowledged that judgements are required and provided a list of broad objectives, though the list is barely more than a restatement of the standard policy principles. Most recently, the Mirrlees Review (2011) used an optimal tax theory approach, applying the guidelines of neutrality, simplicity and stability. However, as noted above this approach has been criticised as overly theoretical. Conclusions from optimal tax theory for tax policy in practice can be hard to identify, or even if identified, they are often difficult to implement.

The lack of guidance about how to make tax policy trade-offs was addressed to a certain extent by the Tax Working Group (2010), who adopted a model of rational policy analysis (Creedy, 2010). They noted that choosing between reform options will depend on value judgements that are required where competing objectives are involved, and the scale of reform that the New Zealand government is willing to undertake. To help make these value judgements, the Tax Working Group (2010) identified various tax reform options. To help make trade-offs, each scenario was tested against the standard tax policy principles to identify the costs and benefits of various reform choices.

Another recent example of how trade-offs might be made is the work of Ball and Creedy (2013). They use a range of two-period models to highlight some of the important tax policy inter-relationships and trade-offs involved when governments are faced with the possibility of funding a future contingency. They conclude that the size of the potential future tax-financed cost and its associated probability are the major determinants of the optimal tax policy, with potential future expenditure needing to be relatively large before ex ante action is taken (Ball & Creedy, 2013). However, the models are highly simplified and no consideration is given to distributional issues. Barro (2009, as cited in Cavallo & Noy, 2011) argues that disasters have a much larger welfare cost than economic fluctuations of lesser size, which means distributional issues are highly relevant.

The next five chapters compare the tax policy responses to two real life natural disasters (starting with the Canterbury earthquakes in New Zealand), based on the views of actual policy makers involved, the full range of available tax policy documents behind the responses, and considering the three phases of a natural disaster response.

4. Canterbury Earthquakes: Case Context and Tax Responses

4.1. Introduction

This case study outlines the tax responses in the pre-disaster, immediate response, and recovery stages of the 2010/11 Canterbury earthquakes in New Zealand. By summarising the responses in this way, a useful resource for future tax policy makers has been created. A short summary of the human and economic effects of the Canterbury earthquakes is also provided as context for the case study.

4.2. Case context

On 4 September 2010, New Zealand was struck by a 7.1 magnitude earthquake 40 kilometres west of Christchurch, causing severe damage to Christchurch city and the Canterbury plains. Over the next four months, the region faced over 1000 aftershocks (Whitman et al., 2013), with further significant earthquakes on 26 December 2010. Then, on 22 February 2011, a shallow 6.3 magnitude earthquake hit 10 kilometres south east of the Christchurch Central Business District (CBD). The earthquake had the highest peak ground acceleration ever recorded in New Zealand (Fischer-Smith, 2013), and one of the greatest-ever ground accelerations recorded in the world (Burgess, 2011).

The February earthquake devastated Christchurch, resulting in significant impacts on people, buildings, and infrastructure: "There are no shops, no water, no phone, no power, no petrol, no heating, no place to stay" (Noble, 2011, p.35). Over 50 percent of the CBD's 2400 buildings were severely damaged, 25 percent of buildings were deemed unsafe to enter, and over 1000 commercial buildings were eventually demolished, with damage concentrated in the large number of older masonry structures (Brookie, 2012; CERA, 2012; Hatton, Seville, & Vargo, 2012; Ingham, Biggs, & Moon, 2011; Stevenson et al., 2011). There was also widespread destruction of residential buildings, with much of the damage caused by liquefaction (Pawson, 2011). Close to 50 percent of Canterbury's 220,000 residences required repair or rebuilding (Small, 2012), with 8,000 homes redzoned (Wright, 2016).

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⁶ Engineers mapped residential land damage into four zones – red, orange, green and white. Land so badly damaged that it is unlikely to be rebuilt on was characterised as residential red zone. For owners of property with insurance in the residential red zones, the Crown made an offer of purchase (Brownlee, 2011).

Christchurch's communications, energy, water and social services were disrupted. Infrastructure and essential services were severely affected, with 50 kilometres of damaged water mains and 500 kilometres of damaged sewer pipes (Macbeth, Partington, Hutchinson, & Moore, 2017). There was major disruption to the electricity supply, and the electricity network remained fragile for some time following the earthquake (Hayman, 2011). The city was forced to rely heavily on portable toilets to supplement the fractured wastewater system.

Transportation was impacted, with 50 percent of roads requiring repair, over 40 roads and bridges outside the CBD shut for more than two weeks and main routes into badly affected coastal suburbs restricted throughout March (Brookie, 2012; Macbeth et al., 2017; Stevenson et al., 2011). Bus services were non-operational for a week, and still running at limited capacity a month later (Stevenson et al., 2011). The tunnel which connects Christchurch to the nearby port was closed for several days, meaning food and fuel deliveries from the port were hindered (NZPA, 2011b). Luckily access into the city was restored quickly with State Highways largely unaffected, the airport able to resume operation the same day and the port operational within 96 hours (Stevenson et al., 2011).

Christchurch continued to sustain further damage throughout 2011. There were two more major events on 13 June 2011 and magnitude 5.8 and 6.0 earthquakes on 23 December 2011. As at October 2016, the region had endured over 14,000 aftershocks (Macbeth et al., 2017).

Due to the scale of the damage, the New Zealand government appointed a Minister for Earthquake Recovery and established a special Cabinet Committee. Legislation was enacted and a new recovery commission established on 14 September 2010. After the February earthquake, further legislation was passed giving the Minister and a new Canterbury Earthquake Recovery Authority (CERA) wide powers to manage recovery (Tompkins et al., 2012).

⁷ Critical services remained off in the CBD for the entire month after the earthquake (Stevenson et al., 2011):

Percent of occupied households with service in Christchurch area 1 week after event 1 day after event 1 month after event Electricity 60 80 99 Water 50 66 95 40-50 50-60 80 Wastewater

4.2.1. Human impact

While the September 2010 earthquake caused extensive damage, due to the rural location and the time of the event (4.35 a.m.), there was no loss of life, as most people were in bed and away from unreinforced buildings. Unfortunately this was not the case with the February 2011 event.

After the September event, the city council did not adequately cordon off damaged buildings and there was confusion about the system of inspecting and tagging damage (Hare et al., 2012; Heather, 2012). This meant that when the February earthquake struck, on a weekday lunchtime, close to the CBD, many people were injured from falling masonry or trapped in buildings that should have been closed (Tompkins et al., 2012). Buildings deemed safe to enter after the September earthquake suffered structural failure, with 133 deaths occurring in the collapse of two multi-storey office buildings, and many of the remaining fatalities caused by collapsing unreinforced masonry buildings in the CBD (Brookie, 2012; Stevenson et al., 2011). In total, 185 people were killed and close to 7,000 people were injured (Tompkins et al., 2012).

An estimated 65,000 people, approximately 17 percent of the population, left Christchurch following the February earthquake (Stevenson et al., 2011; Wang, 2012). While many of these relocations were temporary, the city's population reduced by 8,900 in the year to June 2011 (Doherty, 2011). This reduced demand on strained infrastructure, but does have long-term repercussions for rebuilding the city.

The earthquakes also caused psychological injuries, including post-traumatic stress disorder and an increase in family violence (Christchurch Women's Refuge, 2010). The earthquakes placed a high emotional toll on business owners and employees who were worried about their economic future. Business owners faced challenging trading conditions, relocation, additional work and stress dealing with insurance as well as managing the impacts on their residential situation (Hatton et al., 2012). There was a lot of uncertainty around jobs, and staff were concerned about being made redundant, as well as dealing with recovery demands at a personal level (Brookie, 2012; Radford, Addison, & Ahmed, 2013; Stevenson et al., 2011).

The human impact has been exacerbated by delays over recovery. Initially, people were in a 'honeymoon' phase, characterised by community bonding, optimism, and visible New Zealand government support. They thought it would be only a year until the rebuild started

(IRD, 2014a). However, the continued seismic activity constrained progress with the recovery. By 2012, the main reconstruction had yet to progress, meaning the timing of the rebuild was still subject to change (Bollard & Hannah, 2012). Therefore, while the earthquakes created a greater sense of community spirit and resilience, this was outweighed by negative human impacts from a slow rebuild process, multiple relocations, extensive changes in the business environment, ongoing insurance issues and poor personal health and wellbeing (IRD, 2013a).

4.2.2. Economic impact

Costs for the September earthquake were estimated at NZ\$5 billion (New Zealand Treasury, 2011c). Following the February earthquake, costs increased, initially to NZ\$15 billion (English, 2011a), and then to NZ\$20 billion in October 2011, with a net cost to the Crown of NZ\$13.5 billion (New Zealand Treasury, 2011f). However, it was acknowledged that costs could be as high as NZ\$30 billion if business disruption, inflation, insurance administration and the impact of higher building standards were included (New Zealand Treasury, 2011f). By 2014, the estimated rebuild cost had grown to NZ\$40 billion, of which the government's share was NZ\$14.9 billion (New Zealand Treasury, 2014).

The disaster was a significant economic shock. At Budget 2011, the combined cost of the earthquakes was estimated to be eight percent of New Zealand's GDP (Brookie, 2012; Burgess, 2011). This figure was revised to 10 percent in December 2011 (Bollard & Hannah, 2012), with later estimates increasing to 20 percent of GDP (Tompkins et al., 2012). National economic growth forecasts were revised down and New Zealand's long-term sovereign rating downgraded due to an increased fiscal deficit (Brookie, 2012; Stevenson et al., 2011).

The impact of the earthquakes on the regional economy was significant. Canterbury previously accounted for 15 percent of the national economy (New Zealand Treasury, 2011d). However, the earthquakes meant lost production, large drops in consumer and business confidence and declines in household and business spending. Two thirds of business owners reported having at least one business adversely affected and 40 percent of small businesses enterprises (SMEs) still trading experienced a decrease in their business income (IRD, 2012i). This flowed into employment, with 18 percent of SMEs adversely affected by the earthquakes, but still trading in 2012, having reduced staff and 38 percent of SMEs no longer trading having employed staff prior to the earthquakes (IRD, 2012i).

One of the reasons for the significant economic impact has been the delayed recovery. The February disaster effectively reset the recovery timeline. Approximately 75 blocks of the CBD were cordoned off, with about 50,000 people unable to go to work and businesses within the cordon unable to function (Radford et al., 2013; Radio New Zealand, 2011a; Stevenson et al., 2011). Access to business premises, equipment and records was extremely slow, or non-existent (Hatton et al., 2012), with the CBD closed entirely from 22 February 2011 to 9 March 2011, and the cordon reduced gradually over time, as shown in Figure 4.1, with the last central city cordons removed in mid-2013.

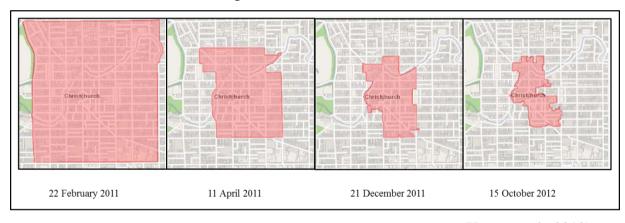


Figure 4.1 – CBD cordon

(Hatton et al., 2012).

Initially, it was estimated that it would take six months for the CBD to be fully open (Christchurch City Council, 2011 as cited in Stevenson et al., 2011). However, recovery was still in its infancy a year after the February earthquake, with officials finding it difficult to balance safety, planning and consultation with the demand to move quickly to retain viable businesses and reduce the direct and indirect costs of a prolonged closure (Stevenson et al., 2011). The significant aftershocks throughout 2011 also contributed to the delay. As a result, recovery was largely focused on demolition until May 2012 (Brookie, 2012).

Due to the closure of the CBD, organisations relocated, with 26 percent of affected SMEs having moved location since the earthquakes, and 12 percent having moved multiple times (IRD, 2012i; Poppelwell et al., 2015). There was increased demand for vacant space in areas less affected by the earthquakes, with many businesses setting up operations in homes and garages. Two years after the earthquakes, the expectation was that businesses would have resumed trading or closed down (Poppelwell et al., 2015). However, the IRD (2014a) research showed a range of business positions. While most SMEs were gradually

recovering, other businesses estimated that it might take three to four years to reach business-as-usual (Poppelwell et al., 2015). By mid-2014 only 10-15 percent of the estimated NZ\$40 billion rebuild investment had been spent (Wakefield, 2014). Construction was just beginning inside the central city, with key anchor projects behind schedule, and concerns over the rising cost of construction (Wakefield, 2014).

Once fully underway, the rebuild was expected to produce a sizeable increase in residential, commercial and infrastructure investment. However, there has been a geographic and sectoral shift in Canterbury, raising questions about the future of the CBD. Only 24 percent of previously centrally-located SMEs plan to move back, with 48 percent saying they have relocated permanently (IRD, 2012i). Other problems have included: disputes with insurance companies, local government finances, transport blockages, labour and housing shortages, flooding problems, and construction firm failures (Wakefield, 2014). These mean big challenges to the recovery effort remain, creating a high level of uncertainty around the timing of the rebuild and final cost of the earthquakes.

4.3. Tax responses made by the New Zealand Government

The first aim of this research is to provide a narrative of responses to natural disasters as a useful resource for future tax policy makers. This next section therefore provides an overview of the tax responses to the Canterbury earthquakes using Todd & Todd's (2011) three phase model. All section references are to the *Income Tax Act 2007* unless otherwise specified.

4.3.1. Pre-disaster

In investigating the tax responses to the Canterbury earthquakes, it is necessary to consider the pre-existing rules for dealing with natural disasters. The pre-disaster tax settings can be grouped under three themes: ad hoc disaster tax provisions, EQC and earthquake strengthening. These are highlighted in Figure 4.2 and discussed below.

Canterbury Earthquakes 0 Immediate Pre-disaster Recovery response Timing of Ad hoc Employer Rollover payments & disaster tax Admin Issues relief provisions support deductions Damaged Employee Social policy EOC trading stock responses Earthquake Extension of Special tax levy and Charitable Farthquake other tax issues strengthening tax credit financing

Figure 4.2 – Pre-disaster tax responses to the Canterbury earthquakes

4.3.1.1. Ad hoc disaster tax provisions

Prior to the Canterbury earthquakes, New Zealand had previously legislated a number of tax rules that help deal with natural disasters. Provisions in the *Income Tax Act 2007* that help respond to natural disasters included:

- Section DB 41. While not disaster specific, companies that make charitable gifts are entitled to a tax deduction up to the level of their net income. Similarly, section LD 1 allows an individual a tax credit of one-third of total gifts made, up to the level of their taxable income.
- Section EA 3. The definition of unexpired expenditure excludes expenditure on goods that are not used in deriving income because they are destroyed or rendered useless.
- Section EE 48. Generally a loss on disposal is not available for buildings. However, this section allows a deduction where a building has been irreparably damaged and rendered useless for deriving income due to a natural event beyond the control of the taxpayer. A similar tax deduction is allowed for the capital value of aquaculture, farming and forestry improvements (Sections DO 11, DO 13 and DP 4).

- Section EC 5. This section provides rollover relief for livestock donated in response to a self-assessed adverse event (fire, flood, drought or other natural event, or sickness or disease among livestock which materially affects the taxpayer's business). It allows the donor and recipient to treat donated livestock as having no value on the date of transfer so that it is only taxable on eventual disposal. Such transfers are also excluded from GC 1 for disposals of trading stock below market value.
- Subpart EH. The income equalisation scheme allows agricultural businesses to spread income from year to year. Section EH 15 overrides the normal time limit for a refund where a person requests a refund to replace livestock disposed of or lost as a result of a self-assessed adverse event. In addition to the standard scheme, there is also a specific adverse event income equalisation scheme which allows farmers who experience adverse events to carry income from forced livestock sales over to the next income year.

Provisions in the *Tax Administration Act 1994* that help respond to natural disasters included:

- Section 37. The Commissioner of Inland Revenue⁸ can extend the filing date for income tax returns upon application by a taxpayer, although this is not specific to natural disasters and the extension period is also limited.
- Sections 176, 177, 177A, 177B and 177C. The IRD has general (rather than disaster specific) powers to provide financial relief from the payment of outstanding tax, including the ability to enter instalment arrangements and write-off tax.
- Section 183A. The Commissioner of Inland Revenue can remit certain penalties (e.g.
 for late payment or filing) which arise as a result of an event or circumstance beyond
 the control of a taxpayer, such as an accident or disaster.
- Section 183ABA. The Commissioner of Inland Revenue can remit interest where an
 emergency physically prevents taxpayers from making tax payments required on or
 before the due date for payment. It applies to an event that meets the definition of
 emergency in section 4 of the *Civil Defence Emergency Management Act* 2002
 (CDEM Act) and is declared by Order in Council to be an emergency event.

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⁸ The head of New Zealand's tax authority.

• Section 226. This section gives the Governor General a power (not disaster specific) to extend the time limit for doing something under the Income Tax Act 2007 or the Goods and Services Tax Act 1985, by Order in Council. However, the power does not apply to all Inland Revenue Acts, requires that a specific time be set for each time limit, and the power may not be delegated to the Commissioner of Inland Revenue making it difficult to use in practice (IRD, 2011x).

There were also a number of provisions dealing with new start grants, which were a New Zealand government grant for families forced to leave their farms as a result of an adverse event (IRD, 2005). However, these have now been repealed in the Inland Revenue Acts as they are no longer part of the suite of responses the New Zealand government uses for primary sector adverse events (IRD, 2015). Similarly, the provisional tax rules previously allowed a taxpayer significantly affected by a self-assessed adverse event to make a late estimate of their provisional tax. However, these provisions were repealed in 2009 as it was considered no longer necessary to have a specific provision allowing taxpayers to make a late re-estimation of provisional tax (IRD, 2009).

4.3.1.2. EQC

In addition to specific natural disaster tax provisions, New Zealand also has a national insurance scheme, managed by the EQC. Prior to the scheme being established in 1945, the government had relied on public appeals or ad hoc provisions to provide relief to those affected by natural disasters. For example see Belton-Brown (2012), Miley & Read (2013), Vosslamber (2012) and Wood (2010) for a discussion of the New Zealand government responses to early disasters. However, following the 1942 Masterton earthquakes, a statutory scheme of disaster insurance was established, coming into force on 1 January 1945 (Steven, 1992). The scheme built on an earlier war damages fund established in 1941 to reimburse owners of property damaged by enemy action (Eiby, 1975).

The New Zealand government's objectives in providing disaster insurance are to:

- make prudent arrangements in advance, as the resources of the state will inevitably be limited in dealing with a natural disaster;
- reduce stress and make sure people are housed after disasters; and
- complement, not replace, private insurance arrangements, with commercial enterprises expected to make their own provisions for recovery (Steven, 1992).

The scheme is one of the principal sources of finance for reconstruction and a key mitigation strategy (Steven, 1992; Wang, 2012). It provides coverage to the owners of privately insured residential properties for loss from natural disasters (Hatton et al., 2012; Steven, 1992). The maximum cover for each disaster event is NZ\$100,000 (plus GST) per residential home, NZ\$20,000 (plus GST) for contents, and cover for insured residential land (Earthquake Commission, 2015a). The scheme is financed by a mandatory levy on home and contents insurance which is collected by insurance companies and then placed in a Natural Disaster Fund (NDF) (Steven, 1992). Prior to the earthquakes, the levy was 5 cents per NZ\$100 of insured value.

After the earthquakes, the EQC levy was increased to 15 cents per NZ\$100 of insured value (Wang, 2012). A generic change was also made to correct a problem with the GST legislation, as the earthquakes highlighted that amounts received from a non-resident insurer were subject to GST with no corresponding input credit (IRD, 2012a). Without the amendment EQC would have had a potential GST liability of NZ\$522m-587m, which had not been factored into the level of reinsurance cover (IRD, 2012b).

4.3.1.3. Earthquake strengthening

As well as insurance against natural disasters, pre-disaster responses also involve investment in mitigation work. One potential mitigation investment is earthquake strengthening. While authorities are keen to have buildings seismically strengthened, there is a question about who pays for the enhanced performance, an issue which can be exacerbated by the tax treatment (Tompkins et al., 2012).

Section DA 2 denies a tax deduction for an amount of expenditure or loss to the extent it is of a capital nature. The term 'capital' is not defined in tax legislation but the courts have developed a series of tests for distinguishing between capital and revenue expenditure. In addition to more general guidance on capital expenditure, there is specific case law on the tax deductibility of earthquake strengthening. In both *Colonial Motor Company Ltd v CIR* (1994) 16 NZTC 11 361 and *TRA Case X26* (2006) 22 NZTC 12 315 the courts held earthquake strengthening expenditure to be capital in nature.

In reviewing the case law, Maples (2012a) discusses a number of earthquake strengthening scenarios. He notes there may be arguments for minor strengthening work undertaken on a sound building to be on revenue account. Similarly, where work on a building is comprised of more than one project, the repair component may be deductible. However,

based on the case law, it is likely that most strengthening work will be capital expenditure. This position is consistent with an IRD interpretation statement on the tax deductibility of repairs and maintenance expenditure (IRD, 2012k).

Capital seismic strengthening costs would have previously been depreciated along with the building. However, from 1 April 2011, there is a nil rate of depreciation and generally no tax deduction for buildings (Maples, 2012a). As such, there is little tax incentive to strengthen a building, and researchers have commented that the denial of depreciation deductions for buildings will place even greater pressure on the boundary between repairs and capital improvements and motivate taxpayers to recharacterise the nature of their building expenditure in order to mitigate the tax effect of disallowing depreciation (Keating, 2010). Taxpayers have also pointed out that the tax treatment is inconsistent with the depreciation rules which allow a deduction for the value of a building destroyed by a natural disaster: "current law often provides no deduction for a building owner if seismic strengthening work is undertaken to make a building safe; but if the building is left unsafe and collapses as a result of an earthquake the loss then is deductible" (Seismic Tax Coalition, 2014, p.1).

4.3.2. Immediate response

Given New Zealand's pre-disaster tax settings (ad hoc disaster tax provisions, the EQC and lack of tax deductions for earthquake strengthening), tax policy's role in the response phase is to fund and support relief. The immediate tax responses to the Canterbury earthquakes can be grouped under six themes: administrative responses, social policy responses, charitable tax issues, employee welfare support, donated trading stock, and extension of the redundancy tax credit. These are shown in Figure 4.3 and discussed below.

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⁹ Other jurisdictions, such as Japan provide both subsidies and tax deductions (Okazaki, 2010).

¹⁰ A coalition of local authorities and private landlords that want the cost of strengthening earthquake-prone buildings to be tax deductible.

Canterbury Earthquakes Immediate Pre-disaster Recovery response Timing of insurance Employer Rollover payments & disaster tax Admin Issues welfare relief business suppor provisions O Damaged Donated Employee Social policy EOC trading stock Earthquake Extension of Special tax levy and Charitable Earthquake other tax credit

Figure 4.3 – Immediate tax responses to the Canterbury earthquakes

4.3.2.1. Administrative issues

A number of administrative tax actions were made in response to the Canterbury earthquakes. Due to the scale of the event, the IRD's Emergency Response Committee was called together for the first time (NZ Official 4). The tax authority's first act was to make public announcements stating that they would use their discretionary powers and adopt a flexible and understanding approach (IRD, 2011t). They established an 0800 Disaster Response line and used a range of communication channels to let businesses know what to do if they had been affected by the earthquakes ("Canterbury quake report" 2010; Poppelwell et al., 2015). Debt, late return letters and tax audits were placed on hold (Burgess, 2011), and the status of all tax disputes in the region was assessed, files rebuilt and adjournments sought as soon as possible (NZ Official 10).

The IRD offered a package of support, including information brochures, deployment of staff at welfare centres, free seminars about complying with tax requirements, and a range of tools and services to help organisations self-manage (IRD, 2011j; Poppelwell et al., 2015). The tax authority utilised their relationship with tax agents to support businesses and maintain compliance behaviour, including appointing a senior staff liaison officer (NZ Official 10), and engaging with the New Zealand Institute of Chartered Accountants about the provision of support to their members and the wider community (IRD, 2011i, 2011t).

In the initial period following the February earthquake, one of the key issues for businesses was access to their essential accounting records: "Firms generally got access to their offices sooner or later, either officially or unofficially, but it was usually for fairly brief periods, sometimes only 15 minutes, sometimes a couple of hours" (Davies, 2011, p.23). The IRD responded by granting leniency for businesses who could not access their accounting systems, providing assistance to help recreate records (NZ Official 7), and allowed the use of estimates when lost records could not be recreated or duplicated (Hatton et al., 2012; Poppelwell et al., 2015).

The existing law provided some discretion for dealing with natural disasters, and the IRD used its powers, such as within its debt management provisions, to establish payment plans for overdue tax, and remit penalties (IRD, 2012d). However, officials felt that the existing discretions were insufficient to deal with the extraordinary circumstances of the Canterbury earthquakes and three temporary earthquake Orders in Council were passed to provide the IRD with extended powers.

Tax Administration (Emergency Event – Canterbury Earthquake) Order 2010

Following the September earthquake, taxpayers were unable to pay their tax because of inaccessible premises or destroyed records. The *Tax Administration (Emergency Event - Canterbury Earthquake) Order 2010* gave the IRD the discretion to remit use-of-money interest (UOMI) if taxpayers were physically prevented from making payments on the due date because of the first Canterbury earthquake or any of its aftershocks. The original Order was set to expire on 31 March 2011, however, due to the ongoing response it was extended, first to 30 September 2011 (*Tax Administration (Emergency Event - Canterbury Earthquake) Amendment Order 2011*), and then to 1 October 2012 (*Tax Administration (Emergency Event - Canterbury Earthquake) Amendment Order (No 2) 2011*).

Canterbury Earthquake (Tax Administration Act) Order 2011

As part of the recovery, the IRD worked closely with other New Zealand government departments, co-locating with the Ministry of Social Development (MSD), and sharing information with other agencies to ensure that social assistance and other New Zealand government services could continue to be delivered in a timely way to Canterbury residents (IRD, 2011u; Poppelwell et al., 2015). Typically, the information shared included a person's contact details and their family, financial and employment status (IRD, 2011u). While the sharing of this information meant more coordinated assistance, it also breached

the IRD's tax secrecy provisions (Poppelwell et al., 2015). The *Canterbury Earthquake* (*Tax Administration Act*) *Order 2011* was therefore passed to allow the IRD to share information with other New Zealand government agencies. The Order came into effect on 24 February 2011 and expired on 31 October 2011 (IRD, 2011a). The information-sharing powers were then extended for another year under a second Order (The *Canterbury Earthquake (Tax Administration Act) Order (No 2) 2011*). This expired on 31 October 2012 (IRD, 2012d).

The Canterbury Earthquake (Inland Revenue Acts) Order 2011

As a result of the Canterbury earthquakes many taxpayers were unable to meet time limits specified in tax legislation. While the Commissioner of Inland Revenue had discretion to provide extensions, this could not be applied in all cases (IRD, 2011g). The existing powers were therefore extended by Order in Council. The *Canterbury Earthquake (Inland Revenue Acts) Order 2011* gave the Commissioner the discretion to grant extensions of any time limit under the Inland Revenue Acts if the earthquake was the reason for lateness, and it would be fair and equitable to allow the actions to be performed late (IRD, 2011g). The discretion was retrospective, allowing changes to time limits as far back as 4 September 2010. Initially, the extended discretion was intended to be reviewed in September 2011 (IRD, 2011g). However, taxpayers were continuing to have difficulty in meeting the time limits. Therefore, it continued to apply until 1 April 2012, when a new Order (The *Canterbury Earthquake (Inland Revenue Acts) Amendment Order 2012*) was put in place until 1 October 2012 (IRD, 2012e).

Returning to business as usual

The IRD tracked business recovery and this helped inform advice on the appropriate time to remove earthquake relief (Poppelwell et al., 2015). On the basis of this advice, the earthquake Orders in Council finally expired in October 2012, when it was considered that extended discretions were no longer needed (IRD, 2012d).

4.3.2.2. Social policy responses

As well as administering the tax system, the IRD is also responsible for managing a number of social policy regimes. Therefore, the tax response to the Canterbury earthquakes also involved social policy responses.

 $^{^{11}}$ For example, the IRD could not extend the period for filing 2009-10 income tax returns past 31 March 2011 (IRD, 2011x).

People adversely affected by the Canterbury earthquakes received payments to help them to recover. Under the definition of family scheme income, these payments could have affected recipient's entitlements to various social policy benefits, such as Working for Families (WfF) tax credits, community services cards and student allowances. Section MB 13(2) was therefore amended so that relief payments in response to emergency events are excluded from the family scheme income definition.¹²

The New Zealand government also considered changes to child support, including a legislative mechanism to pre-pay late child support, as the Canterbury earthquakes had a number of adverse effects on both liable and custodial parents (IRD, 2011i, 2011j). However, there were concerns about practical design and delivery, fairness to other families affected by the earthquakes and the precedent this would set generally for non-payment by liable parents (IRD, 2011i, 2011j). Due to these issues and the availability of other relief, including Special Needs Grants¹³ and Civil Defence Payments,¹⁴ the New Zealand government decided not to make any changes (IRD, 2011i). Changes to make communication with the IRD easier for parents were also considered, as a number of child support processes require requests in writing. However, IRD staff were able to use existing relief options, such as penalty remission, income estimations, administrative reviews as well as online forms and call recording (IRD, 2011j).

Officials reviewed whether there was a need to make legislative changes to relax the KiwiSaver hardship provisions (IRD, 2011f). Section 113 of the *KiwiSaver Act 2006* enables a member to withdraw retirement funds from the scheme early if they are suffering or are likely to suffer significant financial hardship. Subsequently, the *KiwiSaver (Significant Financial Difficulties—Canterbury Earthquake) Regulations 2011* expanded the definition of significant financial hardship to include property damage or destruction, loss of employment, and costs incurred as a result of the February earthquake.

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¹² New section 91AAS of the *Tax Administration Act 1994* allows the Commissioner of Inland Revenue to declare a disaster to be an emergency event for a period of up to 12 months. The event must meet the definition of emergency in the CDEM Act.

¹³ Special Needs Grants provide non-taxable one-off financial assistance to individuals in order to meet immediate needs. They can usually be granted if someone has urgent and necessary needs, has no other way to meet the costs, and is a New Zealand citizen or permanent resident (IRD, 2011j).

¹⁴ Civil Defence Payments are available to meet the immediate needs of those affected by emergencies declared under the CDEM Actor meeting the established guidelines for a Civil Defence emergency or adverse event. They are available where a person does not have insurance to cover their immediate needs and is required to leave their home or is unable to return home or attend work as a result of an event (IRD, 2011j). Between 22 February and 10 March 2011 63,825 Civil Defence Payments totalling NZ\$10.7 million were made (IRD, 2011i).

In addition to social policy changes to the tax system, the New Zealand government also provided additional support through the welfare system in the form of new benefits. After the September earthquake, the New Zealand government provided a four week NZ\$350 per week wage subsidy to support employees of small businesses where earthquake damage meant they could not operate and pay staff wages ("Canterbury quake report" 2010). Businesses could reapply after four weeks if they were still unable to operate but were expected to use insurance cover for loss of earnings before accessing the wage subsidy ("Canterbury quake report," 2010).

Following the February earthquake, the New Zealand government once again quickly provided support. The Christchurch Earthquake Support Package was announced on 28 February 2011 (Fischer-Smith, 2013). This included the Earthquake Support Subsidy (ESS), ¹⁵ a short-term grant to employers to allow them to continue wage payments while they assessed their position. ESS availability ended on 26 May 2011, with support having been provided to over 8,000 businesses, 47,000 employees and 11,000 sole traders (Bennett, 2011). It was widely claimed that this support enabled many businesses to avoid closure and to retain staff whilst they developed a recovery plan (Fischer-Smith, 2013). The New Zealand government also provided an Earthquake Job Loss Cover benefit for six weeks for employees whose employers were un-contactable or who indicated their business was closed permanently (MSD, 2011a). ¹⁶ The aim of this policy was to help employees transition to finding another job or seeking other welfare assistance. By mid-March, 3,500 people had accessed the Earthquake Job Loss Cover (Stevenson et al., 2011), and the combined cost of the total Earthquake Support Package was NZ\$248 million (New Zealand Treasury, 2012b).

Tax changes were made to support the Earthquake Support Package. As well as the extended information-sharing powers already discussed, the New Zealand government

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¹⁵ The program allowed employers who intended to recommence operations a grant of up to NZ\$500 per week per full time employee and NZ\$300 for part-time employees (less than 20 hours a week) for up to six weeks (MSD, 2011a). Eligible businesses were New Zealand owned businesses based in Christchurch that were unable to access their workplace due to damage, a cordon, or the unavailability of essential services, or a small business that could open but was experiencing significant loss of trade (MSD, 2011a). On 28 March 2011, the New Zealand government extended the ESS for another two weeks, and then for a further six weeks under restricted criteria (MSD, 2011b). Subsidies were reduced gradually throughout the six weeks, and businesses had to reapply for the second ESS round (MSD, 2011b). This was only open to businesses whose physical operation was directly impeded and which were able to demonstrate ongoing viability (MSD, 2011b).

¹⁶ Those working at least 20 hours per week were eligible for NZ\$400 net a week, while anyone working less than 20 hours a week received NZ\$240 net per week (Stevenson et al., 2011).

excluded the ESS from GST by Order in Council, and treated the Earthquake Job Loss Cover as exempt from income tax (IRD, 2011h).

4.3.2.3. Charitable tax issues

Charitable relief is an alternate source of emergency support and its availability was factored into decisions about what New Zealand government relief to provide in response to the Canterbury earthquakes (IRD, 2011i). From a tax perspective, the status of new charitable vehicles needed to be determined. For example, the New Zealand government established the Christchurch Earthquake Appeal to receive public donations (IRD, 2012h). The fund was retrospectively registered as a charity, giving it donee and tax exempt status, so that donations were tax deductible and eligible for tax credits (IRD, 2011e). Similarly, the Canterbury Business Recovery Trust was formed to receive donations for Canterbury businesses (Stevenson et al., 2011). It also successfully registered as a charity, receiving donee and tax exempt status (New Zealand Treasury & IRD, 2011b).

As well as tax relief, the IRD also provided operational resources. This was primarily through Recover Canterbury, a public private partnership established to administer The Canterbury Business Recovery Trust (Recover Canterbury, 2012). The service gave Canterbury businesses free access to government and commercial expertise and provided a next step after the ESS to support economic recovery (State Services Commission, 2012). Recover Canterbury was a joint venture between the Canterbury Employers' Chamber of Commerce and the Canterbury Development Corporation, with a Heads of Agreement, signed in April 2011, bringing New Zealand government partners, including the IRD, on board (State Services Commission, 2012). Other operational support provided by the IRD to aid charitable relief efforts included contacting overseas tax authorities seeking tax relief for donations, providing a list of donee organisations on its website, and enabling taxpayers to redirect their donation tax credit to the Christchurch Earthquake Appeal (IRD, 2011e, 2011k, 2011l).

Tax policy changes to support charitable efforts were also considered but did not proceed.¹⁷ However, the tax system was used to incentivise business support.

¹⁷ For example, a tax exemption for interest paid on a Red and Black Bond proposal (IRD, 2011w), and changes to tax legislation to support a "Give a Day" scheme where employees could cash up their annual holiday entitlement and donate this to the Christchurch Earthquake Appeal (New Zealand Treasury, 2011b).

4.3.2.4. Employee welfare support

A number of employers made welfare contributions to their earthquake-affected employees. However, payments by an employer and fringe benefits provided to an employee are generally taxable. This led a number of organisations to request a tax exemption (IRD, 2011h). Officials' initial view was that such payments are made in connection with employment and should be taxable (IRD, 2011h). Subsequent advice suggested income tax should apply but that there should be no fringe benefit tax (FBT) on sundry benefits (IRD, 2011f). However, on 28 March 2011, the government announced three inter-linked tax exemptions for employer welfare contributions (IRD, 2011ad). Under new sections CZ 23 and CZ 24 employer-provided support is exempt from tax if:

- it was provided for the purpose of relief in the eight weeks after the September 2010 or February 2011 Canterbury earthquakes;
- it was not paid or provided in substitution for wages or salary;
- provision and amount did not depend on the seniority of the employee;
- the employee is associated with the employer, it was also available to non-associated full-time employee; and
- the employer elected to treat the support as being exempt from tax.

All accommodation and sundry benefits that met the above criteria were tax exempt. ¹⁸ If the employer could estimate the value of benefits, the first NZ\$3,200 of benefits per employee per earthquake that were not already exempted were tax free. ¹⁹

4.3.2.5. Donated trading stock

Similar to the employer welfare support exemption, tax changes were made to facilitate business donations. Existing tax rules provide relief for donated livestock. However, for other businesses, a person who disposes of trading stock for no consideration, or at a discount, is taxable on the market value of the stock at the time of disposal. Gift duty was also payable if gifts made by a person exceeded NZ\$27,000 in a year (IRD, 2011ad).²⁰

¹⁸ "Sundry benefits" were benefits made available to affected Canterbury employees where uptake did not depend on individual circumstances and where the employer could not estimate the value of benefits provided to each employee, for example a drop-in centre or provision of kitchen facilities (IRD, 2011r).

¹⁹The time and monetary limits were based on the tax-free earthquake job loss cover benefit (IRD, 2011r).

²⁰ Subsequent changes mean gifts made on or after 1 October 2011 are no longer liable for gift duty (IRD, 2016a).

Following the Canterbury earthquakes, there was a call to provide tax relief for donated goods. Officials were concerned about increasing cost and complexity, particularly in relation to valuing such transactions, and that it would mean a significant change to existing policy settings for charitable giving (IRD, 2011k). However, they acknowledged that the provision of goods was important for the Canterbury relief effort and that existing tax laws were a barrier (IRD, 2011aa). Officials were also aware that such donations had already occurred, with many people unaware of the current law (IRD, 2011aa).

In response, on 28 March 2011, the New Zealand government announced a proposed exemption for businesses that donated stock within four months for the purpose of alleviating the effects of the Canterbury earthquakes, with only the actual consideration treated as income (IRD, 2011q, 2011ad). Following feedback, the four month period was extended to cover donations from 4 September 2010 until 31 March 2012 (IRD, 2011ad). Once enacted, section GZ 3 temporarily extended the livestock rules to other businesses, meaning that the anti-avoidance rule for disposals below market value did not apply. New section 73B of the *Estate and Gift Duties Act 1968* also meant that these donations did not constitute a dutiable gift.

4.3.2.6. Extension of the redundancy tax credit

As well as exemptions for employer welfare support and donated trading stock, further relief was provided for redundancy payments. New Zealand had previously introduced a redundancy tax credit of six cents in the dollar up to the first NZ\$60,000 of any lump sum redundancy payment (IRD, 2011b; New Zealand Treasury & IRD, 2011h). This reflected that such payments often resulted in taxpayers moving into the top income tax bracket, then 39 percent. As part of Budget 2010, the tax credit was cancelled from 30 September 2010, as redundancy payments after this date were subject to lower personal tax rates (New Zealand Treasury & IRD, 2011h). Following the September earthquake this was reconsidered, with cancellation delayed for six months as composite tax rates were still being applied until 31 March 2011 (New Zealand Treasury & IRD, 2011h). The cancellation was further delayed following the February earthquake, so that the credit continued to apply to all redundancies up to 30 September 2011 (IRD, 2011ad; New Zealand Treasury, 2011e). The further extension was justified on the basis that the New

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²¹ The four month limit was set initially because officials did not have the time to fully consider the effects of a longer relief period (New Zealand Treasury & IRD, 2011c).

²² For all redundancies, not just those related to the earthquakes.

Zealand government had created a precedent of providing the credit as earthquake relief (New Zealand Treasury & IRD, 2011b).

4.3.3. Recovery

While the immediate response to the Canterbury earthquakes was about providing relief through administrative and social policy responses, charitable assistance, employee welfare support, donated trading stock and extending the redundancy tax credit, recovery involves restoring the living conditions of affected communities, helping businesses restart, rebuilding homes and investing in disaster reduction measures (Todd & Todd, 2011). All of these place huge cash demands on governments who must decide how to finance emergency-related spending. Even if a country can borrow, the debts must be serviced by future taxpayers (Phaup & Kirschner, 2010; World Bank, 2010). Similarly, seignorage has a number of negative consequences (Blanchard, 2009). The alternative is to rely on taxation. The tax responses to aid recovery from the Canterbury earthquakes can be grouped under six themes: timing of insurance payments and business deductions, damaged assets, special tax rates, rollover relief, employee allowances, and the earthquake levy and other financing options. These are highlighted in Figure 4.4 and discussed below.

Canterbury Earthquakes Immediate Pre-disaster Recovery response Timing of insurance Employer Ad hoc Rollover payments & Admin Issues relief business provisions support deductions 0 0 Damaged Employee Donated Social policy FOC Assets allowances trading stock responses Earthquake Extension of Special tax levy and Charitable Earthquake redundancy other tax issues tax credit financing

Figure 4.4 – Post-disaster recovery tax responses to the Canterbury earthquakes

4.3.3.1. Timing of insurance payments and business deductions

The extended recovery period gave rise to a number of tax issues associated with the timing of tax deductions and income. In response, the New Zealand government made a number of amendments.

Business interruption insurance payments

Section CG 5B includes insurance payments for business interruption as taxable income. Previously, any income arising was allocated to the earliest income year the amount could be reasonably estimated or, in case of interim payments, when they were received (IRD, 2012f). This was the case even when the payment related to a number of future income years, a result that was inconsistent with the practice of allocating income on an accrual basis (IRD, 2012f). The New Zealand government therefore made a general amendment to section CG 5B so that such income is now allocated to the later of the income year to which the replaced income relates or the income year the amount can be reasonably estimated (or, in case of interim payments, when they are received) (IRD, 2012f).

Insurance payments for repairable assets

Section CG 4 treats insurance receipts for deductible expenditure, such as asset repairs, as taxable income. The legislation had been developed on the assumption that repairs would be incurred before insurance proceeds were received (IRD, 2012f). However, in response to the Canterbury earthquakes, it was common for insurers to make insurance payments before repairs occurred (IRD, 2012f). A generic amendment was therefore made to section CG 4 so that these insurance receipts are taxable no matter whether they are received before or after the related repairs (IRD, 2012l).

The New Zealand government also introduced a Canterbury specific optional timing rule to smooth the timing of insurance income and repair deductions (IRD, 2012f). New section EZ 74 allows taxpayers to recognise the net balance of insurance proceeds and repair costs, at the earlier of the time these have been incurred or derived, can be reasonably estimated, or the end of the 2018/19 income year. The change effectively allows a taxpayer to carry forward the insurance payment and match it against the cost of repairs (Maples & Sawyer, 2015). If the insurance payment exceeds the cost of repairs, the excess must be deducted

2015/16 time limit was extended to 2018/19, by repealing section EZ 23G and replacing it with section EZ 74, as it was taking longer to settle insurance claims than first anticipated (IRD, 2014b).

The amendment initially applied for the 2010/11 to 2015/16 income years (IRD, 2012l). However, the 2015/16 time limit was extended to 2018/10 by repealing section EZ 22G and replacing it with section EZ

from the adjusted tax value of the asset, with any remaining excess taxable as income (Maples & Sawyer, 2015). The section is also applicable to pooled assets (IRD, 20121).²⁴

Insurance payments for assets that are irreparably damaged

When an asset is destroyed it is treated as being disposed of at that date for the amount of insurance proceeds eventually received (Maples & Sawyer, 2015). However, the insurance proceeds may not be quantifiable within the same tax year. In response, a general amendment was made to insert section EE 48(2B) so that a disposal takes place in the earliest income year in which the consideration can be reasonably estimated (IRD, 2011ae). Another general amendment was also made (from 25 June 2013) to section EE 52 to clarify that if damaged property is disposed of before the insurance proceeds are received, the proceeds are treated as being derived immediately before the disposal. This remedied a gap in the legislation which otherwise meant the proceeds were not taxable (New Zealand Treasury & IRD, 2013).

The New Zealand government also introduced a Canterbury specific optional timing rule to smooth income and deductions for irreparably damaged assets and assets that are uneconomic to repair, meaning the asset is subject to a deemed disposal and reacquisition under section EZ 23C (IRD, 2012l). New section EZ 73 allows the net amount of insurance payments and disposal proceeds, less the tax book value and expenditure on disposing of the asset, to be brought to account for tax purposes. The net amount is recognised when the amount of the insurance proceeds and the disposal costs have been incurred or derived, can be reasonably estimated, or at the end of the 2018/19 income year (IRD, 2012c). If the balance is negative it is a deductible loss on disposal and if the balance is positive there will be a taxable gain on disposal (IRD, 2012c). However, if the consideration is greater than the original cost of the asset the excess is treated as a non-taxable capital gain (IRD, 2012c). The section can also be applied to pooled assets (IRD, 2012f).

²⁴ These are low value assets which have been grouped together and depreciated as if they were a single asset.

²⁵ This amendment initially applied for the 2010/11 to 2015/16 income years (IRD, 2012l). However, the 2015/16 time limit was extended to 2018/19 by repealing section EZ 23F and replacing it with section EZ 73, as it was taking longer to settle insurance claims than first anticipated (IRD, 2014b).

Depreciation deduction where access temporarily restricted

For an item of property to be depreciated, the item must generally be used in a business or available for use (IRD, 2012f). Section EZ 72 (previously section EZ 23E) was made to allow a depreciation deduction when access to a property was temporarily restricted as a result of the Canterbury earthquakes (IRD, 2011ad). The amendment applied for the 2010/11 to the 2018/19 income years (IRD, 2012b). ²⁷

Business tax deductions where business activity disrupted

Similarly, a change was made to provide certainty on the deductibility of expenses or losses for taxpayers who intended to continue their operations but whose income-earning activity was disrupted by the earthquakes (IRD, 2012f). With no income-earning activity, on-going expenses may not be deductible under section DA 1, even if the activity subsequently resumes (IRD, 2012f). Under new section DZ 20, a person whose income-earning activity in Christchurch was interrupted by the earthquakes may receive a deduction when their income-earning activity resumes for expenditure incurred during the period of interruption, as long as this is before the 2019/20 income year (IRD, 2012f). ²⁸

Thin capitalisation exemption

The thin-capitalisation rules deny interest deductions where the New Zealand operations of multinational companies have an excessive accounting debt to assets ratio (IRD, 2011c). For accounting purposes, earthquake damage is recognised immediately, whereas insurance proceeds are recognised at a later date (IRD, 2011ad). This causes a timing problem leading to the denial of interest deductions (IRD, 2011c). In response, new section FZ 7 allows taxpayers to carry back insurance proceeds (up to the amount of the damage) to the date an asset was impaired by the Canterbury earthquakes and treat this as an asset. The asset exists from the date of impairment until insurance is recognised for accounting purposes. Section FZ 7 initially applied for income years ending after 4 September 2010 and before the 2016/17 income year. However, the time limit was subsequently extended until the end of the 2018/19 income year (IRD, 2013b).

²⁶ Section EE 10 provides some relief for temporary repairs or inspection of property.

²⁷ The time limit was originally 2015/16 but this was extended by three years as it was taking taxpayers longer to settle insurance claims and replace damaged property than first anticipated (IRD, 2013b). ²⁸ Ibid.

Insurance proceeds and controlled foreign income

A general change was also made to match tax deductions for insurance claims and receipts from reinsurers. New Zealanders who control foreign companies are taxed on the passive income of those companies, including income from insurance premiums, net of deductions for claims paid (IRD, 2012j). However, an oversight meant that any reimbursement from a reinsurer was not taxable (IRD, 2012j). Changes were made to sections EX 20B(3)(f) and EZ 32E to correct this (IRD, 2012j).

4.3.3.2. Damaged assets

In addition to timing issues, the large scale destruction of property in the Canterbury earthquakes raised a number of other tax issues. The New Zealand government sought to address these with a series of amendments aimed at assisting recovery.

Loss on disposal of building beyond owner's control

After the 2004 floods,²⁹ section EE 48 was amended to allow a write off for any loss on buildings destroyed by an event beyond the owner's control (IRD, 2011o). Following the Canterbury earthquakes calls were made to extend this provision to cover buildings that had to be destroyed to remediate land or to allow for another building to be demolished (IRD, 2011o). A deemed disposal of property now occurs under section EE 47(4) where there is damage to a building, or in the neighbourhood of the building, meaning a property is useless for the purpose of deriving income and needs to be demolished (Burgess, 2011). Any resulting loss is then tax deductible (Section EE 48(3)). This was a general amendment and is not limited to the Canterbury earthquakes (IRD, 2011o).

Amounts for disposal and demolition

In 2010 the law was clarified so that disposal and demolition amounts for buildings irreparably damaged by a natural disaster are dealt with as part of the asset's disposal (IRD, 2011o). Section EE 45(1) was amended so that disposal costs are deducted from disposal proceeds, and section EE 45(2) permits the amount derived to be negative (Burgess, 2011). This means such costs are generally deductible.³⁰ Section EE 45(8) was

²⁹ In February 2004, intense rain fell in the central and lower North Island of New Zealand, flooding towns and farmland. Rural communities were evacuated, half the roads in the region were closed and more than 20 bridges were damaged. The civil defence operation was the largest in 20 years (McSaveney, 2006).

³⁰ If the insurance proceeds exceed the original cost of the building any offset of the demolition costs against these proceeds will most likely simply reduce the capital gain on the building meaning the demolition costs will not give rise to any tax benefit (Burgess, 2011).

also amended to ensure that the amount derived includes any disposal proceeds, for example, any scrap value, and not just the amount of insurance received (IRD, 2012f).

Depreciation recovery limited to depreciation previously claimed

The depreciation rules cap recovery income at the amount of previous depreciation deductions for an asset that is irreparably damaged or rendered useless (IRD, 2011ad). However, under section EE 52 insurance proceeds for a repairable asset are taxable to the extent they exceed the cost of any repairs and the asset's adjusted tax value (IRD, 2011ad). Section EZ 71 (previously section 23D) limits the depreciation recovery income that arises to the amount of depreciation deductions previously claimed (IRD, 2011ad). The cap is confined to repairable assets damaged by the Canterbury earthquakes which are not subject to section EZ 70 (previously section EZ 23C) (IRD, 2011ad). The amendment applies for the 2010/11 to 2018/19 income years.³¹

New section EZ 70 provides for the deemed disposal and reacquisition of assets which are damaged in a Canterbury earthquake and considered by an insurer to be uneconomic to repair (but not irreparably damaged or rendered useless) (IRD, 2011ad). This change caps the tax liability when an insurance amount is received to the amount of previous depreciation deductions. This Canterbury earthquakes-specific amendment applies for the 2010/11 to 2018/19 income years (IRD, 2012f). 32

Damage to pooled assets

Generic changes were made to clarify the treatment of pooled assets. New subsection EE 22(2B) ensures that when a person receives insurance proceeds for damage caused to a pooled asset, any insurance proceeds that are more than the repair costs are subtracted from the pool's adjusted tax value (IRD, 2011ad). Section EE 22(3) has been amended to clarify that insurance proceeds are included as an amount derived from the disposal of an asset, and that any excess of the insurance proceeds over disposal costs is subtracted from the pool's adjusted tax value on the date of disposal (IRD, 2011ad). If the tax book value is reduced to nil, any excess insurance compensation is treated as depreciation recovery income (IRD, 2012c). This aligns the treatment of pooled and non-pooled assets under the depreciation rules (IRD, 2011ad).

³¹ The time limit was originally 2015-16 but this was subsequently extended by three years as it was taking taxpayers longer to settle insurance claims than first anticipated (IRD, 2013b).

Capital contributions

Previously, a business interruption insurance payment for replacement property was not taxable because it did not relate directly to income replacement and the recipient could also claim full depreciation deductions even though the cost of the replacement property had been met by someone else (IRD, 2012m). A general amendment was therefore made to the definition of "capital contribution" in section YA 1 so that such amounts are now treated as a capital contribution if they are not otherwise income (IRD, 2011ad). A capital contribution is treated as income under section CG 8 unless the recipient chooses to reduce the cost base of the replacement property under section DB 64 (IRD, 2011ad).

Disposals within 10 years

Under subpart CB, profits on the sale of a property may be taxable if it is disposed of within ten years of purchase and the seller is a dealer in, or a developer of, land or buildings, or the seller is associated with such a person. New section CZ 26 switches off the 10-year tainting provisions so that sections CB 9 to CB 10 and CB 12 do not apply to purchases of land made in response to a Crown red zone compensation offer under section 53(1) of the *Canterbury Earthquake Recovery Act 2011* (IRD, 2012f).³³ This was later extended to compulsory acquisitions under sections 54 and 55 of that Act, and income arising because of zoning changes (section CB 14) (IRD, 2014b). There is no requirement to purchase new land with the compensation received, although, the 10-year provisions start afresh for any newly acquired land (IRD, 2012f). The exception does not apply to land that was acquired with the intention of resale. However, the rollover relief provisions in section CZ 25 may apply in these circumstances (IRD, 2012f).

4.3.3.3. Special tax rates

The tax changes for timing and damaged assets were applications of existing tax policy. This follows the normal New Zealand response to natural disasters, which is to operate within existing tax laws. Officials consider that tax concessions are likely to be poorly targeted, have awkward boundaries, lead to inequities between taxpayers, and create undesirable precedents (New Zealand Treasury, 2011e). Despite this, a number of tax concessions were considered in response to the Canterbury earthquakes.

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³³ An amendment was made to remove the exemption for income arising from a non-minor development, because section CB 11 is not time-limited (IRD, 2014b).

Calls were made to exempt foreign insurance assessors working in New Zealand (New Zealand Treasury & IRD, 2010). However, officials were concerned about the precedent this would set for other foreign workers involved in the rebuild (IRD, 2011af). Therefore, instead of a tax exemption, the New Zealand government legislated a special discretion which allowed the IRD to waive interest for any foreign workers who incurred tax liabilities in the first year following the earthquakes (IRD, 2011y; New Zealand Treasury & IRD, 2011k). The IRD also waived penalties for late payment under existing powers and streamlined tax compliance, centralising the issuing of tax numbers and provision of information, and establishing special procedures with overseas tax authorities to ensure that double tax relief operated smoothly (IRD, 2011af; New Zealand Treasury & IRD, 2010).

Several taxpayers advocated reducing GST within a special economic zone (MacKenzie, 2011) and deferring GST on CBD property developments (NZ Official 7). While neither of these ideas was given serious consideration, the New Zealand government did contemplate reducing the company tax rate for Canterbury businesses and allowing businesses to carry back and cash out losses (New Zealand Treasury & IRD, 2011n). A third alternative, preferred by officials, was to give immediate or accelerated tax deductions for capital expenditure in Canterbury. This would reduce the cost of building or purchasing assets, provide an incentive to rebuild in Canterbury, and equate the treatment of repairs and replacement (New Zealand Treasury & IRD, 2011n). It was also a scalable option, as the entire cost or some fraction could be made tax deductible (New Zealand Treasury & IRD, 2011n). However, proceeding with expensing would require a range of design issues to be resolved, including defining qualifying assets and regional boundaries (IRD, 2011z). It would also be expensive (IRD, 2011z). Therefore, on balance, officials considered that the disadvantages outweighed the advantages and that it would be preferable to provide support for reconstruction through other measures, such as rollover relief (New Zealand Treasury & IRD, 2011n).

4.3.3.4. Rollover relief

Applying the tax depreciation rules to assets damaged by the Canterbury earthquakes could have led to taxpayers facing unexpected tax liabilities, as insurance proceeds that exceed an asset's book value are taxable (IRD, 2011z). In response, the New Zealand government gave taxpayers the option to defer this income into the value of replacement assets (IRD, 2011o). The rollover relief (provided by section EZ 23B) is for certain classes

of depreciable assets: buildings, commercial fit out, pooled assets and other property destroyed in the Canterbury earthquakes (Maples & Sawyer, 2015). Taxpayers calculate their net recovery income for each class of asset and can elect to suspend that income if they intend to replace the asset (IRD, 2011o; Maples & Sawyer, 2015). In the case of buildings, rollover relief is restricted to structures rebuilt in Canterbury (IRD, 2011v). When the relief is applied, the replacement asset's adjusted tax value and cost are reduced by the amount of depreciation rolled-over (IRD, 2011o). If the destroyed asset is not actually replaced, then the deferred income is taxable in the earlier of the 2018/19 income year, or the income year in which the owner made a decision not to replace the destroyed asset, or goes into liquidation or bankruptcy (IRD, 2011o). ³⁴

Initially, rollover relief only applied to destroyed assets (IRD, 2012f). Later, the relief was extended to assets that were uneconomic to repair under section EZ 70 (IRD, 2012f). The New Zealand government also recognised that reinvestment in Canterbury is occurring by owners pooling together (IRD, 2014b). An amendment was therefore made (section EZ 23BB) to extend rollover relief to taxpayers who reinvest jointly with other investors to acquire replacement property (IRD, 2014b). Each person's entitlement to rollover relief is related to their share of the replacement asset's cost as a proportion of their destroyed asset's cost (IRD, 2014b). They are able to defer their depreciation recovery income until the earliest year that the replacement property is sold by the joint investment entity, or the taxpayer exits the joint investment entity (IRD, 2014b). In addition, depreciation recovery income must be recognised in the 2018/19 income year if the joint investment entity has not acquired replacement property (IRD, 2014b).

Rollover relief was also provided under section CZ 25 for revenue account property. In order to be eligible for relief the owner must incur expenditure on replacement revenue account property located in Christchurch before their 2018/19 income year (IRD, 2012f). Initially the relief in section CZ 25(1)(a)(i) (originally section CZ 23) applied only to income arising from the disposal of buildings destroyed by the earthquake (New Zealand Treasury & IRD, 2013). However, in 2012, new section CZ 25(1)(a)(ii) widened the relief to apply to land and buildings purchased by the Crown under a red-zone offer made under

³⁴ The income year time limit in sections EZ 23B and EZ 23C (repealed and re-enacted as section EZ 70) was originally 2015/16. However, it was subsequently extended by three years to the end of the 2018/19 income year as it was taking taxpayers longer to settle insurance claims than first anticipated (IRD, 2014b).

³⁵ The time limit was initially 2015/16. However, this was subsequently extended by three years as it was taking taxpayers longer to settle insurance claims and replace damaged property (IRD, 2014b).

section 53(1) of the *Canterbury Earthquake Recovery Act 2011* (New Zealand Treasury & IRD, 2013). This was later extended to compulsory acquisitions under sections 54 and 55 of the *Canterbury Earthquake Recovery Act 2011* (IRD, 2014b). Further amendments were also made to include rollover relief for income arising under sections CB 6 and CB 7 (New Zealand Treasury & IRD, 2013). 36

If the rollover relief provision applies, the cost of any replacement revenue account property is reduced by the amount of profit made on the destroyed asset (IRD, 2012f). This lower cost base will result in a higher taxable profit when the replacement property is eventually sold. The income amount is pro-rated if not all of the receipts from disposal are used to purchase replacement revenue account property, with no deferral of tax on the unused remainder (New Zealand Treasury & IRD, 2013).³⁷

4.3.3.5. Employee allowances

In addition to the rollover relief provisions to incentivise rebuilding in Canterbury, the New Zealand government also provided tax concessions for employee allowances paid to those working on the rebuild. Generally accepted practice had been that employer-provided accommodation was tax exempt if the employee maintained a home elsewhere (Maples & Sawyer, 2015). However, this was contradicted by the release of an IRD Operation Statement (CS 12/01) in 2012 which took the view that any employee expenditure payment to cover accommodation was taxable. Initially, a one-year tax exemption was proposed (IRD, 2012o). However, concerns were raised about longer-term projects (New Zealand Treasury & IRD, 2014). In response, under the new rules in sections CW 16B to F, employer-provided accommodation or an accommodation payment is tax-exempt if an employee is seconded to work at a new location not within reasonable daily travelling distance of their home for two years or less, or three years or less where the work relates to a capital asset. A special transitional exemption in section CZ 29 applies for employees working on the Canterbury rebuild. In this case, the maximum tax

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³⁶ The section initially only applied to income under section CG 6 for the loss or destruction of, or damage to, traded property. However, for buildings that were not destroyed, income arose under other revenue account property sections (New Zealand Treasury & IRD, 2013).

³⁷ Where the cost of replacement revenue account property is less than the insurance proceeds and the cost of the original property, no rollover relief is available as the tax liability can be met without affecting the taxpayer's ability to purchase the new property. Where the cost of replacement property is less than the insurance proceeds but more than the cost of the original property, a portion of the insurance proceeds will be taxable as income in the year of receipt, with the remainder rolled-over to reduce the cost price of the replacement property. Where the cost of replacement property is equal to or more than the insurance proceeds, and more than the cost of the original property, there is no pro-rata, and the full amount of taxable income will be rolled over (New Zealand Treasury & IRD, 2013).

exempt period is extended to five years if the employee started work in the period 4 September 2010 to 31 March 2015, and to four years if the employee started work in the period 1 April 2013 to 31 March 2016. There is also a restricted ability to extend the thresholds in exceptional circumstances, such as a natural disaster (IRD, 2013c). In this case, the time limit is extended for as long as the employee is unable to leave the work location (IRD, 2013c).

Submitters on the proposed rules called for a generic rule for accommodation provided or paid for by employers carrying out rebuild work after an adverse event (New Zealand Treasury & IRD, 2014). However, officials' preference was to deal with adverse events on a case-by-case basis and legislate as necessary at the time of the event (New Zealand Treasury & IRD, 2014).

4.3.3.6. Earthquake levy and other financing

Emergency-related spending, including tax concessions for employee allowances and rollover relief, placed huge cash demands on the New Zealand government at short notice. New Zealand's approach to funding shocks has been to run a strong fiscal position with low Crown debt levels which allows the cost of an event to be absorbed without unduly affecting core public services or the wider economy, or putting upward pressure on government borrowing costs due to solvency concerns (New Zealand Treasury, 2014). However, the Canterbury earthquakes had a devastating impact on the New Zealand government's fiscal position. To a certain extent, pressure was mitigated by New Zealand's high levels of public and private insurance. However, following the disaster there were calls to introduce an earthquake levy to help fund recovery (Wang, 2012). In response, officials provided advice on using time-limited disaster taxes. After considering and rejecting a number of temporary revenue raising ideas, including temporary increases in GST, alcohol, tobacco or fuel excises, and tariffs, four different options were analysed in detail:

- a levy based on total taxable income;
- a payroll tax on labour income;

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³⁸ Over 99 percent of Christchurch's damaged dwellings and most non-residential buildings in the CBD were insured, meaning insurance covered 80 percent of the rebuild cost (Tompkins et al., 2012). However, the high level of insurance did have some negative impacts with significant delays in claim settlement (Hatton et al., 2012; Poppelwell et al., 2015), and dramatic increases in premiums and excesses (Newman, 2012b).

- a central government levy on ratepayers; and
- a special increase in the EQC levy to fund dividends to central government (New Zealand Treasury & IRD, 20111).

However, despite considering a range of revenue raising options, the New Zealand government elected to rely on existing taxes and increase debt, combined with partial asset sales, ³⁹ spending cuts ⁴⁰ and local government financing to help pay for rebuilding Christchurch. Increased borrowing to finance the earthquake recovery spread the burden over time. However, the direct costs of the December 2011 earthquake added about NZ\$300 million to the New Zealand government's operating deficit (Brookie, 2012), pushing the current account deficit to 4.3 percent of GDP for the year ended September 2011, and testing the limits of the New Zealand government's fiscal buffer (Wang, 2012). Concerns about the level of government debt led to New Zealand's long-term sovereign rating being downgraded to 'AA' by Standard and Poor's in early 2012 (Bollard & Hannah, 2012). In response, the New Zealand government reviewed the appropriate split of costs between central and local government. Central government no longer assumed sole financial responsibility, with local government in Canterbury expected to pay NZ\$1 billion towards the cost of earthquake recovery (Miley & Read, 2013). An independent report highlighted a potential shortfall in Christchurch City Council finances which was expected to grow to close to NZ\$1 billion once insurance settlements were finalised (Wakefield, 2014). After rejecting rate increases, the council opted for a mix of debt funding combined with asset sales aimed at raising up to NZ\$750 million from councilowned commercial assets (Cairns, 2015; Miley & Read, 2013; Wakefield, 2014).

4.4. Summary

The first aim of this research is to provide a narrative of responses to natural disasters as a useful resource for future tax policy makers. Using Todd & Todd's (2011) three phase model, this chapter provided an overview of the tax responses to the Canterbury earthquakes, as illustrated in Figure 4.5.

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³⁹ The New Zealand government established the Future Investment Fund to invest money realized from selling minority shareholdings in public assets. Of the total NZ\$4.7 billion fund, over one billion dollars was allocated to rebuilding Christchurch (English & Ryall, 2013; Manning, 2014; New Zealand Treasury, 2015a).

⁴⁰ Approximately NZ\$800 million of new spending was cut from the 2011 budget (Wang, 2012).

Canterbury Earthquakes 0 Immediate Pre-disaster Recovery response Timing of insurance Ad hoc Employer Rollover payments & disaster tax Admin Issues welfare relief business provisions support deductions Damaged Employee Donated Social policy EQC Assets allowances trading stock responses 0 Earthquake Extension of Special tax levy and Charitable Earthquake redundancy rates other tax issues strengthening tax credit financing

Figure 4.5 – Tax responses to the Canterbury earthquakes

In summary, New Zealand's pre-disaster tax settings consisted of a number of ad hoc disaster provisions along with a national insurance scheme, funded by a mandatory levy. While pre-disaster tax responses can also include incentivising property owners to invest in mitigation, such as earthquake strengthening, since 1 April 2011, no tax deduction has generally been available in New Zealand for such expenditure. As such, there is little tax incentive to strengthen a building, unless taxpayers are able to somehow treat the expenditure as a repair.

Given these pre-disaster settings, New Zealand made a range of immediate tax responses to the Canterbury earthquakes. The IRD offered a package of administrative support, including public announcements, deployment of staff at welfare centres, free seminars, and a range of tools to help organisations self-manage. They provided assistance to firms who could not access their financial records and utilised their relationship with tax agents to support businesses. Debt, late return letters and tax audits were put on hold, and the IRD used its existing powers to establish payment plans for overdue tax and remit penalties. However, officials felt that the existing discretions were insufficient and three temporary

earthquake Orders were passed to provide the IRD with extended powers to remit UOMI, share information with other agencies and grant extensions of time.

As well as administrative responses, the New Zealand government made a number of social policy changes. They enacted amendments to ensure that relief payments did not affect social policy benefits and expanded the definition of financial hardship for KiwiSaver withdrawals. Additional assistance was provided through the welfare system, with tax changes made to support the welfare package, including exempting earthquake benefits from income tax and GST. Cancellation of the redundancy tax credit was delayed.

The availability of charitable relief for emergency support was factored into decisions about what New Zealand government assistance to provide. Tax relief was granted to a number of new charitable vehicles and the IRD provided operational resources to aid charitable efforts. The New Zealand government also used the tax system to incentivise private support, providing tax relief for employer welfare contributions and an exemption for donated trading stock.

Similarly, New Zealand made tax responses to support longer-term recovery. The extended recovery period gave rise to timing issues, leading the New Zealand government to make a number of amendments to address timing issues with business interruption insurance, insurance proceeds for repairable assets, destroyed assets, depreciation deductions for inaccessible property, expenses for disrupted business operations, recognition of insurance proceeds under the thin capitalisation rules, and insurance deductions and receipts for controlled foreign companies. The New Zealand government also introduced an optional Canterbury specific timing rule to smooth insurance income and deductions for repairable assets, irreparably damaged assets and assets that are uneconomic to repair, including pooled property.

In addition to timing issues, the large scale destruction of property in the Canterbury earthquakes raised a number of tax issues. The government sought to address these issues with a series of amendments aimed at assisting recovery, including allowing a deemed disposal for buildings that had to be destroyed, clarifying the treatment of disposal and demolition amounts, and limiting depreciation recovery income to the amount of depreciation deductions previously claimed for repairable assets and assets considered uneconomic to repair. The 10-year revenue account property provisions were turned off for red zone compensation offers or compulsory acquisitions, and generic changes were made

to clarify the treatment of insurance proceeds for pooled assets and to tax business interruption insurance payments for replacement property as a capital contribution.

A number of tax concessions were considered in response to the Canterbury earthquakes. Calls were made to exempt foreign insurance assessors. Instead, the New Zealand government streamlined tax compliance and allowed the IRD to waive UOMI. Several taxpayers advocated reducing or deferring GST. While neither of these ideas was given serious consideration, the New Zealand government did contemplate reducing the company tax rate for Canterbury businesses or allowing them to carry back losses. However, both were seen as problematic and ineffective. A third alternative was to give immediate or accelerated tax deductions for capital expenditure in Canterbury. However, the option was fiscally expensive and would require a range of design issues to be resolved. Therefore, officials considered that it would be preferable to provide support for reconstruction through other measures, such as rollover relief.

Rollover relief gave taxpayers the option to defer depreciation recovery income arising from insurance proceeds into the value of replacement assets acquired before the end of the 2018/19 income year. In the case of buildings, replacement assets had to be located in Canterbury. Initially, rollover relief only applied to destroyed assets and revenue account property. Later, the relief was extended to assets that were uneconomic to repair and joint investment entities. In addition to the rollover relief provisions, the New Zealand government also provided tax concessions for rebuild workers, with an extended tax exempt period for employer- provided accommodation.

Emergency-related spending placed huge cash demands on the New Zealand government. To a certain extent, this was mitigated by New Zealand's high levels of public and private insurance. However, in the aftermath of the disaster there were calls to introduce an earthquake levy to help fund recovery. In response, officials provided advice on time-limited disaster taxes. Despite considering a range of revenue raising options to help pay for rebuilding Christchurch, the New Zealand government elected to rely on existing taxes and increase debt, combined with partial asset sales, spending cuts and local government financing.

5. Canterbury Earthquakes: How responses related to the strength of the existing tax system

5.1. Introduction

After providing an overview of the pre-disaster, immediate response, and post-disaster recovery tax responses to the 2010/11 Canterbury earthquakes in New Zealand, the second aim of this research is to assess how the tax responses related to the strength of the existing tax policy system. The following chapter therefore completes the New Zealand case study by evaluating the tax responses to the earthquakes against the standard economic principles of good tax policy, and investigating the relationship between the responses and the strength of the existing tax policy system. In order to do that, it is necessary to evaluate the New Zealand tax policy framework (and policy process) prior to the Canterbury earthquakes.

5.2. New Zealand policy framework

The OECD reviewed New Zealand's tax system in 2009 as part of its economic survey of member countries, and in 2010, the Tax Working Group assessed New Zealand's tax system as part of an independent review of medium-term tax policy. PricewaterhouseCoopers and the World Bank also compile an annual study of the world's tax systems (PricewaterhouseCoopers & World Bank, 2012). These documents, along with relevant commentary by tax officials, practitioners and academics have been used to assess the strength of the New Zealand tax system prior to the Canterbury earthquakes.

Prior to the mid-1980s, New Zealand had a narrow-based, high-rate system (Tax Working Group, 2010). However, the system was unable to deliver sufficient revenue, relied heavily on personal income tax and did not satisfy normal efficiency and equity criteria (Stephens, 1993). In response, New Zealand undertook what has been described as "possibly the most radical tax reform programme ever implemented by a western government" (Kay and King, 1990, as cited in Stephens, 1993, p.45). Following a new broad-base low-rate (BBLR) approach to tax policy, the reforms lowered New Zealand's personal and company tax rates, removed tax preferences, eliminated stamp and estate duties, and introduced a GST and full imputation system, with the company, trustee and top personal tax rate aligned at 33 percent (Tax Working Group, 2010).

Following the reforms, the New Zealand's tax system was rated as one of the most efficient in the OECD (OECD, 2007, as cited in Christensen, 2012), with corporate and top

personal tax rates well below the OECD average, and New Zealand's GST seen as the best tax of its type internationally (OECD, 2000, as cited in Tax Working Group, 2010). Policy makers across the spectrum commented positively on how the New Zealand system compared internationally: "Amongst tax policy advisors, international fora and so on, our system is one of the best designs in the OECD" (NZ Official 2). Similar views were shared by NZ Academics 3, 6, 7, NZ Officials 3, 6, NZ Practitioner 9 and Christensen (2012) who commented on the robust, consistent, coherent, neutral, low rate and broad base nature of the New Zealand tax system.

The Paying Taxes study (PricewaterhouseCoopers & World Bank, 2012) also rated the New Zealand tax system favourably. For the period 2004 to 2011, it ranked the New Zealand tax system 8th out of 34 OECD countries. These results and the OECD average are summarised in Table 5.1.

Table 5.1 – Paying Taxes study – New Zealand results compared to OECD average

Indicator	New Zealand	OECD Average
Total Tax Rate (the cost of all taxes borne)	33.5 percent	44.0 percent
Time needed to comply	152 hours	192 hours
Tax payments per year	8 payments	12 payments

While these international comparisons are favourable, the Tax Working Group (2010) report highlighted concerns with the structure of the New Zealand tax system:

- Heavy reliance on taxes most harmful to growth (corporate and personal taxes), with a major hole in the tax base from the absence of a CGT. As a result, many people faced a disincentive to work, exacerbated by abatement of WfF tax credits which creates high effective marginal tax rates.
- Differences in tax rates and the treatment of entities provided opportunities to divert income and reduce tax, meaning the tax burden was unduly borne by employees.
- Risks to the system's sustainability due to perceptions of unfairness, international
 competition on corporate and personal tax rates, and higher demands on the tax base
 from fewer taxpayers due to demographic change and the rising cost of public debt.

Many of these concerns arose from changes that had occurred since the earlier tax reforms, such as an increase in the top personal tax rate to 39 percent in 2000, introduction of WfF in 2004, and reduction in the rates for companies and savings vehicles to 30 percent in 2007 (New Zealand Treasury, 2007). Other tax changes, such as the introduction of portfolio investment entities, had eroded New Zealand's comprehensive income tax base and increased the complexity of the tax system (Tax Working Group, 2010).

In response, the Tax Working Group (2010) made a number of recommendations. These included:

- increasing GST to 15 percent to reduce the bias against saving and investment;
- reducing personal tax rates across-the-board along with a review of welfare policy to reduce high effective marginal tax rates on labour;
- keeping New Zealand's company tax rate competitive;
- retaining the imputation system and aligning the company, top personal and trust rates to improve system integrity; and
- a number of base-broadening proposals aimed at addressing biases in the tax system, improving efficiency and sustainability, and funding reductions in tax rates. These included a comprehensive CGT or identifying categories of under-taxed income (such as residential rental income) and applying a more targeted approach, such as the removal of depreciation on buildings.

Similar recommendations were made by OECD in their 2009 review. The OECD recommended lowering the corporate tax rate to match the OECD average, and eliminating the double taxation of trans-Tasman profits through mutual recognition of imputation and franking credits. They also suggested shifting the tax mix toward more efficient taxes, by increasing GST and lowering income and profit taxes, alongside flattening the tax structure by reviewing tax thresholds and removing discrepancies between the top personal, trust, portfolio investment entity and corporate rates.

The New Zealand government responded in the 2010 Budget with an overhaul of the tax system in line with the OECD and Tax Working Group recommendations. Following these reforms, OECD (2011) acknowledged movement towards a more growth-friendly tax mix and progress in enhancing neutrality, with New Zealand having addressed some distortions

and inefficiencies with respect to housing. However, they stressed the need for further tax reforms to address a lack of neutrality with respect to saving and investment decisions, a weakness highlighted by other policy makers: "You could argue that one of the things missing in the New Zealand tax system is potentially a capital gains tax and whether the omission of CGT is in itself contrary to broad base low rate" (NZ Practitioner 8). Similar comments were made by NZ Academic 1, NZ Official 2, NZ Practitioners 3 and 4.

Others discussed the fact that vertical equity is not a key objective of New Zealand tax policy design. Features often associated with equity, like a tax-free threshold, CGT, and GST exemptions, are missing from the New Zealand framework (Creedy, 2010; Stephens, 1993). Christensen (2012) concludes that equity is a constraint on design rather than a motivation for policy change, and Creedy (2010, p.68) argues that the New Zealand framework is not focussed on redistribution:

The BB-LR rule of thumb leads... directly to the suggestion that the top marginal income-tax rate should be reduced. But it is important to recognise that economic 'efficiency' criteria alone are not sufficient to determine policy... . The preferred policy depends on the judge's precise value judgements, including the degree of aversion to inequality.

This lack of emphasis on vertical equity is apparent in the Tax Working Group (2010) review. While the Tax Working Group identified equity (both horizontal and vertical) as one of the principles of a good tax system, their discussion was primarily focussed on horizontal equity. There is only one mention of inequality in the report, which notes that New Zealand is close to the OECD average. Similarly, in assessing options for reform, the report notes that the Tax Working Group attempted to estimate the distributional effects of potential changes. Despite this analysis, the primary reform option recommended, to return to an aligned system, reduces vertical equity. The report also acknowledges that the primary method of funding the reforms, an increase in GST, also raises equity concerns. This supports a view that the New Zealand tax system places less emphasis on vertical equity. However, what impact does this have on income distribution?

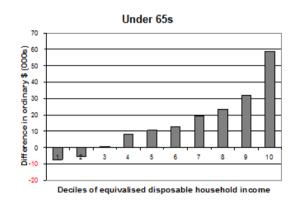
Perry (2010, p.6) concluded that income inequality increased significantly between 1988 to 2004, then fell from 2004 to 2007 as a result of the WfF package. Market income is redistributed across households because high-income households pay more income tax

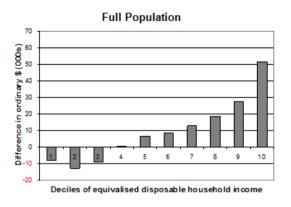
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⁴¹ Although examining the scope of the social welfare system was outside the scope of the review.

than low-income households, and also receive less in the way of cash benefits from the New Zealand government. The extent of redistribution, using 2008/09 data, is shown in Figure 5.1.

Figure 5.1 – Income tax less New Zealand government cash transfers using HES 2008





(Perry, 2010, p.42).

How does New Zealand compare internationally? In 2012, OECD looked specifically at the role that taxes and transfers play in income inequality and growth (OECD, 2012). They noted that labour income inequality is the main contributor to the dispersion in household incomes, but that some countries rely heavily on taxes and transfers to influence distributional incomes. New Zealand is not one of these (OECD, 2012, Figure 4, p.7). Looking specifically at the redistributive impact of taxes on the level of inequality, New Zealand is below the OECD average (OECD, 2012, Figure 5, p.8). In terms of patterns of inequality, New Zealand is grouped with five other OECD countries (Australia, Canada, Ireland, the Netherlands and the United Kingdom) as having higher inequality in household disposable income as a result of average wage dispersion coupled with a high part-time rate. ⁴² Cash transfers are targeted and taxes are progressive (OECD, 2012, Figure 6, p.11). Of these six countries, New Zealand has the lowest level of redistribution through its tax system.

Other authors have also made similar observations about the comparative level of redistribution achieved by the New Zealand tax system. Creedy, Enright, Gemmell, & McNabb (2008) compared inequality indices for New Zealand with similar measures for Australia and demonstrated that net incomes are more equally distributed in Australia than New Zealand. Similarly, Stephens' (1993) analysis of earlier reforms concluded that the

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⁴² Those countries identified as having the highest inequality are Chile, Israel, Mexico, Portugal, Turkey and the United States.

degree of progression in the tax structure had been substantially reduced. This view was also shared by practitioners and academics:

I guess we use the welfare system to do redistribution... .That is right, because our tax rates are relatively flat and we don't have the zero percent band, and we have got highish GST on everything. Our tax system demonstrates some progressivity but not huge. (NZ Practitioner 4).

Similar comments were made by NZ Academics 1, 5 and 7. In contrast, officials see BBLR as addressing equity concerns: "What you are after is fairness and efficiency and keeping administrative and compliance costs down and keeping things coherent. BBLR is a way of dealing with that" (NZ Official 6).

In summary, while international comparisons were favourable following recent reforms, the New Zealand tax system prior to the Canterbury earthquakes was described by the OECD, the Tax Working Group and other commentators as having a number of features:

- Highly efficient with a consistent and coherent BBLR framework;
- lack of level playing field for saving and investment decisions, with a potential weakness being the lack of a CGT or land tax; and
- less emphasis on redistribution, perhaps due to greater reliance on the welfare system.

However, to fully assess how tax responses related to the strength of the existing tax system, it is also necessary to understand how tax policy change is effected.

5.3. New Zealand policy process

New Zealand is internationally recognised for its strong tax policy process (Sawyer, 2013). Since 1995, tax policy has been developed using the Generic Tax Policy Process (GTPP), which is designed to ensure more effective policy development through increased consultation and early consideration of all aspects and impacts of proposals (IRD, 2016b). The process enables officials to communicate the rationale behind policy changes and tap into technical and practical expertise (Sawyer, 2013). It also clarifies the responsibilities and accountabilities of participants, particularly for New Zealand government officials (IRD, 2016b).

Sawyer (2013) undertook a review of the literature on the GTTP, as well as political and judicial commentary on its application. In the literature, GTTP is seen as having a number of advantages. These include a logical structured transparent policy process, and clear definition of roles and accountability (Dirkis & Bondfield, 2005; PricewaterhouseCoopers & World Bank, 2012; Review of Business Taxation, 1998; Sawyer, 2013; Wales & Wales, 2012).

The New Zealand policy process is also seen as having a commitment to consultation and a tight policy network. Trusted practitioners are part of the policy development community and New Zealand government officials are very open to academic contributions (Dirkis & Bondfield, 2005; Sawyer, 2013; Stewart, 2008; Wales & Wales, 2012). One reason that officials, practitioners and academics are able to work so well together is New Zealand's framework. Policy makers across the spectrum commented on the strength of the New Zealand tax system and alignment with standard tax policy principles, with many referring to New Zealand's BBLR framework: "We are lucky in New Zealand that we have a very strong and a clearly articulated tax policy framework" (NZ Official 4). Similar comments were made by NZ Academics 2, 3, NZ Official 6, NZ Practitioners 1, 3, 7, 8 and 9.

Another characteristic of the New Zealand tax policy process is the active role played by tax policy officials. They are able to strongly influence the policy preferences of ministers and counter political proposals as a result of their concentrated expertise and clear policy ideas (Christensen, 2012). Both the IRD and the Treasury have a principle-based way of thinking about tax policy. While the two perspectives are distinct, with the IRD emphasising the benefits of an aligned tax system, and Treasury focusing on taxes and growth, they are set within the same neo-classical framework which promotes low rates, broad bases and neutrality (Christensen, 2012).

While most commentators are generally favourable about the New Zealand policy process, ⁴³ there are some areas for improvement. New Zealand's small size means there is pressure on a small number of policy makers (Dirkis & Bondfield, 2005; Sawyer, 2013; Wales & Wales, 2012). Openness and transparency also come at a cost and take time (Bondfield, 2006; Sawyer, 2013). As a result, there is a risk that the process can be abandoned for political expediency or to protect revenue, for example late policy and legislative developments may occur by way of a Supplementary Order Paper, which means

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⁴³ In a comprehensive review of tax policy making in ten countries, New Zealand was one of the countries highlighted for the strength of its policy-making process (Wales & Wales, 2012).

policy is not exposed to formal consultation (Sawyer, 2013).⁴⁴ Finally, commentators noted that there is limited oversight of the process, as New Zealand has a unicameral system, the committee process has limited impact and assistance for members of the legislature is virtually non-existent (Dirkis & Bondfield, 2005; Wales & Wales, 2012).

Perhaps in response to some of these criticisms, the Tax Working Group (2010) recommended that the New Zealand government introduce institutional arrangements to ensure there is a stronger focus on achieving and sustaining efficiency, fairness, coherence and integrity of the tax system when tax changes are proposed. Specifically, they suggested the introduction of a non-statutory body, similar to Australia's Board of Taxation, to advise the New Zealand government on the development and implementation of tax legislation and the ongoing operation of the tax system. Similarly, Wales and Wales (2012, p.175) commented that "some change in the policy-making environment might be necessary... . However, it will be important to ensure that the changes do not damage the country's established good practices".

The above summary of GTPP mirrors views expressed by policy makers. While there was the occasional criticism of the process ("the legislation got bumped through really quickly" (NZ Practitioner 9)), in general the views echoed those in the literature, in respect of the:

- logical structured process ("we follow a pretty structured, pretty good process" (NZ Practitioner 10));
- commitment to consultation ("openness/transparency in the broad policy framework and the discussions that go on around that" (NZ Practitioner 1));
- accepted framework ("New Zealand's tax framework and process constitute a strong investment in human capital. People understand the framework and regularly apply it" (NZ Academic 2)); and
- active role played by officials ("It is quite different from other government departments where Ministers have much tighter control" (NZ Practitioner 5)).

Therefore, in addition to the tax framework identified above, the New Zealand tax system prior to the Canterbury earthquakes was seen as having a logical, structured, and transparent policy process, driven by tax policy experts rather than political

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⁴⁴ This risk also exists in other jurisdictions.

considerations, with clear definition of roles and a commitment to consultation supported by the widely accepted BBLR framework. However, there are some areas where it could still be improved. Specifically changes to address the slow process, limited political scrutiny, and risk GTPP could be abandoned for political expediency or to protect the revenue base. The next section assesses how the tax response related to the strength of the existing policy system.

5.4. How the tax responses related to the strength of the existing tax policy system

For this section of the study, a smaller subset of nodes has been selected to allow for more in-depth analysis of the tax policy approach taken. As outlined in Chapter Two, nodes for further analysis were selected to provide a maximum variation sample (Maykut & Morehouse, 1994) to understand how tax responses to natural disasters relate to the strength of the existing tax policy system. The nodes for further analysis, summarised and highlighted in Figure 5.2, were selected because they represent responses at all three phases of a disaster: pre-disaster, immediate response and recovery, with examples of good and bad tax policy. Selection was also based on those responses of most importance to policy makers (determined by the number of sources and references), and by the ability to separate out policy makers' comments on individual responses, meaning those nodes with multiple responses, such as damaged assets or timing of insurance payments and business deductions, were not selected. Finally, the links between nodes were considered. For example, where responses were related, such as welfare support, donated trading stock and charitable relief, only one of these was selected for further analysis.

Canterbury Earthquakes (No. of Sources/No. of References) O 0 Immediate Pre-disaster Recovery response Timing of Employer insurance Ad hoc Rollover payments & disaster tax Admin Issues welfare relief business provisions support deductions (45/257) (58/511)(75/673)(37/117)(40/110)Damaged Employee Donated Social policy EQC Assets allowances trading stock (47/243)(41/137)(25/75)(25/80)(28/185)Earthquake Extension of Special tax levy and Charitable Earthquake redundancy other tax issues strengthening tax credit financing (36/135)(29/76)(16/40)(50/281)(37/335)

Figure 5.2 – Canterbury earthquakes nodes for analysis

5.4.1. Pre-disaster

In investigating the tax responses to the Canterbury earthquakes, it is necessary to consider the pre-existing rules for dealing with natural disasters. The tax policy approach to the EQC fund, and to earthquake strengthening, are discussed below as examples of the pre-disaster tax settings.

5.4.1.1. EQC

Who talked about it?

There were 185 references to New Zealand's EQC arrangements. Six academics, four practitioners and two tax officials discussed this aspect of the existing tax system. There were also references to EQC in 16 secondary source articles in the form of academic documents (Brookie, 2012; Hatton et al., 2012; Miley & Read, 2013; Steven, 1992; Stevenson et al., 2011; Tompkins et al., 2012; Vosslamber, 2012; Wakefield, 2014; Wang, 2012), policy reports (IRD, 2012a, 2012b, 2012p; New Zealand Treasury & IRD, 2011l,

2011o, 2012), and an official report (New Zealand Treasury, 2014). As shown in Figure 5.3, this was a tax response focussed on by academics and tax officials.

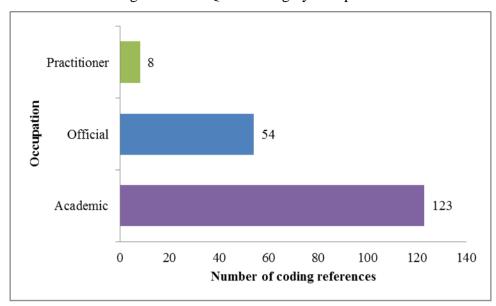


Figure 5.3 – EQC – coding by occupation

How did they talk about it?

Revenue adequacy

Comments from tax policy makers were focussed on the contribution EQC makes to funding recovery. This is consistent with the scheme's objective, and contributes to New Zealand's high level of insurance (Wang, 2012). Academics and practitioners acknowledged EQC as a major source of finance for reconstruction and a key element in New Zealand's mitigation strategy (NZ Practitioner 8; Steven, 1992; Wang, 2012). Officials commented that the fund acts as a buffer for the Crown to assist in meeting natural disaster liabilities, and reduces the need for post-disaster borrowing (New Zealand Treasury, 2014). Without EQC, significant losses from the earthquakes would have been borne by households, with flow on effects in terms of welfare and health costs (Wang, 2012).

However, while the EQC scheme reduces the need for other government funding, the Crown still ultimately bears responsibility to meet recovery costs via a guarantee (New Zealand Treasury, 2014; Steven, 1992). This risk is managed by a comprehensive reinsurance programme (Earthquake Commission, 2015b), a fact acknowledged by policy makers: "a lot of it was covered from overseas, not adequately, but it was sufficient to get us out of a hole" (NZ Academic 7).

Despite these arrangements, the Canterbury earthquakes wiped out NZ\$6 billion of NDF reserves, with 25 percent of claims falling on the NDF and 17 percent on EQC's reinsurers (Brookie, 2012; Feltham, 2011; National Infrastructure Unit, 2011; Tompkins et al., 2012; Wang, 2012). This led to a call on the Crown guarantee and questions about how to fund future events, including what role the NDF should play (New Zealand Treasury, 2014).

An initial response was a tripling of the EQC levy from February 2012 (Wang, 2012). This change was far from a careful calculation of future funding requirements: "the work we did suggested that the levy should be increased by a factor of two to three. We suggested to Ministers they double it and they said let's just triple it. But there wasn't a huge amount of science" (NZ Official 2). However, no one seems to have challenged the increase, perhaps because academics and practitioners are concerned about the ability of the fund to meet future events:

...something that has been designed for occasional events has suddenly been forced into not only a broad based event like Canterbury but a modern environment where you can't just slap a few bits of timber up against a building and say it is okay. (NZ Academic 7).

Similar comments were made by NZ Academics 5, 8 and NZ Practitioner 8.

In response to these concerns, a number of changes have been recommended, including increasing the claim excess, removing contents cover, introducing variable premiums depending on house size or risk, automatic adjustment of premiums and pay-out caps (Brookie, 2012). EQC is also able to disallow cover for high-risk land or buildings and a stricter application of these powers may be fiscally necessary (Brookie, 2012). Longer-term, academics have queried the level of prefunding and cover for private losses (NZ Academic 2). The need to address these questions has been recognised by officials ("In the wake of the Canterbury earthquakes, the challenge will be in determining what level of mix between post-disaster debt funding, prefunding through the NDF, and reinsurance is most appropriate and cost effective for the Crown in the long-term" (New Zealand Treasury, 2014, p.88)), and is being done through a legislative review, announced in 2012, which is still underway (New Zealand Treasury, 2015c).

Equity

One question for the review is what role the government should take in insuring private property losses from natural disasters, as New Zealand is one of the few countries to offer disaster insurance. An explanation offered by policy makers for this difference is that the EQC scheme is part of New Zealand's social policy system and comparable to arrangements for mitigating the effects of age, accident, unemployment and illness: "Certainly the levy is intended to accomplish some of New Zealand's social objectives" (Vosslamber, 2012, p.9; Wang, 2012). In doing so, the scheme is seen as softening the impact of New Zealand's BBLR framework: "If BBLR were the policy setting for everything it would be severe but if you work in the context of a modified welfare state with several quasi-public/private organisations like ACC and EQC" (NZ Academic 7). 45

However, unlike social policy support, EQC funding is based on the benefit principle, consistent with the earlier war damages insurance scheme. At the time of its enactment, parliamentary queries were raised about why cover for war damages was not provided from the Consolidated Fund. The response was that non-property owners should not be called upon to compensate property-owners given the insurance covered private losses (Vosslamber, 2012). Similarly, with the EQC scheme only those who contribute to the fund are indemnified against loss and the scheme is optional in the sense that only those who take out private insurance are covered and required to pay the levy (Vosslamber, 2012).

While the benefit principle underpins the EQC funding structure, given the risk of natural disaster in New Zealand, social policy comparison and objectives of the scheme, academics have argued that we should move towards an ability to pay scheme: "Given that all share the risk, it might be argued that all should also share the cost" (Vosslamber, 2012, p.7). This would mean the New Zealand government taking a wider role with respect to natural disasters: "I do wonder whether there is almost a bigger role for the government. It is hugely debatable of course but you are taking a wider responsibility for the issues that come up" (NZ Academic 3). However, doing so would raise efficiency concerns.

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⁴⁵ Accident Compensation Corporation (ACC). New Zealand's universal no-fault accidental injury scheme.

Efficiency

An efficient tax should minimize interference with economic decisions (Musgrave & Musgrave, 1989). While academics were of the view that the levy does not materially affect the operation of the market (Wang, 2012), comments were made about the fund and the influence it has. Officials criticised EQC, as a hypothecated fund, for interfering with the proper allocation of revenue among competing uses: "Clearly contingencies should be handled centrally rather than having all these pots of gold for every different contingency" (NZ Official 2). Despite this concern, earmarking can be appropriate where tax payments reflect variable costs and are in line with the benefits received (Musgrave & Musgrave, 1989). However, academics commented that while EQC is limited to those likely to benefit (property owners), its uniform levy unrelated to risk does not recognise variable costs and benefits (Vosslamber, 2012).

Practitioners and academics also focussed on the role EQC plays as a corrective mechanism. They noted that the EQC scheme helps address market failures, such as:

- Externalities. The EQC scheme helps address risks from unsafe structures and the economic effects of delayed reconstruction (Vosslamber, 2012);
- Non-availability of insurance. Without the public provision of insurance, the devastation caused by natural disasters might be compounded by an inability to obtain or afford cover (Brookie, 2012);
- Consumer myopia. Even where cover is available, individuals must understand the benefit of protection, which can be difficult to assess and price given the high level of uncertainty associated with natural disasters (Brookie, 2012; Bernstein, 1996; Tarr, 2011, as cited in Vosslamber, 2012); and
- Information asymmetry. Academics and practitioners were concerned about how government action in response to natural disasters could discourage individuals from taking out voluntary insurance: "The problem the government has got is that they can't be seen to be creating too much of a precedent in terms of every time there is a natural disaster, everyone thinks the government will bail us out" (NZ Practitioner 9). Similar comments were made by NZ Academics 3 and 7.

The compulsory nature of the EQC scheme was seen as avoiding these issues (Vosslamber, 2012; Wang, 2012).

Compliance and administration costs

In contrast to the scheme's perceived corrective benefits, policy makers commented on compliance and administration cost limitations. Prior to the earthquakes, concerns had been raised about EQC's capacity to deal with a major disaster (Brookie, 2012; Dykstra, 2011a; NZ Official 1). Its planning (which had assumed settling 80,000 claims in 12 months from a major quake) did not allow for multiple events and completely underestimated the number of claims it might be expected to manage (Brookie, 2012). In response to the earthquakes, the scheme resourced up to process over 400,000 claims. However, the sheer scale of the Canterbury earthquakes stretched the EQC operationally (Brookie, 2012; Wang, 2012). As a result, EQC faced increasing criticism regarding:

- the length of time to process claims;
- duplication of effort within EQC, and with private insurers;
- lack of communication with homeowners and contractors; and
- withholding contractor payment for repairs (Brookie, 2012; Dykstra, 2011b).

EQC attempted to manage some of the compliance and administration costs of the disaster by awarding Fletcher Construction a bulk contract for rebuilding approximately 50,000 moderately or seriously damaged properties (Brookie, 2012). However, the most complex home repairs stalled due to insurance disputes and legal complexities (Wakefield, 2014). The split of insurance cover between government and private insurers gave rise to compliance and administration costs, with huge disparities between the approaches of private insurance companies and the EQC in assessing the amount of damage to homes (Brookie, 2012).

What else was or should have been discussed?

While policy makers supported the scheme on revenue adequacy and equity grounds, they noted that the rationale for a hypothecated fund disappears if this is able to be used for other purposes. Academics observed that the EQC arrangements for paying dividends to the New Zealand government were open to manipulation (Steven, 1992), with both academics and officials commenting on the political temptation to raid the fund:

At one stage politically people were just seeing this as a golden egg. We are never going to have an earthquake, millions of dollars sitting there, why don't we access

that for some sort of alternative Cullen superfund. ...One of the difficulties is earthquakes are one in a hundred or a thousand year events and politics is every three years. (NZ Academic 4).

Similar comments were made by NZ Official 2, NZ Academics 2 and 7. Officials were also guilty of seeing the fund as a source of revenue for other purposes: "Treasury was recommending the fund pay some special dividends, transferring money out of it during the dark days of 2008 and 2009. It didn't happen thank goodness" (NZ Official 2). However, while academics and officials (but not practitioners) were concerned about the fund being used for other purposes, there were no comments from policy makers about how to reduce this risk or what had prevented the scheme from being raided prior to the earthquakes.

One other aspect without much discussion was the fact that the EQC GST reinsurance exemption was one of the few GST amendments required in response to the earthquakes, as compared to the many income tax changes, a fact acknowledged by one practitioner (NZ Practitioner 4).

5.4.1.2. Earthquake strengthening

Who talked about it?

There were 335 references to the tax treatment of earthquake strengthening. Ten practitioners, eight academics, and eight tax officials discussed this aspect of the existing tax system. There were also references to earthquake strengthening in 11 secondary documents, in the form of academic articles (Burgess, 2011; Maples & Sawyer, 2015; Maples, 2012a, 2012b; Newman, 2012b; PricewaterhouseCoopers New Zealand, 2012), formal reports (Hatton et al., 2012; Tompkins et al., 2012), policy reports (IRD, 2012p; New Zealand Treasury & IRD, 2011c) and a submission (Seismic Tax Coalition, 2014). As shown in Figure 5.4, this was an issue across the spectrum of policy makers.

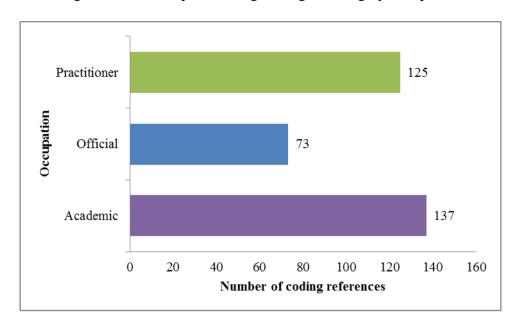


Figure 5.4 – Earthquake strengthening – coding by occupation

How did they talk about it?

Revenue adequacy

Policy makers across the spectrum (NZ Official 9, NZ Practitioners 1, 6 and 7) acknowledged the large fiscal cost associated with any tax response to encourage earthquake strengthening: "the fiscal cost of allowing all earthquake strengthening throughout New Zealand to be immediately deducted would be very high" (New Zealand Treasury & IRD, 2011c, p.5). Officials were concerned that this cost could be even greater as any change could lead to tax relief being extended to other large programmes of remedial work: "If you did something for earthquake strengthening, why didn't you do anything for leaky buildings?" (NZ Official 1). ⁴⁶ Similar views were expressed by NZ Officials 3, 5 and 9.

Academics and practitioners were of the view that policy decisions were being made on revenue adequacy grounds alone: "at the end of the day no government can afford to give a tax deduction for earthquake strengthening" (NZ Practitioner 10). They noted that while the New Zealand government acknowledged problems with black hole expenditure, seismic strengthening costs were excluded from the policy work programme, likely for fiscal reasons (Maples, 2012a). Similar views were expressed by NZ Academic 5, NZ Practitioners 5 and 7.

 $^{^{46}}$ Leaky buildings refers to the ongoing construction and legal crisis in New Zealand concerning a large number of buildings constructed from 1994 to 2004 that suffer from weather-tightness problems.

These policy makers believed that a decision based solely on fiscal grounds would not be good tax policy:

...there is no case for ignoring a significant business loss because of fiscal concerns. ...the policy strategy should be a fair and reasonable set of tax rules that would allow the private sector to meet most of the seismic strengthening costs. (Seismic Tax Coalition, 2014, pp.4-5).

In fact, one academic linked the current issues to a previous push for revenue-neutral tax changes, arguing that a lack of tax deductions may in fact have the opposite effect:

They said because everything had to be tax neutral, if we are going to cut income tax we need to raise GST, and to fill the gap they also decided that they were going to reverse the standard policy and disallow all depreciation on buildings. ...It was going to save us all this money. I suggested that that may not be the case, because people might take some of their capital expenditure and redefine it as revenue repairs and maintenance. (NZ Academic 4).

Therefore, instead of denying tax deductions for earthquake strengthening, academics and practitioners suggested policy solutions that could help mitigate the fiscal cost (Maples, 2012a; NZ Practitioners 2 and 9; Seismic Tax Coalition, 2014).

Efficiency

Policy makers arguing for earthquake-related tax relief did so on two different efficiency grounds: firstly, on the basis that a comprehensive definition of taxable income should recognise such costs and secondly that a corrective tax was required to address externalities.

A comprehensive definition of taxable income includes all inflows and outflows of resources. As such, some policy makers argued that the current tax rules are ignoring economic costs:

An owner of commercial property may have many millions of dollars of seismic strengthening work to do in order to make a building tenantable, pay tax on the rents it receives, but then get no deduction for the seismic strengthening costs. It could easily have an overall economic loss but under the current law be taxed on a fictitious profit. (Seismic Tax Coalition, 2014, p.2).

Similar comments were made by NZ Practitioners 7, 8 and 9, and even some officials:

I think the framework was slightly disturbed as a result of Budget 2010. ... The tradeoff for buildings was inappropriate and has given rise to downstream policy problems, of which earthquake strengthening is but one example. I have no doubt that conceptually the costs of earthquake strengthening should be amortised over a period of time. (NZ Official 4).

Other policy makers argued the treatment was appropriate, because while costs are not tax deductible, in general, gains on the disposal of buildings are not taxable in New Zealand: "at the heart of some of these problems is our capital revenue divide. You are not going to get deductions when we don't tax the profit" (NZ Academic 5). Similar comments were made by NZ Practitioners 5 and 8, and acknowledged by officials (NZ Officials 3 and 5). In response, proponents highlighted other cases where New Zealand provides tax deductions for capital expenditure, including tax depreciation (Seismic Tax Coalition, 2014), buildings destroyed by disasters (NZ Practitioner 8), and software (NZ Official 3).

While the comprehensive income arguments, both for and against, were consistent with BBLR, most policy makers advocating for tax deductions did so on the basis that some form of corrective tax was required, an argument which runs counter to New Zealand's standard tax policy framework: "you might give an incentive where you give up a bit of tax revenue but you actually get more money rather than the expectation that government funds it all. It is actually facilitating the money to come in" (NZ Academic 8). A Similar views were shared by Maples (2012a), Maples & Sawyer (2015) and NZ Practitioner 7. In many cases they argued that a corrective tax measure was required to reflect externalities, including:

- A public benefit from strengthening: "you are going to end up with cities full of either really unsafe buildings or derelict buildings because people just can't afford to fix them" (NZ Practitioner 9). Hatton et al. (2012), NZ Practitioners 1, 10 and the Seismic Tax Coalition (2014) expressed similar views.
- Heritage buildings: "for major public buildings, heritage buildings, we need to consider whether it is worth giving them a subsidy because there is a social benefit to preserving these properties" (NZ Academic 1). NZ Academics 5, 8, NZ Official

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⁴⁷ While an incentive may attract funding there is no guarantee this would be equivalent to the lost tax revenue resulting from granting a tax deduction.

9, the Seismic Tax Coalition (2014) and Tompkins et al. (2012) also raised this argument.

However, in general, officials did not agree that these impacts required tax intervention: "he bought a Heritage building, he knew what the situation was" (NZ Official 5). Applying the BBLR framework, they were concerned about:

- "unintended distortions" (IRD, 2012p, p.2);
- recharacterisation ("allowing deductions for seismic strengthening would need rules to prevent taxpayers from re-characterising expenditure unrelated to seismic strengthening as expenditure that would qualify for the deduction" (IRD, 2012p, p.2));
- the cost of supporting one group of taxpayers ("if you assume that you gave everybody a tax deduction, you have to put up tax rates by a certain percent" (NZ Official 1)); and
- that it would not be effective for those outside the tax system: "not all tax incentives benefit all taxpayers and it can be a blunt tool. For example, there would not be any immediate benefit to exempt taxpayers (e.g. charities, hospitals) or taxpayers in a loss position from enhanced deductions" (IRD, 2012p, p.2; with similar views expressed by NZ Official 2).

These concerns were shared by other policy makers (NZ Academics 1, 2, 7 and NZ Practitioners 1 and 10). Even where policy makers were sympathetic to externality arguments, they felt that New Zealand government support would be better provided in other ways: "I think if you are putting a lot of weight on heritage considerations, that you have to look outside the tax system" (NZ Official 2). Alternatives such as central or local government grants and low or interest-free loans were suggested (Maples, 2012a), with similar comments made by NZ Officials 5, 6, 9 and NZ Practitioner 4.

Equity

While the majority of comments from policy makers focussed on revenue adequacy and efficiency, there were also concerns about a lack of horizontal equity. Practitioners commented that current settings are "ad hoc and inconsistent" (Seismic Tax Coalition, 2014, p.1), with a "lack of neutrality" (NZ Practitioner 6). Similar views were expressed

by NZ Practitioner 7. Specifically, they criticised the current law for allowing a tax deduction where an unsafe building collapses in an earthquake but providing no deduction for seismic strengthening (Seismic Tax Coalition, 2014). Practitioners also pointed out other inconsistencies, including the lack of deductions for losses on buildings or depreciation on buildings as compared to other assets (NZ Practitioner 8), and that the current rules do not permit a deduction where destruction occurs by other means, such as fire (NZ Practitioner 1).

While officials agreed that there was a lack of consistency (NZ Officials 3, 5 and 6), they justified the lack of alignment on the basis that "there are other mismatches within the tax legislation" (NZ Official 2) and the "boundary is nice and defendable" (NZ Official 5). In addition, the treatment matched that for new building construction costs, which also have to comply with modern building standards (New Zealand Treasury & IRD, 2011c), a point mentioned by one practitioner (NZ Practitioner 8).

As well as horizontal equity, policy makers also raised other equity arguments for providing tax relief, including:

- having a process and institutional context which is seen as fair ("the tax system should be intuitively sensible... . Fair and reasonable tax laws underpin New Zealand tax policy and support voluntary compliance with tax requirements. Disregarding economic losses, as current legislation can do, is not fair and reasonable" (Seismic Tax Coalition, 2014, p.4)); and
- transitional fairness: "suppose the government said: 'morality says we are not willing to have people in dangerous buildings. You must do this in five years'. That extra element of compulsion can cause transitional problems" (NZ Academic 1). Others were sympathetic to this view: NZ Academic 7, NZ Officials 1 and 6.

However, while allowing tax deductions for earthquake strengthening would resolve some inconsistencies with the current tax system, tax policy makers were wary of creating new equity issues. Both officials and academics raised the distributional implications of providing relief (vertical equity): "If you are able to strengthen your building, you have got a building in the first place. Why is the government subsidising property developers?" (NZ Academic 7). Similar comments were made by NZ Official 1. Policy makers also emphasised the need for any change to integrate into the existing system and be consistent with other tax rules (horizontal equity). They were worried about creating new boundaries,

for example between deductible earthquake strengthening work and other unrelated structural work (Maples, 2012a). Finally, the issue of temporal equity was highlighted: "you would have to go back over all the earthquake strengthening that has happened over the last two years" (NZ Academic 3).

Compliance and administration costs

While tax officials used existing case law to justify the lack of tax relief (New Zealand Treasury & IRD, 2011c), academics and practitioners commented on the uncertain (and unsatisfactory) case law, difficulty in discerning the capital-revenue boundary, and lack of clear guidance for taxpayers: "The case law we have got on earthquake strengthening, I don't think is good authority" (NZ Academic 6). They criticised IRD's interpretation statement on repairs and maintenance, noting that one of the reasons for releasing updated guidance was the Canterbury earthquakes, but that discussion on point was limited:

It is very messy and you have got the OCTC statement to feed in there as well. It says earthquake strengthening may or may not be deductible and here are two examples, one where they put a piece of sellotape on and that is deductible but it only cost 50 cents and one where they practically redid the whole building and that is not deductible. So that doesn't give anyone any guidance at all really. (NZ Practitioner 2).

Similar concerns were made by NZ Academic 4, Maples (2012a, 2012b) and NZ Practitioner 5.

As a result of the lack of certainty and inconsistent treatment, practitioners and academics highlighted the likelihood that taxpayers would recharacterise expenditure: "It is the difference, not between capitalising and depreciating the deduction, it is between zero and a full deduction. There is an incentive for taxpayers to try and reclassify as much of this expenditure as possible as being deductible" (NZ Practitioner 5). Similar comments were made by Keating (2010), Maples (2012a), NZ Academics 4, 6 and NZ Practitioner 9. While not a risk highlighted in advice to the New Zealand government, it was also acknowledged by officials: "what that does invite is fiddling around the edges...are those beams fit out or are they strengthening? And then you end up with a whole industry" (NZ Official 9).

Recharacterisation means higher compliance costs, with academics recommending taxpayers take steps to ensure building repairs undertaken at the same time as capital work are treated as a separate project, for example by using different project managers and different contractors (Maples, 2012a). Similarly, the adoption of aggressive tax positions leads to increased administration costs, with practitioners describing the uncertain position as "fertile ground for tax audit activity by the IRD" (NZ Practitioner 5). Similar comments were made by NZ Academic 4 and PricewaterhouseCoopers (2012).

In terms of changes to allow relief, policy makers suggested that tax deductions as compared to grants would "have lower compliance costs because you don't have to go through any approval stuff, and you get a little bit of flexibility for what else you do at the same time" (NZ Official 1). However, case by case support, as opposed to a general tax deduction, is easier to monitor, although with additional administrative costs (NZ Academic 1).

What else was or should have been discussed?

While much of the commentary both for and against the current tax treatment of seismic strengthening related to the application of tax policy principles, there was some suggestion that such issues involve wider considerations: "there has been a lot of discussion with MBIE, the lead agency on this, because it is not just about the tax system" (NZ Official 5). This idea was echoed in comments made by NZ Official 9, NZ Practitioners 1, 6 and the Seismic Tax Coalition (2014). However what is not clear is how the tax policy framework is applied in such cases. How are trade-offs made between the tax policy principles and other factors? One answer might be that as far as New Zealand is concerned, the strength of the tax policy framework overrides these other issues: "I think that is an example where in the absence of a robust framework, you would have lost that one because it has a strong political appeal to stakeholders including parts of the Crown" (NZ Official 2). Similar comments were made by NZ Officials 3, 6, 9 and NZ Practitioner 8.

Another interesting question is whether the 2010 depreciation changes that led to the non-deductibility of earthquake strengthening would have gone ahead had officials and politicians been able to foresee the Canterbury earthquakes. While officials generally stuck to the 2010 reform position, other tax policy makers viewed the removal of depreciation as exacerbating the issue (NZ Academics 6, 7, NZ Official 9, NZ Practitioners 4 and 8) and

believed knowledge of the earthquakes could have led to a different outcome: "maybe had the earthquakes happened before that they may not have done that" (NZ Academic 8).

5.4.1.3. Pre-disaster summary

Features of the New Zealand tax system can clearly be seen in policy makers' comments on New Zealand's pre-disaster settings. While policy makers acknowledged wider considerations in terms of whether or not to provide tax deductions for seismic strengthening, the strength of the tax policy framework, and in particular its lack of support for tax incentives, appears to have overridden these. Policy makers advocating for tax relief for earthquake strengthening did so on the basis that a comprehensive definition of taxable income should recognise such costs, in line with transitional fairness and a reasonable institutional process. They also raised the lack of neutrality in current capital expenditure settings, pointing out inconsistencies, including the lack of deductions for buildings as compared to other assets. However, while officials agreed that there was a lack of consistency, they justified the lack of alignment on the basis of other mismatches within the tax legislation and the ability to easily defend the boundary. Applying a BBLR framework, they argued that the exclusion of such costs mirrored the treatment of related gains, and that tax incentives for strengthening should be avoided due to concerns about boundaries between types of capital expenditure, unintended distortions, the cost of subsidising a select group of taxpayers, and the ineffective nature of this form of relief for those outside the tax system. These concerns were shared by other policy makers, who, even where sympathetic to externality arguments, felt that New Zealand government support would be better provided in other ways.

In contrast, on first glance, New Zealand's unique EQC scheme appears inconsistent with the tax policy framework. As a hypothecated fund with a uniform levy unrelated to risk, it interferes with the efficient allocation of revenue among competing uses, and plays a corrective rather than neutral role, helping to address market failures, such as externalities, non-availability of insurance, consumer myopia and information asymmetry. However, this deviation makes sense when EQC is seen as part of New Zealand's social policy system, helping to soften the impact of BBLR rather than align with it.

While New Zealand's pre-disaster tax settings generally mirrored the existing tax framework, there were hints that the tax framework and process could be abandoned for political expediency or to protect the revenue base. The tripling of the EQC levy appeared

to be more of a political rather than policy response. Academics and practitioners were also of the view that policy decisions with respect to earthquake strengthening were being made on revenue adequacy grounds alone.

5.4.2. Immediate response

Tax policy's role in the response phase is to fund immediate relief. The tax policy approach to administrative responses, and to employer welfare support, are discussed next as examples of New Zealand's immediate responses.

5.4.2.1. Administrative issues

Who talked about it?

There were 673 references to the use of administrative tax measures in response to the Canterbury earthquakes. Ten tax officials, ten practitioners and eight academics discussed this aspect of the immediate disaster response. There were also references in 48 secondary source documents in the form of academic literature (Brookie, 2012; Burgess, 2011; "Canterbury quake report," 2010, "Tax uncertainties remain," 2011; Davies, 2011; Fischer-Smith, 2013; Gill & Bogacki, 2013; IRD, 2013a, 2014a, 2014c, 2011u, 2012i; Maples & Sawyer, 2015; Nash & Rakete, 2011; Poppelwell et al., 2015; Stevenson et al., 2011; Wang, 2012; Wood, 2010), reports (Hatton et al., 2012; Tompkins et al., 2012), technical guidance (IRD, 2011p), and policy advice (IRD, 2010, 2011a, 2011x, 2011ac, 2011ag, 2012b, 2012c, 2012d, 2012e, 2012g, 2012m, 2012n, 2011b, 2012p, 2013b, 2011d, 2011e, 2011f, 2011g, 2011j, 2011s, 2011t; New Zealand Treasury & IRD, 2011b, 2011i, 2011k, 2011n; New Zealand Treasury, 2011e). As illustrated in Figure 5.5, this was primarily an issue for officials.

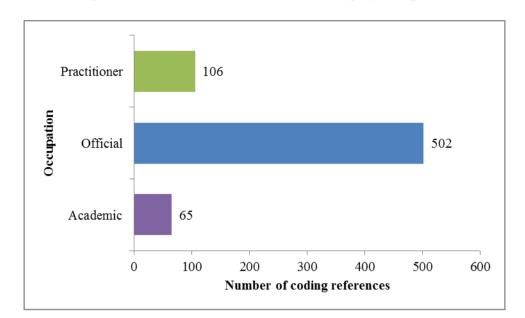


Figure 5.5 – Administrative issues – coding by occupation

How did they talk about it?

Equity

Equity was identified by officials as the policy rational behind the IRD's administrative response to the Canterbury earthquakes:

It would be unreasonable to penalise taxpayers for exceeding a time limit when they have been prevented by the earthquake from meeting it. ...Not providing extensions will also mean that taxpayers miss out on benefits that they otherwise would have been entitled to. Again, this could be seen as unfair. (IRD, 2011x, p.2).

Similar comments were made by NZ Officials 4, 9, 10, and by IRD (2012n), and acknowledged by other policy makers: "I guess that if you go back to policy, it is equity and a bit of administration and compliance. They were saying it is all too hard at the moment. It is not fair on people" (NZ Practitioner 3). However, officials were keen to limit relief: "the government does not wish to extend time limits in cases where obligations might reasonably have been met" (IRD, 2011x, p.2). To do so, they supported a discretionary power, rather than a blanket exemption, as with the latter there "would be no test of fairness of equity, and no requirement that a person be affected by the Earthquake to qualify" (IRD, 2011x, p.4). Other policy makers (NZ Academics 2, 4, NZ Officials 5, 9 and NZ Practitioner 4) were concerned about the IRD's ability to apply a discretion given their desire for horizontal equity: "One of the themes for the IRD is consistent treatment of

taxpayers, and they try very hard to do that. I think there is a bit of a concern by the IRD about unequal treatment applying" (NZ Practitioner 5).

The question of when to cease special treatments was also controversial, with a range of business positions following the earthquakes leading to different views on how long emergency powers were required. Officials wanted as short a period as possible: "until the earliest time at which the person might reasonably be able to perform the action" (IRD, 2011x, p.2). Other policy makers called for assistance to be extended beyond the first few weeks/months (IRD, 2012i, 2013a, 2014a; Poppelwell et al., 2015; "Tax uncertainties remain," 2011). However, as time went on, policy makers felt that there should be a "deadline on leniency" (IRD, 2013b, p.8). Therefore, in October 2012, the emergency powers were replaced by increased frontline staff, compliance plans for tax agents and the use of existing discretions (IRD, 2012d). While only 50 percent of businesses had recovered, removal was justified on the basis that other factors were the real obstacles to non-filing/payment, tax agents needed a clear deadline for certainty, and reintroduction of standard compliance behaviours would enable more resources to be focused on the neediest cases (IRD, 2012d, 2012g). Some of these arguments seem questionable, such as the end of a broad exemption freeing up resources and that a rushed end to the emergency powers was needed for taxpayer certainty. Tax practitioners also raised problems with the existing discretions, insufficient practical safeguards for those unable to comply, that this would be a signal for the IRD to stop acting sympathetically, and that returning to a 'business as usual' approach may not be appropriate when Canterbury was still an environment of constant change (IRD, 2012d, 2014a).

Despite these concerns, most were comfortable with the emergency powers coming to an end ("I would have thought the time is well and truly due" (NZ Practitioner 3)), with some even suggesting the IRD had been too lenient: "I think early on the Revenue were almost a little bit too soft in terms of trying to respond to what had come from the earthquake" (NZ Practitioner 3). Similar comments were made by NZ Academic 7, NZ Practitioners 5, 7, 10 and the IRD (2012d). However, practitioners and academics were concerned about the short transition period, with tax agents required to file 24,000 returns by the 2011-12 deadline (IRD, 2012d), and felt the end of the emergency powers could have been better managed:

It was very rushed, very last minute and very much a forced thing from somewhere outside of IRD. ...there should have been a really clear framework to evaluate when they should be turned off and what notice will be given for turning them off and really clear communication about what that will mean for people. None of that happened. (NZ Practitioner 2).

This view was also shared by NZ Academic 4 and NZ Practitioner 7, and acknowledged by officials: "There wasn't much of a plan to be honest" (NZ Official 5).

In addition to a rushed transition, the emergency powers were supposed to be replaced with a more consultative and tailored approach (IRD, 2014a). However, the IRD appeared to lack a framework for applying concessions, noting that support would depend on "which stage of recovery a business is at", but that "there are no straightforward and significant indicators" (IRD, 2012i, p.16). Other policy makers questioned the IRD's ability to operate in a flexible way, either because legislatively ("we have removed all the elements of discretion" (NZ Academic 4)) or operationally ("they have taken quite a narrow view of what the Commissioner can do in exceptional circumstances" (NZ Practitioner 8)), discretionary powers were limited. Similar comments were made by NZ Academic 5, NZ Officials 1, 3, 4, NZ Practitioners 3, 5, 6, 9 and the IRD (2011x). These concerns were validated by practitioners' experience following the removal of the emergency powers: "once they were turned off IRD's attitude was very different, stiff upper lip, brisk, 'Right, let's get on with it now and let's get these outstanding returns filed'" (NZ Practitioner 2). NZ Practitioners 5, 7, 9 and 10 agreed.

Revenue adequacy

While tax officials were keen to provide an equitable tax response for those affected by the earthquakes, they were also very aware of their role as revenue collectors: "we had to open the cheques in the mail because we had to keep the revenue stream going for government" (NZ Official 10). This role was complicated by a drop in filing and tax payments, and increases in tax debt, avoidance and bankruptcy (IRD, 2012i, 2013a, 2014a; Poppelwell et al., 2015). Practitioners commenting on "the cash economy for repairs" (NZ Practitioner 7), business failures ("We are starting to see a lot of businesses collapse" (NZ Practitioner 10)), and reaction from the tax authority: "Steps are being taken to try and make sure that the revenue base is protected" (NZ Practitioner 3). In response, taxpayers generally favoured the IRD taking a lenient approach during the survival phase (Poppelwell et al.,

2015). However, as time went on there were concerns about the moratorium on investigations (NZ Official 10), with many stakeholders and IRD staff believing that the tax authority needed to return to its usual practices and take a tougher approach to 'deliberate' tax avoidance (IRD, 2014a, 2014c; Poppelwell et al., 2015).

As well as protecting the revenue base, fiscal concerns were factored into the specific administrative responses, with a trade-off made between equity and revenue adequacy: "The mentality was stop abuse, rather than let's allow a small amount of abuse to grant a lot of equity" (NZ Academic 4). Similar comments were made by NZ Official 1. Therefore, while 37 percent of SMEs received a filing or payment extension and 21 percent negotiated a late payment arrangement (Poppelwell et al., 2015), this was not expected to have any long-term fiscal cost: "this option neither materially reduces the amount of tax collected, nor delays collection" (IRD, 2011x, p.3). Similarly, remitting UOMI had no fiscal impact as this revenue was not included in forecasts (IRD, 2011ac).

Compliance and administration costs

Less emphasis was placed on compliance and administration costs. While, some aspects of this tax principle were seen as important, such as:

- convenience, with policy makers acknowledging the difficulty of complying when taxpayers could not access their records (NZ Academics 4, 6, NZ Officials 3, 5, 7, 9, NZ Practitioners 1, 2, 3, and the IRD (2011x));
- certainty, with requests for the government to provide more assurance about extensions of time ("Tax uncertainties remain," 2011), and the IRD using a range of communication channels to let business owners know what to do ("We needed to assure the general public on critical dates and penalties for filing their GST returns, PAYE late" (NZ Official 10, with similar views from NZ Academic 3); and
- speed of response (IRD, 2011x, 2012b, 2012c; Poppelwell et al., 2015), with the IRD quickly reactivating operational responses that had been put in place following the September event (NZ Academic 8, NZ Official 7), and extending administrative powers: "We had Orders in Council being signed by the Governor General on the 28th of September... . We had a government that was prepared to shortcut process" (NZ Official 4). Similar comments were made by NZ Officials 3, 5, 7, 10, NZ Practitioner 3 and by the IRD (2011g, 2011x).

However, in general, the IRD response led to increased compliance and administrative costs: "Taxpayers would need to contact Inland Revenue to claim or apply for extensions of time, and Inland Revenue would need to process these applications or extensions" (IRD, 2011x, p.3). Similar comments were made by NZ Official 5 ("We spend an enormous amount of time extending these things and having discussions about them") and in other IRD documents (2011p, 2011x).

The Canterbury earthquakes also had a significant impact on IRD operations. IRD's Christchurch office, normally housing over 800 staff, was forced to evacuate, and New Zealand Post suspended mail delivery, meaning taxpayer correspondence could not be accessed or processed (IRD, 2011j, 2011t; NZ Officials 4, 7 and 10). Initially it was expected that the IRD would be able to reoccupy their offices within a couple of weeks, however, this estimate stretched initially to 10 months, and then to eventual abandonment of the site (IRD, 2011s). The IRD was therefore forced to implement a number of interim work and accommodation arrangements, including temporary accommodation in 11 separate buildings across the city, resulting in considerable disruption:

- "I probably spent three hours of every day in the car";
- "Even when we were in that building we had four seats available for the 19 of us"; and
- "There was a photocopier between 110" (NZ Official 10).

Many staff were only working six hour days, with 50 percent working from home and 100 staff seconded to other agencies (IRD, 2011s; NZ Official 10). This resulted in a 25-30 percent drop in productivity, and meant the IRD had to reprioritise activity during the busiest time of year, putting resources under immense pressure (IRD, 2011j, 2011s). At the same time, tax agents were calling for more local support (IRD, 2012i; Poppelwell et al., 2015), with demand on administrative resources continuing as new issues arose in connection with recovery and rebuilding: "I think where the problem is going to come is with insurance settlements ... and where the auditors are going to sit on that and how far they will go to get behind it" (NZ Practitioner 6).

One policy maker suggested that a driver for the administrative responses was New Zealand's tough compliance regime:

If you look at the changes, many of them are based on timing of returns and timing of payments. ...I wonder whether it is a response to the fact that our system is over regulated. ...with incredible deadlines and penalties for breaching deadlines and multiple penalties. ...I have got a view that a lot of them are draconian any way and why does it take an earthquake to point out that making people do all these things is quite hard work and a bit unnecessary. (NZ Academic 4).

Subsequently, New Zealand has announced reforms to provisional tax, use of money interest and late payment penalties as part of its business transformation process (IRD & New Zealand Treasury, 2016).

What else was or should have been discussed?

While policy makers commented extensively on equity, revenue adequacy and compliance and administration costs, in general there was much less focus on efficiency. However, academics and officials did raise the risk of negative incentives from taking a lenient approach to accounting records ("every auditor who asks for copies of records is going to be told 'even though I live in Whangarei, all my records were destroyed in Christchurch" (NZ Academic 4)) and emergency powers ("Are we creating a bit of a moral hazard here because people are not prioritising tax because they know that there is continuous relief from having to file" (NZ Official 5)). Similar comments were made by NZ Academic 2 and NZ Official 7.

Outside the standard policy principles, policy makers raised other drivers, including:

• Wider New Zealand government objectives. Collaboration between New Zealand government agencies was a key part of the earthquake response. However, the IRD's pre-disaster administrative rules assumed the organisation operated as an independent silo ("We are still fortress IRD" (NZ Official 9)), requiring responses like the earthquake information-sharing power to allow the IRD to help meet wider New Zealand government objectives (IRD, 2011a, 2011t, 2011ac, 2012p; NZ Officials 2, 3, 5, and 7).⁴⁸

⁴⁸ The Order was seen as a short-term solution, as well as an opportunity to pilot more coordinated cross-agency services. It was eventually replaced by changes to the IRD's tax secrecy provisions. Section 81BA of the *Tax Administration Act 1994* now allows ongoing information sharing with other New Zealand government agencies. Amendments were also made to the *Privacy Act 1993* in 2013 to allow information sharing between New Zealand government departments by Order in Council.

- Political pressure: "we have got to be careful that the Commissioner is not seen as getting too tough, running counter to what government is trying to do in terms of rebuilding the city" (NZ Official 10)).
- Declining interest from tax officials: "At the outset IRD were falling over themselves to be helpful. But two years later ...it was very hard to get anyone in IRD to engage" (NZ Practitioner 1). Similar comments were made by NZ Academic 5, NZ Practitioners 2, 5, 6, 7, 9, and 10, and acknowledged by officials (IRD, 2012i).

Finally, while tax policy makers were generally complimentary about the administrative responses, they stressed the need to plan for future events. This included continuity arrangements, ⁴⁹ arrangements for cross-government collaboration ("there is the need for the public sector to forget about boundaries and work together. That is where you probably need more planning" (NZ Official 3)), and the creation of administrative powers. In respect of the latter, while some tax policy makers felt New Zealand could rely on post-disaster legislation (NZ Official 4), most supported the enactment of generic tax rules for responding to future natural disasters:

You do need that flexibility in the tax system because inevitably there are going to be circumstances beyond taxpayers' control, like the Christchurch earthquakes or floods or natural disasters, where you need to act quickly and you can't wait to pass legislation in order to provide that certainty. (NZ Practitioner 8).

They argued that having such powers would prevent the need to sanction official actions after the fact ("It ratified a situation – we were operating outside of the legislative framework" (NZ Official 10)) and help reduce some of the immediate pressure ("I mean some of that stuff went through pretty quickly" (NZ Official 9)) and administrative hassle: "With the CERA legislation, you had to jump through a whole bunch of hoops, …it was very bureaucratic and quite cumbersome" (NZ Official 5). Similar comments were made by NZ Academics 2, 4, 5, 8, NZ Officials 1, 2, 3, 8, NZ Practitioners 1, 2, 3, 4, 9 and 10.

5.4.2.2. Employer welfare support

As well as administrative assistance, a number of legislative changes were made to facilitate relief efforts, including employer welfare support. From a tax policy perspective,

⁴⁹ While the IRD had arrangements for Wellington, specific procedures had not been developed for Christchurch due to the lower perceived risk (NZ Officials 3, 4 and 10).

the provision of assistance raises the question of whether support payments should be subject to tax or treated as exempt income.

Who talked about it?

There were 117 references to the use of employer welfare support. Seven tax officials, six practitioners and three academics discussed this aspect of the immediate disaster response. There were also references in 21 secondary source documents in the form of policy advice (IRD, 2011b, 2011e, 2011f, 2011h, 2011n, 2011t, 2011ab, 2012b, 2012m; New Zealand Treasury & IRD, 2011b, 2011d, 2011g, 2011j; New Zealand Treasury, 2012a, 2012b, 2011e), academic literature (Burgess, 2011; "Tax uncertainties remain," 2011; Wang, 2012), technical guidance (IRD, 2011r), special reports (IRD, 2011ad). As illustrated in Figure 5.6, this was primarily an area of focus for officials.

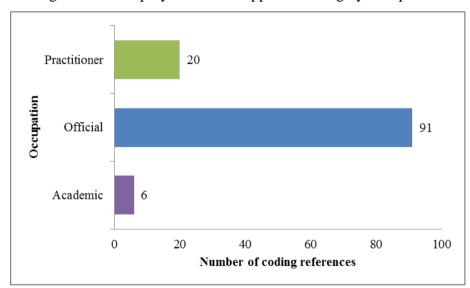


Figure 5.6 – Employer welfare support – coding by occupation

How did they talk about it?

Efficiency

When the tax treatment of employer welfare support was initially raised, officials were firmly of the view that such amounts should remain taxable in line with New Zealand's BBLR policy framework: "because we have got pretty broad bases, we have made clear that if employers are providing benefits to their employees typically that is going to be taxable because it is going to be income, or an income substitute" (NZ Official 6). Similar views were expressed in tax policy advice (IRD, 2011ab; New Zealand Treasury & IRD, 2011g, 2011j), and by some practitioners: "I would have thought, Henry Simons, you have

received these amounts. They are from your employer. There is nexus to employment" (NZ Practitioner 4). However, other policy makers argued that such support should be excluded from tax, because:

- it was not in the nature of income ("welfare contributions, for example, provided by employers, well, are they really income?" (NZ Academic 3));
- employees had suffered a loss of wealth ("in a sense they have had very negative incomes if you measured it properly. This is just a way of the employer offsetting some of the disadvantage that they faced" (NZ Official 6)); and
- the context changed the nature of the payments for tax purposes: "It is intuitively sensible when you provide your employees with blankets and goods and accommodation ... that should be a taxable benefit but not when ...their home has been munted and they have got nowhere to go" (NZ Official 3). Similar views were expressed by NZ Academic 3, NZ Officials 2, 4 and 10 and acknowledged in policy advice (New Zealand Treasury & IRD, 2011j).

On the basis of these arguments, a temporary tax exclusion was implemented and justified by officials as a form of corrective tax, with the government aiming to "encourage (or least not discourage) employers to look after their staff" (IRD, 2011ab, p.2). However, practitioners were dubious about the impact on employer behaviour: "a number of our clients did special things for their staff, irrespective of whether the government helped them pay for it" (NZ Practitioner 7). This view was also shared by NZ Practitioner 4.

Equity

Similarly, tax policy makers had differing views about whether exempting welfare support payments was consistent with the principle of equity. Despite some references to ability to pay ("not sensible to start taxing people on cans of baked beans when they have got nothing to eat" (NZ Official 3)), officials argued that a tax exemption was contrary to the principle of vertical equity:

Employees whose employers are providing such assistance are comparatively better off than those whose employer can't afford to provide such assistance, or whose business won't survive the earthquake. It might be better for the Government, with its limited resources, to focus assistance on those people who do not have such employer support. (New Zealand Treasury & IRD, 2011j, p.8).

Practitioners and academics also raised horizontal equity concerns, such as inconsistent treatment between:

- the Canterbury earthquakes and earlier disasters ("The wage relief stuff wasn't done in Manawatu" (NZ Practitioner 7));
- initial and later Canterbury support ("Why is it that your kindness and generosity after the first one and then your continued kindness and generosity after the second one suddenly became a taxable fringe benefit after eight weeks?" (NZ Academic 4)); and
- Canterbury employees and those working elsewhere ("A worker who has been affected in Christchurch is getting assistance which is tax free whereas a similar worker has been laid off in Auckland is not" (NZ Practitioner 8)).

One policy maker justified the differing treatment on the size of the disaster ("It was the scale of it and you had to keep a city alive to some degree and that made it imperative" (NZ Practitioner 7)). However, other academics and practitioners thought that a general exemption was needed to address inconsistencies: "we have had three floods in the last year in Christchurch plus the ones up north. You are starting to get the fact that this is the norm, so there should be some power around that" (NZ Practitioner 7). This view was shared by NZ Academic 4.

In contrast, officials were concerned that without an exemption there would be differing tax treatments, between:

- support provided at business premises and elsewhere ("A key issue here is whether the centres are part of the employer's premises so that the on-premises exemption applies. ...we can envisage scenarios where it won't and this could ...cause a disparate tax treatment between employers providing similar benefits" (New Zealand Treasury & IRD, 2011j, p.5)).
- support provided to employees and non-employees ("if the employees went along to the food bank, or the employees from Pak'n'Save went to Countdown ...there would be no tax implications" (NZ Official 2)); and

• support provided in response to the September 2010 and February 2011 earthquakes ("ensure that such assistance provided as a result of both quakes is treated the same" (New Zealand Treasury & IRD, 2011g, p.2)).

Parallels were also drawn between the employer welfare support exemption and earthquake benefits. Initially, the comparison was used to support advice that employer support should be taxable, consistent with the taxable ESS (IRD, 2011h). Subsequently, the settings for the exemption were aligned to the exempt Earthquake Job Loss Cover: "The \$3,200 maximum and the eight week period are both based on the criteria for the "earthquake job loss cover" benefit... . This benefit is tax free to recipients" (IRD, 2011r, p.2). Consistency between the tax treatment of employer support and welfare benefits was also given as a reason for limiting relief to the September and February earthquakes:

The original exemption was introduced as part of a time-limited set of emergency responses. It was made available for the same eight-week period following each of the September earthquake and the February aftershocks as the Job Loss Cover.... Those other measures were not offered following the June aftershock, so it would seem odd for the PAYE exemption to be the only one extended. (IRD, 2011n, p.2).

Revenue adequacy

While officials felt that exempting employer assistance would improve horizontal equity, they were worried about fiscal cost (IRD, 2011ab). Initial advice was that there would be no revenue impact (New Zealand Treasury & IRD, 2011j). Subsequently, officials advised that the relief could cost up to \$8 million (rising to \$10 million when the exemption was extended) as the contributions were still deductible to the employer (New Zealand Treasury & IRD, 2011d, 2011g). However, there was considerable uncertainty about cost due to difficulties in estimating the amount of support and its current tax treatment, and potential behavioural responses from employers (IRD, 2011ab). In particular, officials were worried about support being "inappropriately biased towards employees who are associated with the owners" and that "payments are in-lieu of salary, or a salary increase" (New Zealand Treasury & IRD, 2011j, p.8).

These concerns were managed by the short exemption period and links to a natural disaster ("if it is tightly wrapped around events which require some declaration of a natural disaster, the taxpayer doesn't have control over access to the provision" (NZ Official 2)). As a result, officials were unwilling to consider calls for a longer period of relief. For

example, there were requests to extend the exemption following the June 2011 aftershocks. In response, officials raised concerns that payments might not genuinely be for support, along with creating a precedent that relief would be offered after future events (IRD, 2011n). They believed that the time limited relief provided "an appropriate balance between offering taxpayer assistance to employers who can and do provide such welfare assistance and the wider need of government to encourage the community to start standing on its own two feet" (New Zealand Treasury & IRD, 2011b, p.5). This thinking also meant officials were similarly unsupportive of requests for a general exemption for relief provided after natural disasters:

I don't think it would be appropriate for the private sector to have a generic expectation of protection in this space. If event A, or event B happens, I think it is much better dealt with on an ad hoc basis, just to manage that expectation. One of the big advantages that we had in relation to the response to those employer payments was that the response was at least partially post factum. There was no opportunity for planning, whereas if they know about it in advance, I am always sceptical about private sector opportunities. (NZ Official 4).

Similar comments were made by NZ Official 6.

While other policy makers acknowledged the fiscal risk ("you need to be careful when it is applied" (NZ Practitioner 7)), they criticised officials for an undue focus on avoidance: "there is almost a constant undercurrent, we have got to tax everything. If you create legitimate exceptions, illegitimate people will take advantage of it" (NZ Academic 4).

Compliance and administration costs

While revenue adequacy was a key concern for policy makers, it was compliance and administration costs that convinced officials to support a limited exemption for employer welfare support. After initially advising that all support should be taxable, officials revised their position to recommend a FBT exemption for sundry benefits "both for compliance and equity reasons" (New Zealand Treasury & IRD, 2011g, p.1). Compliance concerns were driven by the fact that "employers will have no idea of the details of the benefits being provided and the associated cost" (New Zealand Treasury & IRD, 2011j, p.2). Similar comments were made by NZ Official 4.

Later advice to extend the exemption was also justified on the basis of reducing administration and compliance costs for taxpayers. A key objective was to "provide certainty to those employers providing this support to their employees who have been affected by the earthquake" (IRD, 2011ab, p.2). An exemption was seen as a way to avoid imposing tax after-the-fact ("A lot of those payments had been made. It was trying to reflect how people had treated it so you weren't creating retrospective liabilities" (NZ Official 1), prevent costs associated with disputes ("Some of that stuff was clearly inside the tax net, some of it might not have been. Why bother having those scraps" (NZ Official 4)), and ensure that employers could quickly finalise their 2010/11 payroll positions (IRD, 2011ad). Officials did consider providing additional information on tax liabilities as an alternative to an exemption: "We should give some guidance. We would have said it is taxable" (NZ Official 1). However, this was seen as contrary to the IRD's general approach of deprioritising tax compliance following the earthquakes (IRD, 2011ab).

Part of providing certainty was to act quickly: "the welfare provided by employers should be enacted on a timely basis to limit both compliance and administration costs" (New Zealand Treasury & IRD, 2011b, p.3). The policy change was part of a disaster response and officials were conscious that:

...people should have certainty as to what the tax treatment will be in respect of certain things they have done or are contemplating doing as soon as practically possible. This is certainly the case where the consequence is an exposure to income tax as larger employers have to finalise their 31 March 2011 payroll by 5 April, and smaller employers have until 20 April. (IRD, 2011ab, p.2).

The exemption was therefore legislated for in the *Taxation (Canterbury Earthquake Measures) Act 2011*, introduced on 4 May 2011 and passed under urgency on 20 May 2011 (Dunne, 2011).

While the exemption was appreciated by practitioners ("The government has moved quickly to bring certainty to some of the tax issues arising from the Canterbury earthquakes" ("Tax uncertainties remain," 2011, p.8)), other policy makers argued that the exemption might actually increase compliance and administration costs: "If employers have correctly accounted for tax on such contributions and relief is provided, then employers will incur compliance and administration costs making any associated changes

in the tax treatment. Also Inland Revenue will incur administration costs" (New Zealand Treasury & IRD, 2011g, p.2).

What else was or should have been discussed?

While policy makers discussed the application of tax policy principles, they also pointed to external influences, including:

- need to take a broader perspective ("there is a greater NZ Inc. good. We were just saying that certain sorts of behaviour won't have their normal tax consequences" (NZ Practitioner 2));
- impact of an abnormal situation ("In a post-disaster world and with duties as a good employer ...it would seem odd to consider assistance post-disaster as taxable income" (NZ Official 2));
- need to respond quickly ("The other thing we were under huge pressure on ...was employers who had been looking after their employees. The initial pressure in that space was almost intolerable. We were not given time to think" (NZ Official 4)); and
- political pressure ("there is obviously an emotive political issue there which means that potentially tax policy principles get suspended" (NZ Practitioner 8)). Similar comments were made by NZ Academic 7, NZ Officials 2, 10 and in secondary source documents (IRD, 2011ab).

As a result of other influences, policy makers commented that the exemption was outside the standard tax policy framework ("I don't think it was applying the existing framework at all" (NZ Practitioner 7)). This view was shared by NZ Practitioner 4, NZ Officials 4 and 5, but was not universal (("Yes, we were applying the framework" (NZ Official 10)).

These pressures also impacted the policy process, both in terms of evaluation ("The analysis has been undertaken in a very constrained timeframe, due to the urgency of the Government decisions that are required" and consultation, which was "extremely limited" (IRD, 2011ab, p.1). Instead of GTPP, officials relied on their network of contacts ("We worked with the private sector and we were fast and made very fast decisions" (NZ Official 3)) and consultation after the fact, including "a period for public feedback after its early announcement, and to consult on the draft legislation with two taxpayer-representative organisations before the legislation is finalised" (IRD, 2011ab, p.3).

5.4.2.3. Immediate response summary

The immediate tax responses to the Canterbury earthquakes are also consistent with features of the New Zealand tax system prior to the disaster. In line with New Zealand's BBLR framework, officials initially advised that employer support should remain taxable. However, other policy makers took a different view of economic income, arguing that employees had suffered a loss of wealth and the context meant the payments were not in the nature of income. In the end, concerns over compliance and administration costs from lack of certainty and retrospective tax liabilities convinced officials to support a limited exemption.

In respect of the administrative response to the earthquakes, academics and officials raised the risk of negative incentives from taking a lenient approach to accounting records and emergency powers. They also emphasised aspects of minimising compliance and administration costs, such as convenience, certainty, and speed of response, with one policy maker suggesting that a driver for the response was New Zealand's tough compliance regime.

The immediate tax responses also reflected a lack of emphasis on redistribution. While tax officials were keen to provide an equitable tax response for those affected, they were focussed on their role as revenue collectors, emphasising horizontal equity and trading-off vertical equity. This meant they were keen to limit relief, supporting a discretionary power, rather than a blanket exemption, and wanting special treatments in place for as short a period as possible. Other policy makers favoured the IRD taking a lenient approach during the survival phase but were generally comfortable with emergency powers coming to an end as long as the transition was well managed.

The design of the tax exemption for employer welfare support was also driven by worries about horizontal equity and fiscal risk, rather than vertical equity. Officials were concerned about differing tax treatments for earthquake support, managing fiscal risk via a short exemption period and linking relief to a natural disaster. As a result, they were unwilling to consider calls for a longer period of relief, arguing that the time limited relief provided an appropriate balance between offering taxpayer assistance and encouraging the community to start standing on its own two feet. This thinking also meant officials were also unsupportive of requests for a general exemption, despite practitioners and academics raising horizontal equity concerns, such as inconsistent treatment between the Canterbury

earthquakes and earlier disasters and between Canterbury employees and those working elsewhere.

Finally, while New Zealand normally follows a structured and transparent policy process, it can be slow and runs the risk of being abandoned for political expediency or to protect the revenue base. This was evidenced in the approach to administrative responses and employer support, where policy makers highlighted drivers outside the standard tax policy principles, such as the impact of an abnormal situation, need to respond quickly, wider New Zealand government objectives, and political pressure. These pressures impacted the policy process, both in terms of evaluation and consultation, with officials relying on their network of contacts and consultation after the fact instead of the GTPP. Perhaps because of these pressures, tax policy makers stressed the need to plan for future events. This included continuity arrangements, arrangements for cross-government collaboration, and the creation of administrative powers, including the enactment of generic tax rules for responding to future natural disasters.

5.4.3. Recovery

The final phase is recovery. The tax policy approach to rollover relief, and to an earthquake levy, are discussed next as examples of responses to support recovery.

5.4.3.1. Rollover relief

Who talked about it?

There were 511 references to rollover relief. Eight academics, nine tax officials and ten practitioners discussed this aspect of the disaster recovery. There were also references in 31 secondary source documents in the form of policy advice (IRD, 2011b, 2011e, 2012m, 2012p, 2013b, 2011f, 2011m, 2011t, 2011v, 2011z, 2012a, 2012b, 2012c; New Zealand Treasury & IRD, 2011a, 2011e, 2011f, 2011i, 2011m, 2011n; New Zealand Treasury, 2011e), reports (IRD, 2012f), technical guidance (IRD, 2011o), legislative documents (New Zealand Treasury & IRD, 2013) and academic literature (Burgess, 2011; Davies, 2011; IRD, 2012l; Maples & Sawyer, 2015; Newman, 2012a, 2012b; "Tax uncertainties remain," 2011). As illustrated in Figure 5.7, this was an issue primarily for officials and practitioners.

Practitioner 163 Occupation Official 305 Academic 43 0 50 100 150 200 250 300 350 Number of coding references

Figure 5.7 – Rollover relief – coding by occupation

How did they talk about it?

Equity

Equity was a key principle behind the rollover relief response to the Canterbury earthquakes. Officials commented that the depreciation clawback rules and revenue account property rules exist for revenue protection purposes, but that in the context of the earthquakes these rules seemed inequitable: "Those rules make sense in a different environment and suddenly you are into a new environment and, yes, it is scale. ... But trying to apply that rule right across for an earthquake situation didn't intuitively seem right" (NZ Official 3). Similar remarks were made by NZ Practitioners 9, 10, and in secondary source documents (IRD, 2012b, 2012m, 2013b). As such, vertical equity was seen as justification for providing an alternative tax treatment for those affected by the disaster ("firms significantly affected by earthquake-destroyed assets face tax liabilities not faced by unaffected or less affected firms" (IRD, 2011z, p.1). ⁵⁰ In doing so, officials noted that other options for providing assistance, such as regional tax cuts or allowing the carrying back of tax losses, were less likely to focus on those affected: "it is not possible to effectively target tax cuts to those firms with depreciation clawback liabilities", and "loss carry-back would be much less closely associated with reconstruction" (IRD, 2011z, p.3).

⁵⁰ Similar views were expressed in other policy advice documents (IRD, 2011z; New Zealand Treasury & IRD, 2011a, 2011e, 2011m, 2011n).

Similar views were expressed by other officials (New Zealand Treasury & IRD, 2011n; Poppelwell et al., 2015).

Horizontal equity was also seen by policy makers as important in the design of the response and informed decisions to apply the relief to:

- assets that are uneconomic to repair ("This recognises that assets that are uneconomic to repair in the context of the Canterbury earthquakes are, in substance, very similar to assets that are physically irreparable and therefore should receive similar treatment under the depreciation rules" (IRD, 2012f, p.3));⁵¹
- pooled assets (IRD, 2012b, 2012m);
- land and buildings on revenue account (IRD, 2011m, 2011v, 2012a, 2012b, 2012f, 2012p; New Zealand Treasury & IRD, 2011a, 2011e); and
- the September earthquake (IRD, 2011z).

An extension of horizontal equity is transitional fairness. This was a major driver behind the response, as in the absence of any tax changes, the New Zealand government would have received a large unexpected revenue stream from the clawback of depreciation deductions (IRD, 2011z; New Zealand Treasury & IRD, 2011m, 2011n). Tax policy makers saw the imposition of tax for events outside a taxpayer's control as inequitable and against policy intent: "They had been de-housed through no decision they had made, so it seemed odd for that to trigger a tax consequence" (NZ Official 2). These views were also shared by NZ Academic 7, NZ Officials 1, 3 to 6, 9, NZ Practitioners 1 to 3, 5, 6, 8, and made in a number of policy documents (IRD, 2012b, 2012c, 2012m, 2013b; New Zealand Treasury & IRD, 2011e, 2011m).

While there were aspects of the response which aligned with horizontal equity, policy makers (NZ Academics 2, 6, 7, NZ Practitioners 3, 4, 5, 9, NZ Officials 1, 2, 3, 5 and 6) observed that this type of treatment is not a normal part of the New Zealand tax system, noting that such relief is not provided for:

• voluntary disposals related to the earthquakes ("A case can be made for rollover relief to apply more broadly, for example depreciation clawback earned as an

.

⁵¹ Similar views were expressed in other policy advice documents (IRD, 2012a, 2012b, 2012c, 2012f, 2012m; New Zealand Treasury & IRD, 2011e));

earthquake affected firm restructures and sells undamaged assets to acquire other assets" (New Zealand Treasury & IRD, 2011m, p.7);

- other disasters ("Well, it is not neutral. If your house burns down there is still depreciation recovery" (NZ Official 3);
- other events beyond a taxpayer's control ("there are all sorts of things where the government will acquire land or buildings, like Transmission Gully, and we don't provide any relief on those" (NZ Official 5); and
- other windfall gains ("just because it is a windfall we are not going to tax windfall gains? What are examples of that? You might say lease inducements are almost a windfall gain" (NZ Practitioner 4).

Practitioners (NZ Practitioners 4, 5 and 9) suggested that the inconsistency was due to a lack of understanding of issues on the ground: "I don't think the people in CERA, for example, really understand how this works, and if they don't understand it they are not going to be communicating it to policy" (NZ Practitioner 9). However, it appears that officials were happy to accept a lack of horizontal equity:

- In the short-term: "You may have unevenness of treatment or it might have broader implications and they are just too hard to work through because of time and head space" (NZ Official 2). Similar comments were made in policy documents (IRD, 2012a, 2012f, 2012l, 2013b; New Zealand Treasury & IRD, 2011m).
- Where they thought it would only affect a limited number of taxpayers: "We thought that it was a good idea when there were probably about 70 buildings. Not when there are more than 20,000" (NZ Official 7). The same view was shared by NZ Officials 2 and 9.

Revenue adequacy

While policy makers saw the need for an equitable response, revenue adequacy concerns led to the rejection of a number of options for providing assistance to property owners affected by the earthquakes. These included tax deductions for new capital investment ("expensing is costly") and regional tax rates: "It was not preferred because reducing all tax rates in Canterbury would be fiscally expensive" (IRD, 2011z, p.3). The eventual choice of rollover relief was also limited (at the detriment of horizontal equity) to reduce

fiscal cost: "the government is doing itself out of revenue, and I think it is containing it by being able to dictate if and when people can avail themselves of it" (NZ Official 10). Similar views were reflected in policy documents (IRD, 2011t, 2011z, 2012a, 2012b; New Zealand Treasury & IRD, 2011a, 2011e, 2011m, 2011n).

For related reasons, officials were focused on restricting tax planning opportunities: "In order to get the provision you needed an insurance pay out, it needed to be a loss of something, so it was hard to manipulate" (NZ Official 2). This was also noted by NZ Academic 7, NZ Practitioner 3, and in a number of secondary documents (IRD, 2011z, 2012m; New Zealand Treasury & IRD, 2011e, 2011m). However, the restricted nature of the relief appears to have had the opposite effect by driving tax planning behaviour: "that has caused a whole lot of interesting transactions to start occurring, that probably wouldn't otherwise have happened" (NZ Practitioner 7).

Similarly, despite calls for a general discretion to eliminate windfall gains (NZ Practitioner 1), revenue protection concerns are also likely to mean that any future rollover relief remains tightly controlled: "While some may consider that there is a risk that this measure may be seen to create a general precedent, we consider that this will only be the case in relation to future significant natural disasters" (New Zealand Treasury & IRD, 2011a, p.3).

Efficiency

While rollover relief was broadly in line with equity and revenue adequacy, it ran counter to New Zealand's tax policy framework. BBLR generally discourages tax preferences: "Broad Base Low Rate will say 'no incentives" (NZ Official 4). As such, officials did not support using the tax system to incentivise rebuilding, raising concerns about targeting, unintended distortions and boundary issues between qualifying and non-qualifying expenditure (IRD, 2012p; New Zealand Treasury & IRD, 2011a, 2011m). Officials' advice was that geographically restricted relief would not fully address vertical equity concerns, would raise horizontal equity problems, could require complex targeting provisions and might mean businesses remained even when it might be more efficient to relocate (New Zealand Treasury & IRD, 2011a, 2011m). Tax practitioners were worried about incentivising behaviour contrary to the accepted investment strategy of risk diversification: "he is investing in Australia and Fiji and other places because if it was all in Christchurch that would be a bit of a silly investment strategy. ... For the true businessman, risk diversity

is what they are about" (NZ Practitioner 7). Similar views were shared by NZ Practitioner 5.

Despite these concerns, other assistance options were rejected because they were not seen as providing sufficient incentives ("loss carry-back would be much less closely associated with reconstruction" and "Expensing is not preferred because in order to target reconstruction it would require a range of design issues to be resolved" (IRD, 2011z, p.3)), and when announced, a specific aim of the rollover relief was to encourage rebuilding in Canterbury: "the rollover is preserving the cash, …we are trying to incentivise, 'helping the rebuild" (NZ Academic 6). Similar comments were made by NZ Officials 2, 4, 5, 6, 9, NZ Practitioners 2, 3, 5, 7, NZ Academics 3, 4, and in a number of secondary source documents (Burgess, 2011; IRD, 2013b, 2011o, 2011v, 2011z, 2012a, 2012c, 2012f, 2012l, 2012m; Maples & Sawyer, 2015; New Zealand Treasury & IRD, 2011a, 2011e, 2011f, 2011m, 2011n, 2013).

Interestingly, New Zealand tax policy makers (NZ Academics 1 and 3, NZ Officials 1, 5 and 9, NZ Practitioners 1, 3, 8 and 9), who are generally united in protecting BBLR, were prepared to accept tax distortions in response to the earthquakes, on the basis that:

- It was taxpayer assistance: "it was a relief provision... . I wasn't too fazed by the fact that if you rebuilt somewhere else you didn't qualify for it, because generally speaking by that time you might have the cash in your hand" (NZ Practitioner 1).
- It removed an obstacle to reconstruction: "you don't want the tax system to be a barrier to the rebuild" (NZ Practitioner 8).
- Natural disasters are location specific: "The one thing about natural disasters I think that can be different from some reasons for suspending policy is that they often are geographically quite specific and so the geographical boundary often helps to stop moral hazard problems" (NZ Academic 1).
- It was a deliberate incentive in response to the earthquakes: "That's not efficient because you are actually creating a distortion but you are intentionally creating a distortion" (NZ Official 9).

Even officials, who were initially against targeting, seemed to focus more on the incentive element as time went on:

Not in the first instance, but when we looked at extending it, we wanted some clearer commitment from property owners that they were going to rebuild, because we wanted to target it more closely to Canterbury. ... What we are saying is that it is more about rebuilding than being destroyed in the earthquake. (NZ Official 5).

However, despite the relief being structured as a deliberate tax incentive, policy makers (NZ Academic 8, NZ Official 5, NZ Practitioners 5 and 9) commented on its lack of impact, primarily due to insurance delays: "I don't believe that worked in terms of getting things going, like it thought that it was going to" (NZ Practitioner 7). As a result, when the rebuild stalled it was necessary to extend the time limits for the relief (IRD, 2013b).

Compliance and administration costs

While, equity, revenue adequacy and encouraging rebuilding drove the relief, compliance and administration factors (certainty, convenience and simplicity) were also taken into account.

Certainty requires time, manner and quantity of payment to be clear. In order to achieve this, officials pushed for a quick response, trading off analysis and consultation: "The desired Government outcomes must be achieved within a short timeframe" to "provide certainty to those firms with potential depreciation clawback income liabilities" (IRD, 2011z, p.2). However, despite attempts by officials to have the changes proceed together (IRD, 2011b), the amendments were spread over multiple tax acts. This led other policy makers to comment on extra compliance costs incurred from:

- confusion: "what date did they acquire it, because under the legislation they could say as of tomorrow we are taking the land off you, but we might not pay you for two years while we fight about the purchase price" (NZ Practitioner 9).
- mistakes in the legislation: "It is not as clear as it could be... it was rushed out.

 Pretty obvious errors were made" (NZ Practitioner 5); and
- lack of guidance: "It should have been done and disseminated out there" (NZ Practitioner 1).

As a result, academics and practitioners queried whether such haste was necessary and suggested that following the standard policy process could have avoided the need for multiple sets of changes and the related compliance costs: "arguably something like this

could have gone through a slightly more consultative process and some more thinking been done about it" (NZ Academic 5). Similar comments were made by NZ Practitioners 2, 10, and in secondary source documents (IRD, 2012a, 2012b, 2012c, 2012m, 2012p, 2013b; New Zealand Treasury & IRD, 2011i, 2013; "Tax uncertainties remain," 2011).

Convenience means that taxes ought to be levied at an appropriate time for payment. However, the destruction of large numbers of buildings meant taxpayers would be subject to tax long before they might otherwise have disposed of their property, and at a time when cash was needed for rebuilding. This provided support for relief:

Any tax that the government is getting from this is really a windfall because this was such a freak event, so these provisions should be designed to move that tax cost to the time when it would have occurred had there not been an earthquake. (NZ Practitioner 2).

This was a view shared by NZ Officials 7, 9, NZ Practitioners 3, 10, and in a number of secondary source documents (Burgess, 2011; IRD, 2011o, 2011z, 2012b, 2012c, 2012l, 2012m, 2013b; Maples & Sawyer, 2015; New Zealand Treasury & IRD, 2011e, 2011i, 2011m, 2011n, 2013, 2011a).

A tax system should be as simple and low cost as possible. In line with this objective, officials rejected other options for providing assistance, including carrying back tax losses and reducing tax rates (IRD, 2011z). Similarly, in designing the rollover relief, their aim was to keep it "relatively simple" (New Zealand Treasury & IRD, 2011a, p.3). This was demonstrated in the broad definition of replacement assets, advice on pooled ownership, time limits for relief, and requirements for replacement revenue account property (Burgess, 2011; IRD, 2013b; NZ Officials 2, 6; New Zealand Treasury & IRD, 2013). Officials also argued that costs were reduced by making rollover relief optional, administering relief through existing channels, linking relief to the rebuilding process, and avoiding the need for estimates (IRD, 2011z, 2012m, 2013b; New Zealand Treasury & IRD, 2013). However, other policy makers (Burgess, 2011; Maples & Sawyer, 2015; NZ Practitioners 1, 2, 3, 5, 6, 10) commented on the lack of simplicity ("The rollover relief provisions I think would have to be one of the worst drafted provisions I have ever tried to read" (NZ Practitioner 1)), and problematic notification and documentation requirements. This was acknowledged by officials (IRD, 2011o; NZ Officials 5, 9; New Zealand Treasury & IRD, 2013): "firms will need to separately track and account for assets where rollover relief has

been taken" (IRD, 2011z, p.2). As a result, officials were forced to reduce some base maintenance aspects:

When we tried to tighten up the rules we got into a bit of trouble because we wanted people to, for example, submit building consents applications or resource consent applications, and that turned out to be too difficult from a compliance and simplicity perspective. So we ended up changing that at Select Committee and loosening the rules a bit more. (NZ Official 5).

What else was or should have been discussed?

The discussion on rollover relief revolved around the application of standard tax policy principles: "Without having a firm tax policy base to work from it would have been impossible to respond coherently to the earthquake" (NZ Official 4). These principles were also applied to alternative options for assistance, leading officials to support targeted rollover relief even when it contravened the framework because it was a shield against or substitute for other less palatable responses ("It was a lesser evil in policy terms" (NZ Academic 5)). Outside the framework, policy makers (NZ Academics 1, 3, 4, 6, 7; NZ Officials 1 to 6, 9; NZ Practitioners 1 to 4, 8; New Zealand Treasury & IRD, 2011n) did acknowledge some external pressures: "There were all sorts of arguments under the framework and they were subjective. The eventual response we chose was a halfway house" (NZ Official 4). In particular, they commented on the following non-tax policy drivers:

- political influence ("I think that is political because I mean ultimately the government sat down after the earthquake and had to decide whether to still have Christchurch" (NZ Official 9));
- broader New Zealand government objectives ("Government policy regarding rebuilding Canterbury ... is still largely unformed... . However, the rollover relief proposal could be tailored to target redevelopment in Canterbury or it could be driven by broader tax policy design principles, leading to no geographic restriction being imposed" (New Zealand Treasury & IRD, 2011a, p.3)); and
- as a response to an extraordinary event: "there were some very much gut reaction answers, not political, because I think that is unfair, but much more focusing on 'This is an extraordinary event, let's be sensible'" (NZ Official 4).

5.4.3.2. Earthquake levy and other financing options

Who talked about it?

There were 281 references to the use of an earthquake levy and other post-disaster financing options. Ten practitioners, eight academics, and seven officials discussed this aspect of the disaster recovery. There were also references in 25 secondary source documents. These were in the form of academic literature (Brookie, 2012; Fischer-Smith, 2013; IRD, 2012i, 2013a, 2014a, 2014c; Miley & Read, 2013; Poppelwell et al., 2015; Radford et al., 2013; Stevenson et al., 2011; Wakefield, 2014; Wang, 2012; Wood, 2010), policy advice (IRD, 2011e, 2011t, 2011ag, 2012d; New Zealand Treasury & IRD, 2011l; New Zealand Treasury, 2011a, 2011g, 2012a, 2012b, 2014), and reports (Hatton et al., 2012; Tompkins et al., 2012). As illustrated in Figure 5.8, this was an issue for all tax policy makers.

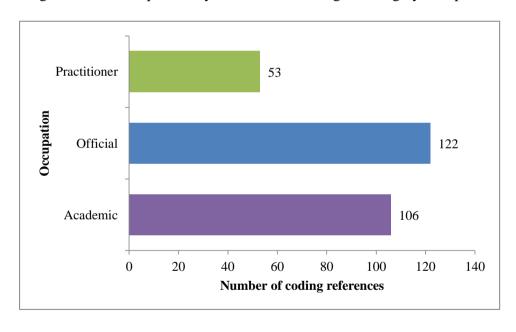


Figure 5.8 – Earthquake levy and other financing – coding by occupation

How did they talk about it?

Revenue adequacy

Discussion of an earthquake levy was driven by concerns over funding recovery from the Canterbury earthquakes. The earthquakes had a significant impact on the New Zealand government's fiscal position, with lower tax revenues and higher expenditure, leading to rising fiscal deficits (Brookie, 2012; English, 2011b; Fischer-Smith, 2013; Hatton et al., 2012; IRD, 2011ag; Miley & Read, 2013; New Zealand Treasury, 2014, 2011a, 2011c,

2012a, 2012b; Stevenson et al., 2011; Wakefield, 2014; Wang, 2012). In response, academics noted public support for an earthquake levy (Stevenson et al., 2011; Wang, 2012). There was also support amongst some policy makers (particularly those based in Christchurch): "there is still the question of what have we forgone by not doing that" (NZ Practitioner 7) and "I don't think people would mind" (NZ Practitioner 6).

Advice to the New Zealand government on funding considered a range of potential options for a temporary levy (IRD, 2011e), including:

- A payroll tax on labour income. Officials estimated that a one percent payroll levy capped at NZ\$110,000 (consistent with ACC) could raise net revenue of NZ\$800 million (New Zealand Treasury & IRD, 2011l; New Zealand Treasury, 2011g). However, there were concerns about being able to implement this quickly (New Zealand Treasury & IRD, 2011l; New Zealand Treasury, 2011g).
- A temporary increase in alcohol, tobacco or fuel excises. This was rejected due to the narrow base, and that these are corrective or hypothecated taxes rather than general revenue raising mechanisms (New Zealand Treasury & IRD, 2011l).
- A central government levy on ratepayers. Officials estimated that a 0.25 percent levy
 on land value could raise NZ\$1 billion (New Zealand Treasury & IRD, 2011l; New
 Zealand Treasury, 2011g). However, such a measure was likely to be strongly
 opposed by local government, presumably because it would be seen as appropriating
 their tax base (New Zealand Treasury & IRD, 2011l).
- A special increase in the EQC levy to fund dividends from EQC to central government. While special dividends have been paid by EQC in the past, officials considered that generating enough revenue to fund the recovery would require implausibly large levy increases (New Zealand Treasury & IRD, 20111).

Instead, officials' preferred option if extra tax revenue was required was a levy based on total taxable income, as this was the only option that did not require new legislation, meaning it could be implemented quickly (New Zealand Treasury & IRD, 20111; New Zealand Treasury, 2011g). It could also raise the amount of revenue required. Officials estimated that a flat one percent levy on all income might raise NZ\$1 billion per annum after accounting for lower GST and excise revenues from reduced household income and spending (New Zealand Treasury & IRD, 20111; New Zealand Treasury, 2011g). Limiting

the levy to high income earners would significantly reduce the level of revenue, for example, a half percent levy from NZ\$48,000 and one percent levy from NZ\$70,000, could raise NZ\$210 million (New Zealand Treasury & IRD, 20111; New Zealand Treasury, 2011g).

However, before rushing to implement such a levy, policy makers queried the need for extra tax revenue ("in order to properly inform decisions regarding tax options we need a firmer idea of the nature and scale of the revenue challenge, namely how big is the mismatch between the fiscal strategy and forecast and projected fiscal tracks" (The New Zealand Treasury & IRD, 2011l, p.13)), with both officials and practitioners (of the view that it might not be necessary to raise extra tax revenue ("in Christchurch it just wasn't necessary" (NZ Practitioner 5)), due to:

- high levels of public and private insurance reducing post-disaster funding pressures
 ("We have the Earthquake Commission Fund. It is effectively prefunding some of
 those potential contingent liabilities" (NZ Practitioner 8), with similar views
 expressed by NZ Official 1, NZ Practitioner 5, and Tompkins et al. (2012));
- New Zealand's relatively strong fiscal position which permitted the use of debt financing ("New Zealand's economic situation as another factor to consider, in particular the low level of government debt" (NZ Academic 2)), an approach favoured by NZ Official 6 and in secondary source documents (New Zealand Treasury, 2014);
- possible options for reducing New Zealand government expenditure, such as student loan and working for families reforms (IRD, 2011e; New Zealand Treasury & IRD, 2011l; Radio New Zealand, 2011b; Wang, 2012);
- partial asset sales (Stevenson et al., 2011); and
- the ability to pass some of the costs of earthquake recovery onto local government (Miley & Read, 2013; NZ Practitioner 5, Radio New Zealand, 2011b; Wakefield, 2014).

If these alternative sources of funding proved insufficient, tax policy makers suggested the better course of action was a general tax increase: "if you need it then do a general tax increase" (NZ Official 3). This view was also shared by NZ Officials 1, 5 and NZ Practitioner 4. In this vein, officials outlined a number of permanent options for revenue

raising, including a land tax, loss ring-fencing and raising the equity requirements for banks. Inflation indexing student loans and applying a levy on student loans were also included as possibilities (New Zealand Treasury & IRD, 2011).

In the end, the New Zealand government determined that the EQC fund and available debt financing would be sufficient to finance the earthquake recovery and neither a temporary or permanent tax increase was utilised.⁵² However, a number of tax policy makers (NZ Academics 4 to 7, NZ Practitioners 2, 5, 6, 8, and 9) commented that with the EQC fund exhausted, such an approach may not be available for future events: "certainly if something else happened, heaven forbid, I think there would be an absolute need for a levy" (NZ Practitioner 6).

Efficiency

Those who supported a temporary levy did so on the basis that it would reduce pressure on New Zealand's credit rating and therefore lower borrowing costs: "we were under more pressure around debt at that time and the question of our credit rating being a function of government debt" (NZ Academic 1). Similar comments were made by Wang (2012), and acknowledged by officials:

Through this lens the appropriate fiscal response is to borrow to fund the shock and permanently raise taxes by a little to fund the now-higher expected costs. On the other hand this tax smoothing result assumes increased borrowing doesn't push up borrowing costs. (New Zealand Treasury, 2011g, p.1).

However, in general there was a lack of support for temporary levies. Officials' advice was that current savings would manage pressure on New Zealand government debt levels and therefore no levy was required (New Zealand Treasury & IRD, 2011l). Temporary levies were also seen as:

- inefficient ("From a tax smoothing perspective we would not recommend temporary taxes, as deadweight losses are minimized if the tax rate is set so that, without further changes in rate, it funds the expected NPV of all future expenses" (New Zealand Treasury, 2011g, p.1));
- creating negative incentives for work and employment, where they are in the form of a temporary payroll levy (New Zealand Treasury & IRD, 2011l);

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⁵² Other than an increase in the EOC levy to begin rebuilding the fund.

- creating negative incentives for saving and investment ("Rejected due to the high compliance costs and the perverse behavioural effects created when the increase is temporary (for example, home owners would be incentivised to defer rebuilding or replacing breakages until after the GST rate returned to 15%)" (New Zealand Treasury & IRD, 20111, p.13));
- potentially inconsistent with BBLR ("Officials' initial judgement is that, reflecting standard broad-base-low-rate tax precepts, any levy should be applied to as many taxpayers as possible, and at a standard flat rate" (New Zealand Treasury & IRD, 2011, p.11));
- likely to suffer from the same problems as other hypothecated taxes if the levy was ring-fenced for earthquake recovery ("I guess our government doesn't like hypothecated taxes. We don't have social security tax. We do have ACC levies, but that is a separate corporation so we push it to one side. We want all the money all the time" (NZ Academic 7, with similar views shared by NZ Practitioner 1); and
- harmful to economic growth. While some options, like a surcharge on rates or increase in the EQC levy were potentially less damaging (New Zealand Treasury & IRD, 2011l), in general: "every time you impose a new tax it is a handbrake, so whether you want to do that" (NZ Practitioner 8). Similar comments were made in secondary source documents (New Zealand Treasury, 2011g; Wang, 2012).

As such, an earthquake levy was seen as inconsistent with the New Zealand government's revenue strategy (New Zealand Treasury & IRD, 2011). ⁵³ Officials did advise that such negative impacts could be minimised if the levy was truly seen as temporary:

...although time-limited taxes offend tax smoothing precepts, they have the institutional advantage of finishing, whereas if a normal tax is increased "temporarily" the government may struggle to bring itself to give up the revenue later... Markets and taxpayers anticipate that and respond (negatively) accordingly. (New Zealand Treasury, 2011g, p.1).

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⁵³ This requires a tax system that: maintains revenue flows to pay for public services and reduce debt, responds to New Zealand's medium-term needs in a planned and coherent way, biases economic decisions as little as possible, and rewards effort and individuals' investment in their own skills (New Zealand Treasury, 2016).

Similar comments were made by NZ Academic 1 and NZ Practitioner 6. Therefore, if a levy were to be introduced, officials' preferred option was an income tax-based levy, as this was seen as the only option that would raise the revenue required without requiring significant new legislation, meaning it would be simple to introduce and repeal, helping mitigate negative economic effects (New Zealand Treasury & IRD, 2011).

It is interesting to contrast the above advice with local government options for financing earthquake costs. While it was within the Christchurch City Council's authority to raise rates, this was seen as unsustainable and politically unacceptable (Miley & Read, 2013). Other choices were to borrow, utilise public private partnerships or sell public infrastructure (Wakefield, 2014). Initially, the central government announced that it would be inappropriate for the council to increase debt (Sage, 2012). When approval was eventually given to borrow, the council was criticised for financial inefficiency (Miley & Read, 2013).

Equity

As well as efficiency and revenue adequacy, the New Zealand government's revenue strategy also requires the income tax system to share the burden as fairly as possible. Therefore, there was considerable discussion by policy makers around the equity impacts of a temporary levy (New Zealand Treasury, 2011g).

While some policy makers favoured regional taxation ("you have got the equity issue. It affects a particular region, why should the whole country pay?" (NZ Practitioner 7)), arguing that Cantabrians would be receiving improved infrastructure (NZ Academic 1, NZ Official 2), and saw a temporary surcharge on rates as matching the tax base to central government recovery expenditure dominated by property repairs (New Zealand Treasury & IRD, 20111), in general policy makers did not favour a temporary levy based on the benefit principle. NZ Practitioner 3 commented:

I am not sure that having an earthquake levy or some form of levy of that nature attributed to those that might have benefited from various changes that happened as a result of the earthquake was the right thing. It comes back to the whole community should share in this because if it was the other way around and say it happened in Auckland, I wouldn't be expecting a levy on Auckland.

Similar remarks were made by NZ Academic 3, 4, 7, NZ Official 2 and NZ Practitioner 1.

Instead, policy makers' (NZ Official 9 and NZ Practitioner 7) comments on a temporary levy reflected the ability to pay measure. If a temporary levy was imposed, it was seen as important that taxpayers affected by the earthquake could be excluded: "You would need to carve out the Cantabrians, instead of raising more money from them to pay for their own reconstruction" (NZ Official 5). However, officials warned that it would be difficult to exclude earthquake survivors or affected businesses from an income or payroll levy (New Zealand Treasury & IRD, 2011l). Interestingly, there was no discussion of the counter intertemporal equity argument. While victims of the earthquakes would be excluded from the levy, taxpayers who may be future victims of natural disasters would be required to contribute.

Interestingly, research by IRD showed a positive attitude by Christchurch businesses towards paying tax.⁵⁴ This was in contrast to views about local government rates ("there's a lot of unhappiness I think amongst Christchurch ratepayers" (NZ Official 9)), with Miley and Read (2013) highlighting that Christchurch ratepayers were required to meet 22.5 percent of total government recovery costs, although they comprise fewer than 8.5 percent of New Zealand's population. This is in addition to any private costs to Christchurch taxpayers through uninsured losses and the economic disruption to the city.

Outside Canterbury, policy makers were concerned about how any levy would affect those with different capacity to pay: "It would have to kick in at a level where you could afford it" (NZ Practitioner 6). Some options (such as a temporary payroll levy) were seen as capable of addressing vertical equity through the use of a progressive rate structure (New Zealand Treasury & IRD, 2011l). However, the tax bases for other options, such as property values for local government rates, were not seen as a good indicator of income or ability to pay (New Zealand Treasury & IRD, 2011l). In fact, officials noted that if a temporary surcharge on local government rates was set at a flat rate, it was likely to be regressive (as people earn more their house typically forms a declining fraction of their wealth). Compensating for differences in ability to pay with progressive levies or exemptions would add complexity and could significantly defer the application date (New Zealand Treasury & IRD, 2011l).

⁵⁴ Nearly two thirds of SMEs agree that paying tax is important because it contributes to the Christchurch rebuild (IRD, 2014a).

In contrast, a flat levy on all income could improve measures of equity:

Perhaps counter-intuitively, a flat rate levy would slightly improve aggregate measures of equity such as the Gini co-efficient. This is because a given flat tax increase reduces a high income earner's after-tax income by more, in percentage terms, than a low income earner's. (New Zealand Treasury & IRD, 20111, p.11).

In weighing different options for an earthquake levy, horizontal equity was also discussed by policy makers. Temporary levies with narrower bases, such as an increase in excise duties, a rates surcharge and a payroll tax were seen as raising fairness concerns (New Zealand Treasury, 2011g). In particular, officials noted that a temporary payroll levy may be seen as unfair because it would not apply to people earning income from capital (New Zealand Treasury, 2011g). Such a levy would increase the gap between labour and capital tax rates, creating the potential for self-employed taxpayers to plan around the levy, and raising equity and integrity concerns (New Zealand Treasury & IRD, 2011l). In contrast, a surtax on income tax: "would be fairer than a payroll tax ... as it applies to all forms of income rather than just to labour income" (New Zealand Treasury, 2011g, p.2).

However, while it was regarded as possible to manage vertical and horizontal equity concerns with a temporary income tax levy, intergenerational equity posed a barrier: "How do you fund the government spending to repair the city after an earthquake? The key issue is whether or not you spread the extra tax you have got to raise over future generations" (NZ Official 6). Similar comments were made by NZ Academic 4. In response, policy makers saw debt as a fairer financing option: "many of the costs of the Canterbury rebuild were funded through an increase in debt issuance. This allowed the response to the earthquake to be swift, without putting undue pressure on Crown finances or current taxpayers" (New Zealand Treasury, 2014, p.118).

Compliance and administration costs

While minimising compliance and administrative costs is also part of the revenue strategy, this policy principle was not subject to the same level of discussion. Most comments related to the speed with which any levy could be implemented and then reversed, with officials' advice being that temporary taxes should be simple and quick to implement for both taxpayers and the IRD, easily reversible, and able to be implemented through simple legislation or under the emergency earthquake powers (New Zealand Treasury, 2011g). Applying these criteria, options that relied on existing arrangements were preferred. For

example, all necessary machinery was in place for a temporary increase in the EQC levy (New Zealand Treasury & IRD, 2011l). A temporary surcharge on local government rates was seen as slightly less easy to implement, as while this could use existing rating machinery it would also require significant legislative change, as the *Local Government (Rating) Act 2002* has no provision for rates to be used by central government (New Zealand Treasury & IRD, 2011l; New Zealand Treasury, 2011g). Similarly, there was no existing legislative basis for a temporary payroll levy, although the ACC legislation could be used as a template (New Zealand Treasury & IRD, 2011l).

As a result, a levy on all taxable income was favoured, as officials considered that it could be implemented and reversed relatively easily using existing statutory and legislative frameworks (New Zealand Treasury & IRD, 20111). However, they did acknowledge that the breadth of the income tax base would result in greater compliance costs as it would impact more taxpayers (New Zealand Treasury, 2011g). A particular complication was how to extend a levy to companies. One approach was to delay the 2010 reduction in the company tax rate, as for most companies the new rate applied from 1 April 2011. However, for companies with early balance dates the new rate was already in place, meaning any deferral would have retrospective effect. An alternative was a 2012/13 application date for companies. While officials noted that this would be administratively possible, such an option was described as "clearly messy", as it would have resulted in the 30 percent rate being reduced to 28 percent for one year, increased the year after and then reduced again when the temporary levy ended (New Zealand Treasury & IRD, 2011l, p.12). As a result of these challenges, along with the other policy concerns, no levy was enacted: "we didn't want any of those because of admin issues, because the computer system is still a considerable problem" (NZ Official 3).

What else was or should have been discussed?

Most of the commentary related to the application of standard tax policy principles, with policy makers seeing the strong tax policy framework as helping determine whether New Zealand would implement an earthquake levy: "I think the framework really did drive us to where we got to" (NZ Official 9). Similar comments were made by NZ Academic 1 and reflected in the policy advice (New Zealand Treasury & IRD, 2011; New Zealand Treasury, 2011g). There was a strong view that departing from the standard framework would have set a pattern for future levies:

...the moment you do, then you have got it every time. ... There is a levy for this and that. ... With Christchurch there was a huge chance, but I think what they were saying was 'no, we are not going to create that precedent'. (NZ Academic 4, with similar views shared by NZ Practitioner 1).

There is also the issue of political influence. While some policy makers thought the New Zealand government could have gone further ("if there was ever a time the government could have got away with tax hikes, levies, that would have been it" (NZ Official 9), with similar views share by NZ Practitioners 1 and 7) many felt that imposing a temporary earthquake levy would have been politically difficult so soon after the 2010 tax reforms: "I guess the government at that time had not long reduced tax" (NZ Practitioner 1). The same point was made by NZ Academic 4, NZ Official 3, NZ Practitioners 4, 7 and in secondary source documents (New Zealand Treasury & IRD, 2011l; New Zealand Treasury, 2011g). This raises a question as to whether New Zealand's strong tax policy framework would have meant a similar result under a different government, with a number of policy makers (NZ Academic 4, NZ Officials 3 and 9, NZ Practitioner 5, and Wang, 2012) suggesting otherwise: "a Labour government... I think you probably would have had a different outcome ...it's possible you would have seen a levy" (NZ Official 9).

5.4.3.3. Recovery summary

As with the pre-disaster settings and immediate tax responses, the tax responses aimed at assisting recovery from the Canterbury earthquakes also reflected characteristics of the New Zealand tax system prior to the disaster. Initially, officials and practitioners did not support targeted rollover relief as it ran counter to BBLR and risk diversification. Similarly, commentary on whether or not to impose an earthquake levy was driven by revenue adequacy and efficiency concerns. Those who supported a levy thought it could lower borrowing costs. However, in general, a levy was viewed as inconsistent with the New Zealand government's BBLR revenue strategy, inefficient and harmful to economic growth. Policy makers also queried the need for extra tax revenue, due to high levels of public and private insurance, New Zealand's relatively strong fiscal position which permitted the use of debt financing, possible options for reducing New Zealand government expenditure, partial asset sales, and the ability to pass on some costs to local government. If these alternatives proved insufficient, policy makers suggested the better course of action would be a general tax increase. In the end, the New Zealand government determined that the EQC fund and debt financing were sufficient and preferred (in contrast

to their views of local government borrowing) and neither a temporary or permanent tax increase was utilised. However, with the EQC fund exhausted, such an approach may not be available for future events.

To a lesser extent, the need to minimise compliance and administration costs was also taken into account. Convenience, in terms of an appropriate time for payment, was used as justification for rollover relief. Officials also pushed for a quick response to provide certainty, and rejected other options due to concerns over complexity. In designing the rollover relief, their aim was to keep the response relatively simple, which was demonstrated in some design features. However, other policy makers interviewed commented on the lack of simplicity. The amendments were also spread over multiple tax acts, leading to drafting errors and confusion. As a result, other policy makers queried whether such haste was necessary and suggested that following the standard policy process could have avoided these issues and the related compliance costs. Similarly, in considering an earthquake levy, officials were focussed on the speed with which it could be implemented and then reversed. Options that relied on existing arrangements, such as an income tax levy were preferred. However, officials did acknowledge that an income tax levy would impact more taxpayers, and that there would be complications in extending a levy to companies. As a result of these challenges, along with the other policy concerns, no levy was enacted.

The post-disaster responses were also consistent with New Zealand's lack of emphasis on redistribution. While policy makers saw the need for an equitable response, revenue adequacy concerns led to the rejection of a number of assistance options, and to the limitation of rollover relief to reduce fiscal cost and in an (apparently unsuccessful) attempt to reduce tax planning opportunities. In terms of rollover relief, while there were some references to vertical equity, such as the inappropriateness of applying revenue protection rules following the earthquakes and that an alternative tax treatment was justified for those affected by the disaster, in general policy makers were concerned with horizontal equity. Concerns over consistency were raised in respect of which assets and events relief should apply to, the need to avoid a large unexpected revenue stream (transitional fairness), and inconsistencies between the relief and wider tax system. Practitioners suggested that some inconsistency might be due to a lack of understanding of issues on the ground. However, it appears that officials were happy to accept a lack of horizontal equity for a short time or where they thought it would only affect a limited

number of taxpayers. In contrast, in discussing a temporary levy, although there were horizontal equity concerns with respect to narrow bases and intergenerational equity, policy makers were more focussed on vertical equity. While some policy makers favoured regional taxation based on the benefit principle, policy makers were generally worried about ability to pay, both in terms of excluding taxpayers affected by the earthquakes and how any levy would affect those with different capacity to pay outside Canterbury.

Finally, while the majority of the discussion on rollover relief and the earthquake levy revolved around tax policy principles, there were departures from the standard framework. New Zealand tax policy makers, who are generally united in protecting BBLR, were prepared to accept targeted rollover relief on the basis that it was a deliberate, location specific incentive which provided taxpayer assistance and removed an obstacle to reconstruction. It also provided a shield against, or substitute for, other less palatable responses. Comments from policy makers suggest that this abandonment of the standard framework could have been because of external pressures, such as political influence, broader New Zealand government objectives, and the impact of an extraordinary event. Similarly, while policy makers saw the strong New Zealand framework as helping determine whether there should be an earthquake levy, they also commented on the role of political influence. Many felt that increasing taxes would have been politically difficult so soon after the 2010 tax reforms and led a number of policy makers to suggest that there may have been a different response under another government, in spite of New Zealand's strong tax policy framework.

5.5. New Zealand case study: summary findings

Chapter four provided an overview of the tax responses to the Canterbury earthquakes in line with the first aim of this research, to provide a narrative of responses to natural disasters as a useful resource for future tax policy makers. The second aim of this research is to assess how tax responses to natural disasters relate to the strength of the existing tax system. Prior to the Canterbury earthquakes, the New Zealand tax system was described by the OECD, the Tax Working Group and other commentators, including tax policy makers interviewed for this research, as having a number of features:

 highly efficient with a simple, consistent and coherent BBLR framework to policy design;

- lack of neutrality for saving and investment decisions, with a potential weakness being the lack of a CGT or land tax;
- less emphasis on redistribution, perhaps due to greater reliance on the welfare system to perform this role; and
- having an internationally recognised structured and transparent policy process, driven by policy makers and BBLR, but could still be further improved by changes to address the slow process, limited political scrutiny, and risk GTPP could be abandoned for political expediency or to protect the revenue base.

Highly efficient with a BBLR framework

The New Zealand tax system is seen as highly efficient, following a BBLR framework to policy design. This is reflected in the responses made to the Canterbury earthquakes.

In the pre-disaster settings, the strength of the tax policy framework, and in particular its lack of support for tax incentives, appears to have overridden wider considerations supporting a tax deduction for seismic strengthening.

In the immediate response, academics and officials raised the risk of negative incentives from taking a lenient approach to lost accounting records and emergency powers. They also acknowledged the importance of minimising compliance and administration costs, through convenience, certainty, and speed of response, with one policy maker suggesting that New Zealand's tough compliance regime had created the need for a flexible administrative response to the earthquakes. Similarly, in line with New Zealand's BBLR framework, officials initially advised that employer support should remain taxable. However, other policy makers argued that employees had suffered a loss of wealth and the context meant payments were not in the nature of economic income. In the end, compliance and administration cost factors convinced officials to support a limited exemption for employer welfare support.

In the recovery phase, officials and practitioners did not support targeted rollover relief as it ran counter to BBLR and risk diversification. Similarly, commentary on whether or not to impose an earthquake levy was driven by revenue adequacy and efficiency concerns. Those who supported a levy thought it could lower borrowing costs, while others viewed a levy as inconsistent with the New Zealand government's BBLR revenue strategy, inefficient and harmful to economic growth. Policy makers also queried the need for extra

tax revenue. In the end, the New Zealand government determined that the EQC fund and debt financing were sufficient and preferred (in contrast to their views of local government borrowing), and neither temporary nor permanent tax increases were utilised. However, with the EQC fund exhausted, such an approach may not be available for future events.

To a lesser extent, the need to minimise compliance and administration costs was also taken into account in the recovery phase. In terms of rollover relief, this was in the form of an appropriate and convenient time for payment, quick response to provide certainty, and relatively simple design, rather than more complex alternatives. However, other policy makers interviewed commented on the lack of simplicity, with amendments spread over multiple tax acts, leading to drafting errors and confusion. As a result, other policy makers suggested that following the standard policy process could have avoided these issues and the related compliance costs. Similarly, in considering an earthquake levy, officials were focussed on the speed with which it could be implemented and then reversed, with options that relied on existing arrangements, such as an income tax levy, preferred. However, such a levy would have impacted a large number of taxpayers and been complicated to extend to companies. As a result of these challenges, along with the other policy concerns, no levy was enacted.

Lack of neutrality for saving and investment

While New Zealand's BBLR tax system generally leads to consistent taxation treatment, there is a lack of neutrality with respect to saving and investment decisions, due to the absence of a CGT or land tax. This is also reflected in the Canterbury earthquake responses.

Policy makers advocating for tax relief for earthquake strengthening did so on the basis that a comprehensive definition of taxable income should recognise such costs, with a lack of deductions for buildings leading to a lack of neutrality in current capital expenditure settings. However, while officials agreed that there was a lack of consistency, they justified the lack of alignment on the basis of other mismatches within the tax legislation and the ability to easily defend the boundary. Applying a BBLR framework, they argued that the exclusion of such costs mirrored the treatment of related gains, and that tax incentives for strengthening should be avoided due to concerns about boundaries between types of capital expenditure, unintended distortions, the ineffective nature of relief for those outside the tax system, and the fiscal cost of subsidising a select group of taxpayers.

These concerns were shared by other policy makers, who, even when sympathetic to externality arguments, felt that New Zealand government support would be better provided in other ways.

Less emphasis on redistribution

The New Zealand system is perceived as placing less emphasis on vertical equity, a feature reflected in tax responses made to the Canterbury earthquakes.

At first glance, New Zealand's unique EQC scheme appears inconsistent with the tax policy framework. As a hypothecated fund with a uniform levy unrelated to risk, it interferes with the efficient allocation of revenue among competing uses, and plays a corrective rather than neutral role, helping to address market failures. However, this deviation makes sense when EQC is seen as part of New Zealand's social policy system, helping to soften the impact of BBLR rather than align with it.

In terms of assistance within the tax system, while officials were keen to provide an equitable tax response for those affected, they were focussed on their role as revenue collectors, emphasising horizontal rather than vertical equity. This meant they were keen to limit relief, supporting a discretionary power, rather than a blanket exemption, and wanting special treatments in place for as short a period as possible. Other policy makers favoured the IRD taking a lenient approach during the survival phase but were generally comfortable with emergency powers coming to an end as long as the transition was well managed.

The design of the tax exemption for employer welfare support was also driven by worries about horizontal equity and fiscal risk, rather than vertical equity. Officials were concerned about differing tax treatments for earthquake support, managing fiscal risk via a short exemption period and linking relief to the specific natural disaster. As a result, they were unwilling to consider calls for a longer relief period, arguing that the time limited exemption provided an appropriate balance between offering taxpayer assistance and encouraging the community to regain independence. This thinking also meant officials were unsupportive of requests for a general exemption.

Similarly, in the recovery phase, while policy makers saw the need for an equitable response, revenue adequacy concerns led to the rejection of a number of assistance options, and to the limitation of rollover relief to reduce fiscal cost and reduce tax planning

opportunities. While there were some references to vertical equity, such as the inappropriateness of applying revenue protection rules and that alternative tax treatments were justified for those affected by the disaster, policy makers were generally focussed on horizontal equity. This was demonstrated in concerns about which assets and events relief should apply to, the need to avoid a large unexpected revenue stream, and inconsistencies between the relief and wider tax system. While there was a suggestion that inconsistency might be due to a lack of understanding, it appears that officials were happy to accept a lack of horizontal equity for a short time or where they thought it would only affect a limited number of taxpayers.

In contrast, in discussing a temporary levy, although there were horizontal equity concerns with respect to narrow bases and intergenerational equity, policy makers were focussed on vertical equity. In particular, they were worried about ability to pay, both in terms of excluding taxpayers affected by the earthquakes and how any levy would affect those outside Canterbury with different capacity to pay.

A structured and transparent policy process, driven by policy makers and BBLR, but as with other jurisdictions, this could be abandoned for political expediency or to protect the revenue base

The New Zealand tax system prior to the Canterbury earthquakes was seen as having a logical, structured, and transparent policy process, driven by tax policy experts rather than political considerations, with clear definition of roles and a commitment to consultation supported by the widely accepted BBLR framework. However, there were some areas for improvement. It was slow, had limited political scrutiny, and, like policy-making processes in other jurisdictions, could be abandoned for political expediency or to protect the revenue base. These challenges can be seen in the responses to the Canterbury earthquakes. The tripling of the EQC levy appeared to be more of a political rather than policy response. Similarly, academics and practitioners were of the view that policy decisions with respect to earthquake strengthening were being made on revenue adequacy grounds alone. It can also be evidenced in the approach to administrative responses and employer support, where policy makers highlighted drivers outside the standard tax policy principles, such as the impact of an abnormal situation, need to respond quickly, wider New Zealand government objectives, and political pressure. These pressures impacted the policy process, both in terms of evaluation and consultation, with officials relying on their

network of contacts and consultation after the fact instead of the GTPP. Perhaps because of these pressures, tax policy makers stressed the need to plan for future events. This included continuity arrangements, arrangements for cross-government collaboration, and the creation of administrative powers, including the enactment of generic tax rules for responding to future natural disasters.

Finally, while the majority of the discussion on rollover relief and the earthquake levy revolved around tax policy principles, there were departures from the standard framework. New Zealand tax policy makers, who are generally united in protecting BBLR, were prepared to accept targeted rollover relief on the basis that it was a deliberate, location specific incentive which provided taxpayer assistance and removed an obstacle to reconstruction. It also provided a shield against, or substitute for, other less palatable responses. This abandonment of the standard framework was influenced by external pressures, such as political influence, broader government objectives, and the impact of an extraordinary event. Similarly, while policy makers saw the strong New Zealand framework as helping determine whether there should be an earthquake levy, many felt that increasing taxes would have been politically difficult following recent reforms. It also led a number of policy makers to suggest that there may have been a different response under another government, in spite of New Zealand's strong tax policy framework.

6. Queensland Floods: Case Context and Tax Responses

6.1. Introduction

This case study outlines the tax responses in the pre-disaster, immediate response, recovery stages of the 2010/2011 Queensland floods in Australia. By summarising the responses in this way, a useful resource for future tax policy makers has been created. A short summary of the human and economic effects of the Queensland floods is also provided as context for the case study.

6.2. Case context

At the same time that New Zealand was responding to the Canterbury earthquakes, Australia was struck by the Queensland floods, where heavy rains for three months through the summer resulted in extensive flooding.

Following years of drought, December 2010 was the wettest month in Queensland's recorded history (Howes et al., 2013; Smart, 2012). By early December, some towns in North Queensland were already suffering (Arklay, 2012) and continued heavy rains over December 2010 led to significant flooding of Queensland's coalmines and the expectation of a significant loss in export revenue. ⁵⁵ On 24 December 2010, the Queensland Premier agreed to write to the Prime Minister requesting assistance (State Disaster Management Group, 2010).

Over Christmas 2010, Cyclone Tasha, a category one cyclone, brought widespread torrential rains to Rockhampton and south eastern Queensland (Arklay, 2012; Smart, 2012). Between December 2010 and January 2011 several rivers burst their banks in south eastern and central Queensland causing devastating riverine flooding and also flash flooding over more than half of the state (Mendelson & Carter, 2012). Over 70 towns in Queensland were subject to flooding and a significant proportion of the state's infrastructure was damaged or destroyed (Biggs, 2012). As these events continued to escalate, emergency agencies were seriously tested with towns and regions across the state needing to be supplied with essential goods, access to clean drinking water, food and other supplies (Arklay, 2012).

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⁵⁵ 85 percent of Queensland coal mines had to restrict production or close (Queensland Floods Commission of Inquiry, 2012).

By 10 January 2011, the three dams servicing Toowoomba had reached 127 percent capacity. That day, two intense thunderstorms crossed Queensland and the heavy rain that resulted caused an 'inland tsunami' which devastated Toowoomba and the communities in the Lockyer Valley, leading to roof-top rescues and 22 deaths (Arklay, 2012). The Queensland State Disaster Management Group meetings increased to twice daily and the police began preparing for the rivers in Brisbane and Ipswich to peak (Arklay, 2012). On 11 January 2011, the Brisbane River broke its banks, leading to evacuations in the Brisbane CBD and inner suburbs (Kirby, Leake, & Granger, 2011). Over the next few days, many suburbs across Brisbane city were flooded, with vehicle access and electricity supplies cut (Arklay, 2012), and more than 22,000 Brisbane homes inundated (Kirby et al., 2011). Public transport was suspended and pontoons and boats, which had broken free, threatened major bridges and other critical infrastructure (Arklay, 2012). When the flood waters subsided, over 7,000 volunteers joined 600 soldiers in the clean up around the state capital (Arklay, 2012).

In early February 2011, Cyclone Yasi, a category five cyclone and one of the most severe cyclones in living memory, struck north Queensland compounding the flood damage (Smart, 2012). 10,500 people were evacuated (Arklay, 2012) and in the aftermath of the cyclone more than three-quarters of Queensland was declared a disaster zone (Hurst, 2011; Mendelson & Carter, 2012), with almost 80 percent of Queensland's 1.8 million square kilometre land mass adversely affected by extensive flooding (Arklay, 2012).

6.2.1. Human impact

Due to the prolonged length and significant scale of the Queensland floods, their human impact was severe. More than 2.5 million people were affected (Arklay, 2012; Mendelson & Carter, 2012; Queensland Floods Commission of Inquiry, 2012), with at least 33 people killed (Howes et al., 2013; Queensland Floods Commission of Inquiry, 2012; Smart, 2012) and many more injured (Mendelson & Carter, 2012). 136,000 residences were affected (Arklay, 2012) and more than a year after the floods, Queensland was still in the process of distributing the Premier's Disaster Relief Appeal set up to assist those who had suffered losses from the flooding and Cyclone Yasi (Mendelson & Carter, 2012).

6.2.2. Economic impact

While there are differing estimates of the damage caused, the economic costs of the Queensland floods were considered by most commenters (academics, officials and practitioners) to be significant.⁵⁶ Deloitte (2013) in their report for the Australian Business Roundtable for Disaster Resilience and Safer Communities write that of the last 30 years, 2011 was the most costly in terms of real annual insured losses due to the Queensland floods and Cyclone Yasi. As at March 2012, insurers had received 58,665 claims totalling more than A\$2.37 billion for losses resulting from the flooding and a further 73,250 claims totalling A\$2 billion from Cyclone Yasi (Mendelson & Carter, 2012). However, insured losses represent only a proportion of the total economic costs of natural disasters, which incorporate broader social losses related to uninsured property and infrastructure, emergency response and intangible costs such as death, injury, relocation and stress (Deloitte, 2013).

Mendelson & Carter (2012) and Fleming, Manning, & Smith (2015) use an estimated damages bill of just under A\$10 billion arising from the cumulative effects of the flooding and Cyclone Yasi. Smart (2012), citing a number of sources, refers to damages of US\$15.9 billion (approximately A\$15.5 billion as at June 2012) or 1.1 percent of GDP, and a number of economists stated that the costs may be as high as A\$30 billion (ABC News, 2011b; Biggs, 2012; Fleming, Manning, & Smith, 2015).

In terms of infrastructure, Arklay (2012) and Howes et al. (2013) refer to in excess of A\$5 billion of public and private infrastructure having been damaged or destroyed. Officials estimated the cost to essential infrastructure from the floods at A\$5 billion, to be shared between the state and Commonwealth governments (Bradley, 2011; Ray, 2011). In addition, Cyclone Yasi was expected to have further impacts which were not factored into these numbers (Bradley, 2011).

Other substantial costs related to the provision of government relief to individuals and businesses affected by the floods. The Australian government estimated a cost of A\$600 million for Australian Government Disaster Recovery Payments (AGDRP) \$120 million for the Disaster Income Recovery Subsidy (DIRS) and also made donations to the state relief funds and appeals (Ray, 2011). Mendelson & Carter (2012) write that the Commonwealth government provided assistance amounting to almost A\$460 million in grants for damages caused by the flooding and McGowan & Tiernan (2014) comment that A\$840 million was provided in relief payments to people affected by the 2010-11 floods and Cyclone Yasi.

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⁵⁶ Interestingly, one interviewee characterised the scale as small in terms of the costs involved. "I calculated the actual economic damage was 1 percent of GDP" (AU Academic 5).

As well as the cost of replacing infrastructure and provision of relief payments, the disaster was estimated to have a severe impact on the Queensland state economy. Officials estimated a 2.5 percent drop in the growth rate and a substantial budget deficit. "The budget [deficit] forecast for 2010-11 is now estimated at \$1.468 billion, and that will increase in 2011-12 to \$3.959 billion" (Bradley, 2011). Estimated impacts on the Australian economy were that the disaster would reduce GDP growth by about half a percentage point in 2010/11 and result in some increase in GDP growth in the recovery phase (Ray, 2011).

6.3. Tax responses made by the Australian Government

The first aim of this research is to provide a narrative of responses to natural disasters as a useful resource for future tax policy makers. This section therefore provides an overview of the tax responses to the Queensland floods using Todd & Todd's (2011) three phase model (pre-disaster, disaster response, and post-disaster recovery).

6.3.1. Pre-disaster

In investigating the tax responses to the Queensland floods, it is necessary to consider the pre-existing rules for dealing with natural disasters in place prior to the Queensland floods. The pre-disaster tax settings can be grouped under four themes: tax discretions, ad hoc disaster tax provisions, insurance taxes, and a disaster fund or insurance scheme. These are highlighted in Figure 6.1 and discussed below.

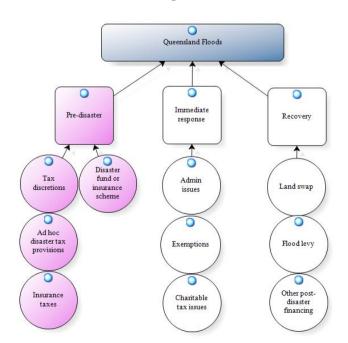


Figure 6.1 – Pre-disaster tax responses to the Queensland floods

6.3.1.1. Tax discretions

Australia's exposure to frequent and large natural disasters has led the ATO to develop centralised business continuity arrangements for people, buildings, systems, services, and communications. The model involves 24-hour capability with a fulltime staff to monitor risks, undertake crisis planning and coordinate any responses. The arrangements have operated for several years following a review by the Australian National Audit Office in 2008 (Australian National Audit Office, 2008).

The business continuity arrangements operate under the Commissioner's broad discretionary powers and use a standardised disaster response framework. The framework is internal guidance rather than a legislated set of responses. Based on the standardised framework and an assessment of impacts, ATO staff recommend a response covering the deferment of lodgements and payments, and remission of interest and penalties for approval by the Commissioner: "We have got this menu ... that we basically work our way through" (AU Official 5). Similarly, state tax legislation also includes discretions for natural disasters: "it is built in and recognised that if events happen to stop them from meeting those conditions then perhaps that is acceptable. One of those things is natural disaster" (AU Official 6).

Australia also had existing discretions around information sharing. Responses to natural disasters require a coordinated cross-government response. As such, tax authorities are often required to work closely with other Australian government agencies. This can be problematic due to standard tax secrecy laws. To support cross-government operational arrangements in the event of a natural disaster, Australia has specific measures in place for the sharing of taxpayer information. These include a cross-government information-sharing instrument that can be signed off by the Attorney-General's Department when a state of emergency is declared. Australia also allows for taxpayer-approved information sharing, which supports the provision of one-stop shops for Australian government assistance. The Australian model therefore offers two forms of amended tax secrecy to deal with the unique circumstances of a natural disaster response.

The ability to rely on broad discretionary powers avoids the need for a rushed legislative response, allowing a faster response in a disaster situation. It also recognises that different disasters have different impacts as the administrative framework allows the ATO to alter its responses depending on the scale and impact of the natural disaster. As such, it provides

significant flexibility for responding to natural disasters. The application of these discretions is discussed as part of the immediate response to the Queensland floods.

6.3.1.2. Ad hoc disaster tax provisions

As well as existing Commissioner discretions, Australia had previously legislated a number of other specific tax rules dealing with natural disasters. References to natural disasters in the *Income Tax Assessment Act 1997* and *Fringe Benefits Tax Assessment Act 1986* include:

- Sections 30-45A, 30-46 Deductions for gifts to disaster relief funds.
- Section 35-55 Deferral of deductions for non-commercial operations. The Commissioner has discretion not to apply this rule where business activities have been affected as the result of a natural disaster.
- Sections 124-85 and 124-95 CGT roll-over relief. New asset treated as pre-CGT asset if the original asset was lost or destroyed as a result of a natural disaster.
- Sections 393-1, 393-15, 393-40 Farm management deposits. A deposit repaid within 12 months as a result of a natural disaster is still treated as deductible.
- Section 995-1 The definition of "Emergency Management Minister" means the Minister who administers the Social Security Act 1991, insofar as it relates to AGDRP.
- Section 58N An exempt benefit includes emergency assistance provided by an employer to an employee.

Other special tax rules for natural disasters include: the ability for businesses affected by a disaster to vary their pay as you go (PAYG) tax instalments (Farmer, 2011a), tax exemptions for Australian government relief, deductions for gifts, including trading stock, specific tax rules for farming businesses, including tax deductions (either immediate or amortised over ten years) for flood mitigation and soil conservation expenditure (ATO, 1982), and discretionary relief under the non-commercial loss rules and deemed dividend rules where the taxpayer's business activity has been adversely affect by floods (PricewaterhouseCoopers Australia, 2011a).

The existing natural disaster rules are a response to the relative frequency of natural disasters in Australia. Having a pre-existing set of tax rules avoids the need to rush through

a large number of changes (AU Academic 1) and means that taxpayers do not need to worry about the tax consequences of a disaster (AU Practitioner 4). However, there is a lack of consistency between these rules. For example, tax policy makers commented that the roll over provisions for trading stock and depreciating assets are not as generous or easy to access as those for capital gains relief (AU Academic 2). Subsequently, more standardised rules for disaster relief have been introduced and are discussed as part of the immediate response to the Queensland floods.

6.3.1.3. Insurance taxes

In addition to existing tax discretions and other specific provisions for dealing with natural disasters, Australia also had a number of existing taxes on insurance. In Australia, government funding for natural disasters is focussed on emergency support and infrastructure replacement. Therefore, private insurance plays a key role in providing coverage for natural disasters, for example, meeting 77 percent of the costs of the 1999 Sydney hail storm, 66 percent of funding for Cyclone Larry in 2006 and 43 percent of the costs of the 2009 Victorian bush fires (Latham, McCourt, & Larkin, 2010).

At the time of the Queensland floods, there were three taxes commonly applied to general insurance. Insurance premiums attracted state stamp duty at rates of between 7.5 percent and 11 percent, a fire service levy on insurers in Victoria, New South Wales (NSW) and Tasmania, and GST (Henry et al., 2010). As a result, compared to other countries, Australian taxes on insurance were relatively high (Henry et al., 2010). Driven by increases in insurance premiums, these taxes have also been a growing funding source for state governments (Henry et al., 2010).

6.3.1.4. Disaster fund or insurance scheme

In addition to encouraging private insurance, governments may be able to reduce losses where individuals under-prepare for disasters. However, this requires them to act in advance, rather than waiting until after a natural disaster has occurred. While Australia has put in place a number of specific tax discretions and provisions for dealing with natural disasters, there is no formal natural disaster prefunding or insurance scheme.

Historically, most governments, including Australia, have financed the costs associated with natural disasters only after an event has taken place by reallocating existing funds, increasing taxes, borrowing or applying for international aid (Department of Finance and Deregulation, 2012). The primary mechanism through which the Australian federal

government funds disaster relief and recovery by state governments is the Natural Disaster Relief and Recovery Arrangements (NDRRA). The scale of these payments is shown in Figure 6.2.

Despite current settings, officials recognise that an effective risk management portfolio should consist of both post-event tools (like the NDRRA) and pre-disaster financing. This is because pre-disaster financing can lower the volatility of the budget and improve planning certainty for the public sector by building up financial reserves, providing contingent financing and, in the case of insurance or reinsurance solutions, reducing the financial burden on the Australian government after a disaster (Department of Finance and Deregulation, 2012).

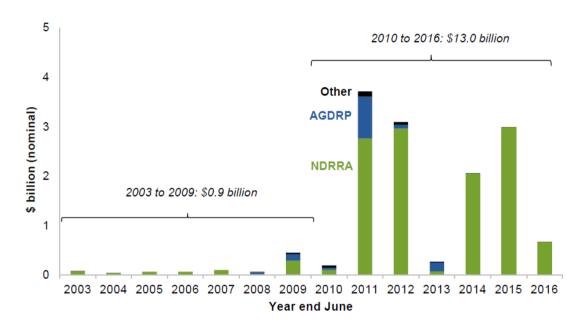


Figure 6.2 – Australian government post-disaster expenditure

(Productivity Commission, 2015, p.3).

In recognition of these benefits, Australia does have a Terrorism Insurance Scheme (Australian Treasury, 2012c). While no claims have been made against the scheme to date, due to the continued lack of commercial terrorism reinsurance, officials have recommended that it continue in operation (The Australian Treasury, 2012b). Most recently, this was justified on the basis of the unprecedented number of insurance claims related to natural disasters (Australian Treasury, 2012c). However, despite the risk that natural disasters pose in Australia, other than recommending an initial dividend be paid to the Commonwealth government of A\$400 million (which may indirectly fund government

responses), the scheme continues to be limited to terrorism losses and does not apply to natural disasters (Australian Treasury, 2012c).

An alternative pre-funding option is the creation of an insurance scheme. This was previously considered and rejected in 1976 (Biggs, 2012). However, following the Queensland floods, there were renewed calls for a natural disaster insurance scheme, including from big four practitioners (Biggs, 2012), academics (Mendelson & Carter, 2012), and as part of the Australian government's Natural Disaster Insurance Review (2011). This review recommended that the Commonwealth government create a system of premium discounts so that purchasers of home insurance in areas subject to flood risk would be eligible for discounts. The discount facility would be funded by subsidies from the Commonwealth government and supplemented by state contributions.

A third option is investing upfront in mitigation to reduce the costs and tax revenue required to fund future disaster responses. However, despite these benefits, the traditional focus in Australia is on responding to, rather than preparing for, natural disasters (McGowan & Tiernan, 2014).

6.3.2. Immediate response

Tax policy's role in the immediate response phase is to fund relief. Governments must make decisions regarding the tax treatment of emergency support payments and may also allow individuals or firms to defer (or disregard) tax payments (Phaup & Kirschner, 2010; Venn, 2012). Tax policy settings also play a role in charitable relief, for example tax incentives for donations and tax exemptions for charitable entities. The immediate tax responses to the Queensland floods can be grouped under three themes: administrative issues, exemptions and charitable tax issues. These are highlighted in Figure 6.3 and discussed below.

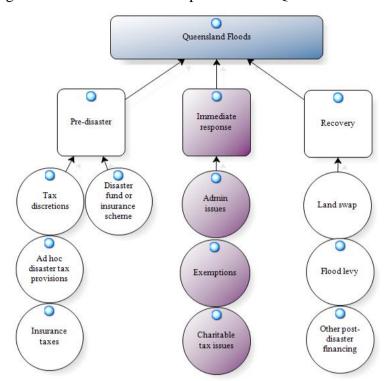


Figure 6.3 – Immediate tax responses to the Queensland floods

6.3.2.1. Administrative issues

Under business continuity arrangements and existing tax provisions, a number of administrative tax actions were made in response to the Queensland floods. Businesses located within the flood-affected area could obtain an extension of time to lodge certain tax documents and pay taxes, in many cases without interest and penalties (ATO, 2011a; Farmer, 2011a; KPMG, 2011a; PricewaterhouseCoopers Australia, 2011b). Discretions were automatically applied (AU Official 5), however, these were deferrals rather than the cancellation of tax liabilities (AU Academic 4). State and local authorities in NSW, Queensland and Victoria also announced temporary relief from the payment of state taxes, local rates and the lodgement of returns for businesses affected by the floods (Farmer, 2011a; KPMG, 2011a; Office of State Revenue, 2011a, 2011b; PricewaterhouseCoopers Australia, 2011b).

The ATO (2011a) provided disaster response information. This included an emergency information line, dedicated call centre support for affected people and specific pages on the ATO website, including frequently asked questions. There was ATO support for tax agents, including a dedicated natural disaster line and a personal contact from an ATO relationship manager. The ATO also clarified the tax treatment around common issues such as donations, grants and CGT. They outlined practical approaches to dealing with

record reconstruction, including use of reasonable estimates for lost records and assistance visits where ATO officers would help in the reconstruction process (ATO, 2011a; Farmer, 2011a; PricewaterhouseCoopers Australia, 2011b).

Outside the normal tax policy framework, but consistent with the literature on successful disaster management (Arklay, 2012; Deloitte, 2013; Howes et al., 2013), the tax office worked as part of a coordinated response with other Australian government agencies and industry groups. ATO staff worked on call centres, helped process emergency claims and ran small business seminars (ATO, 2011a, 2012b), support which was acknowledged by tax practitioners: "the assistance that the ATO made available, their own people going out into communities and talking to businesses, with a here to help type approach ...was first rate. The ATO people who turned up were genuinely there to help" (AU Practitioner 1). The ATO sat on a crisis committee established by the Attorney General, and later, a recovery committee: "For the 2011 flood crisis, we connected in from here, by-and-large, for the crisis coordination side of the things. When the disaster recovery committee came together we went down for that" (AU Official 5).

Helping the ATO to work as part of a coordinated response were common systems ("We could logon to human services systems from a terminal here, which lets us have flexibility with the type of work that we get asked to do" (AU Official 5)), strong connections to the community ("the ATO established a dedicated group that we could go straight to as professional bodies, and direct our members to them" (AU Practitioner 1)), and clearly agreed responsibilities. The Department of Human Services is the first agency that goes into a disaster-affected area after Defence. If the scale of the incident exceeds their capability, then the ATO provides additional contact centre resources (AU Official 5). These cross-government responses were supported by the ATO's natural disaster information-sharing powers.

6.3.2.2. Exemptions

As well as administrative assistance following the Queensland floods, the Australian government provided support to households and businesses. Financial assistance was provided to households through:

- The AGDRP;
- The DIRS;

- Assistance through the NDRRA;⁵⁷ and
- Ex gratia payments for New Zealanders affected by flooding. 58

Assistance was also provided at a state and local government level, for example, all Brisbane ratepayers in flood affected homes received a A\$100 rebate on their water charge so that they could use the water needed to clean up after the flood (KPMG, 2011a). In Queensland individuals could apply for:

- an emergency assistance from the Premier's Disaster Relief Appeal;
- a structural assistance grant of up to A\$14,200 to repair a damaged uninsured home;
- an essential household contents grant up to A\$5,120 to replace uninsured damaged contents;
- personal hardship assistance of up to A\$780 to meet immediate basic costs for food, clothing, medical supplies or accommodation;
- an essential services safety and reconnection grant of up to A\$5,000 to fund the cost of reconnecting utilities; and
- an interest-free mortgage relief loan of up to A\$20,000 (KPMG, 2011a).

Businesses could apply for:

- special disaster flood assistance of up to A\$25,000 to assist small businesses and primary producers with immediate recovery and repair;
- small business or primary producer loans of up to A\$250,000 to carry out essential repairs and replacement of damaged assets;

⁵⁷ In respect of assistance for individuals, the Australian government will reimburse 50 percent of state expenditure on personal hardship and distress assistance under the NDRRA. This is generally for emergency aid for clothing, food, accommodation, repairs to housing and replacement of essential household items and personal effects (Commonwealth of Australia, 2014a). For the Queensland floods, personal hardship and distress assistance was available in 25 local government areas. In addition, communities were eligible for essential services safety and reconnection grants of up to A\$5,000 and funeral and memorial grants of up to A\$10,000 (Commonwealth of Australia, 2011).

⁵⁸ Following diplomatic pressure, the Australian government announced special flood relief measures for

⁵⁸ Following diplomatic pressure, the Australian government announced special flood relief measures for New Zealand non-protected special category visa holders adversely affected by the Queensland floods (Australian Treasury, 2012d; NZPA, 2011a). These ex gratia payments were equivalent to the AGDRP and were paid to New Zealanders who would otherwise be ineligible for this kind of assistance. The Australian government legislated to exempt these payments from income tax (Tax Laws Amendment (2011 Measures No.1) Bill 2011).

- interest subsidies of up to A\$100,000 to assist small businesses and primary producers in financial difficulty as a result of the natural disaster;
- a primary producer freight subsidy of up to A\$5,000 to pay for the transport of animals, emergency fodder or replacement equipment; and
- a loan of up to A\$200,000 to primary producers affected by the floods to recover from the impact of the disaster (KPMG, 2011a).

Similar assistance was available in other states and, under the NDRRA, the Australian federal government reimburses 50 to 75 percent of these forms of support (Attorney-General's Department, 2012).

From a tax policy perspective, the provision of financial assistance raises the question of whether support payments should be subject to tax or treated as exempt income. The AGDRP is generally treated as exempt income under Section 52-10 of the *Income Tax Assessment Act 1997* on the basis that it is a one-off payment to help individuals who have suffered as a result of a natural disaster. However, the tax treatment of other emergency support fluctuates.

ATO guidance notes that income support by way of grants or subsidies and NDRRA relief payments, such as clean up and recovery grants, will generally be assessable income (ATO, 2012a, 2013a). However, in respect of the Queensland floods, emergency grants and relief payments were treated as non-taxable (ATO, 2012a; Australian Treasury, 2011d; *Tax Laws Amendment (2011 Measures No. 1) Act 2011*, 2011).

6.3.2.3. Charitable tax issues

Another form of emergency support is charitable relief. The Australia process for determining whether donations to disaster relief funds are tax deductible involves the ATO and Treasury monitoring potential disaster situations and considering whether a disaster declaration should be made. Based on this assessment, a disaster may be declared by a relevant State Minister or Treasury Minister, with the Treasury Minister and/or the ATO confirming by press release that donations for that disaster are tax deductible. Charities must establish a new disaster relief fund for each declared disaster.

In relation to the Queensland floods, the Queensland Premier declared the floods to be a disaster, allowing the ATO to follow normal procedures with respect to disaster relief.⁵⁹ New charitable funds were established, such as the Queensland Premier's Relief Fund (KPMG, 2011a), which included a A\$11 million contribution from the federal government (Australian Treasury, 2011e). Once processed by the ATO, payments received from these charitable funds were not subject to tax (ATO, 2012a).

Tax officials commented on the administrative effort involved (AU Official 5). The ATO approved new charitable relief funds and clarified the tax treatment around common issues such as deductions for donations (ATO, 2011a). The Australia government also made a legislative change with respect to the charitable status of bodies involved in rebuilding activities. Following the experience in Queensland, as part of enshrining the definition of charity in law,⁶⁰ they extended the common law definition to enable charities to rebuild not-for-profit community assets (Australian Treasury, 2010, 2011a, 2013; Institute of Chartered Accountants Australia, 2012).

6.3.3. Recovery

Recovery involves restoring or improving the living conditions of affected communities, providing support to businesses to restart, rebuilding homes and industry and investing in disaster risk reduction measures (Todd & Todd, 2011). All of these activities can place huge cash demands on governments at short notice and policymakers must decide to finance emergency-related spending and balance-of-payments shortfalls, or to reduce or divert spending to cover immediate needs. Despite measurement challenges, knowing a disaster's effects on fiscal sustainability is important for making informed decisions. Even if a country can borrow to fund a disaster response, the debts must later be serviced by future taxpayers (Phaup & Kirschner, 2010; World Bank, 2010). An overview of the Queensland flood tax responses therefore needs to take account of the wider fiscal position.

Where governments have unsustainable fiscal positions, increasing borrowing in response to a disaster can also increase the pain and necessity for future policy adjustment

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⁵⁹ Refer Sections 30-45A and 30-46 of the Income Tax Assessment Act 1997 which allow deductions for gifts to disaster relief funds.

⁶⁰ In the 2011/2012 Budget, the Australian government announced it would introduce a statutory definition of charity. This definition is based on the 2001 Report of the Inquiry into the Definition of Charity and Related Organisations, also taking into account later judicial decisions. Legislation to progress this measure received Royal assent in June 2013 and commenced on 1 January 2014.

(Anderson & Sheppard, 2009; Auerbach & Gale, 2009). Similarly, seignorage has a number of negative consequences (Blanchard, 2009). The alternative (or in combination with the above options) is for governments to rely on taxation. In general, the macroeconomic policy response to a major catastrophe will involve some combination of reserves drawdown, new financing and macroeconomic adjustment⁶¹ (Laframboise & Loko, 2012). The right mix will depend on a range of factors, including whether the government had taken steps to self-insure or privately insure, whether the impact of the natural disaster is expected to be temporary or permanent, the strength of the country's fiscal position and external balance, the exchange rate and the availability of domestic and external financing (Laframboise & Loko, 2012).

The tax responses to fund recovery from the Queensland floods can be grouped under three themes: tax changes to facilitate a land swap to reduce future disaster risk, the flood levy implemented to fund infrastructure replacement, and other post-disaster financing used or considered. These are highlighted in Figure 6.4 and discussed below.

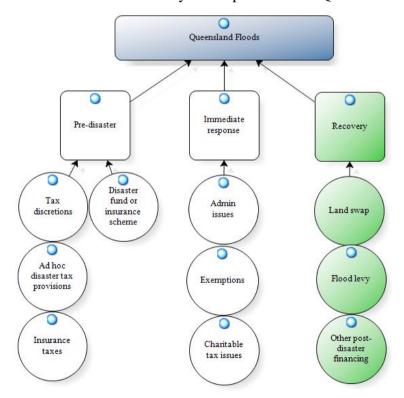


Figure 6.4 – Post-disaster recovery tax responses to the Queensland floods

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⁶¹ A macroeconomic adjustment is a process driven by policies but also by changes in private spending behaviour (consumption, imports, investment) and improvement in competitiveness that countries are required to undertake after a large shock. It usually involves an agreed path of fiscal consolidation, governance measures as well as financial-sector stabilisation and structural reform measures to improve the business environment and support growth (Economic Governance Support Unit, 2014).

6.3.3.1. Land swap

The Queensland Reconstruction Authority, the agency established to rebuild Queensland after the floods, exercised its powers most visibly in the reconstruction of Grantham, a small town which suffered major damage from flash flooding (Smart, 2012). The Authority declared Grantham a 'reconstruction area' which enabled it to override planning instruments (Smart, 2012). Utilising these powers, in an Australian-first, the Lockyer Valley Regional Council unveiled a plan in May 2011 to give flood-devastated residents the option to move to higher ground as part of a voluntary land-swap initiative (Lockyer Valley Regional Council, 2011), and by December 2011, the Grantham Reconstruction Area was in effect (Smart, 2012). As at 2013, 115 land blocks had been signed up, with plans to develop a further 400 sites (Okada, Haynes, Bird, Honert, & King, 2014).

In conflict with this initiative, taxpayers affected by a natural disaster may face immediate CGT consequences when they dispose of an asset, even where this is as a result of participating in an Australian government asset replacement program (Australian Treasury, 2011b). These tax consequences include the triggering of a capital gain or loss, being the difference between the market value of the replacement asset and the cost of the original asset, the triggering of an inflated capital gain position in the future as the cost of the replacement asset is the market value of the original asset which is likely to be depressed as a result of the natural disaster, difficulty in establishing the cost of the original asset where records have been destroyed, and the requirement to obtain valuations of both the original and replacement asset (Institute of Chartered Accountants Australia, 2011).

In response, in October 2011 the Australian government announced a number of additional CGT tax reliefs for taxpayers that participate in asset replacement asset programs to:

- allow taxpayers to choose a CGT exemption for assets that are lost, destroyed or disposed of where they receive a replacement asset from an Australian government agency;
- allow taxpayers to maintain pre-CGT status for replacement assets;
- provide a CGT exemption for rights arising under assistance programmes for taxpayers affected by natural disasters; and
- extend the CGT main residence exemption when a taxpayer's main residence is destroyed (Australian Treasury, 2011b).

Initial consultation on these proposals was followed up by a second discussion document in June 2012 (Australian Treasury, 2012b). However, no tax legislation was forthcoming. Due to a significant backlog of tax announcements awaiting legislation, the changes were not enacted into law and taxpayers entering land swap transactions were reliant on an administrative agreement that the ATO would honour the proposals (AU Official 2). Tax officials saw the administrative process as providing flexibility to respond immediately which also took the pressure off needing to speed up the legislative process (AU Officials 1 and 2). However, it created uncertainty and risk for taxpayers. Then in December 2013 (three years after the flooding), the Assistant Treasurer announced the outcome of consultations over the backlog of 92 announced but unlegislated tax and superannuation measures. Of these, 48 measures, including the CGT relief for taxpayers affected by natural disasters, would not proceed (Sinodinos, 2013).

From a state tax perspective, there were also tax responses in connection with the land swap. However, rather than a legislative exemption, state officials provided ex gratia relief, in limited circumstances, utilising an existing power to cover transfer duty (AU Official 6) and the Queensland Reconstruction Authority (2011).

6.3.3.2. Flood levy

While the land swap was a significant mitigation investment for the Lockyer Valley, this was only a fraction of the total reconstruction expenditure associated with the Queensland floods, which had an estimated A\$5.6 billion recovery cost (Senate Economics Legislation Committee, 2011; Smart, 2012). In response, the Australian government announced that it would impose a flood levy on individual taxpayers for the 2011/2012 financial year to raise A\$1.8 billion (ABC News, 2011a; Deloitte, 2013) towards re-building flood affected areas (ABC News, 2011a; Deloitte, 2013; Farmer, 2011a). The levy, which was enacted on 22 March 2011, was set at 0.5 percent on income from A\$50,001 to A\$100,000 and 1 percent for income above this level. Income below A\$50,001 was not subject to the levy. In addition, anyone who received AGDRP support in response to the floods was not subject to the levy (Farmer, 2011a).

6.3.3.3. Other post-disaster financing

In addition to the flood levy, other sources of post-disaster funding were also utilised or discussed by tax policy makers. These included borrowing, spending cuts and raising tax revenue through other means. In general, temporary funding options were considered, as despite commentary about the growing risk from natural disasters, officials believed the demand was not on-going in nature (AU Official 7).

Cuts to Australian government expenditure raised A\$2.8 billion of the estimated cost of recovery, for example cancellation of green programs such as the Green Car Innovation Fund and the Cleaner Car Rebate Scheme (Deloitte, 2013). A further A\$1 billion was raised through delaying major infrastructure projects around Australia (Deloitte, 2013) and Queensland raised funds from the sale of government assets (AU Official 7). While tax policy makers were generally supportive of reducing government spending, they raised concerns about the particular programmes that had been targeted (Farmer, 2011a; McKibbin, 2011). These were primarily carbon abatement programmes, which given the focus on climate change and the links to natural disasters was somewhat surprising (McKibbin, 2011).

As well as questioning the quality of Australian government expenditure that had been cut, policy makers discussed the appropriate split of costs between federal and state disaster funding, (AU Official 3). The NDRRA arrangements were criticised for being administratively complex and out-of-date:

These arrangements were developed in an era in which the number and impact of disasters was considerably less than has occurred in the last decade. They are reactive in that they are triggered by an event and are consequently focussed on response and the initial recovery. (McGowan, 2014, p.10 as cited in McGowan & Tiernan, 2014, p.17).

The arrangements were seen as creating an expectation of support rather than incentivising mitigation, with academics arguing that more efficient post-disaster funding would shift substantial funding into preventative measures and target hardship payments so that they are "used in cases of genuine hardship rather than to compensate for inconvenience" (McGowan & Tiernan, 2014, p.17). Such changes would help manage fiscal demands on all tiers of Australian government, with potential positive long term impacts on productivity and economic performance.

Certain tax practitioners (AU Practitioner 1) and academics also supported borrowing to fund longer-term recovery from natural disasters. Increased borrowing was seen as advantageous because it smooths income, spreads risk and allocates:

...the cost of rebuilding over many decades into the future. The macroeconomic goal should be to reduce the negative effects of the disaster soon after it occurs. Only borrowing achieves this objective. Both cutting spending and raising taxes worsens the decline in economic activity in the short term. (McKibbin, 2011, p.41).

Compared to increasing taxation, borrowing was also perhaps a less obvious and a lower cost method of financing (McKibbin, 2011). These policy makers did note that these advantages might not hold in the case of every disaster:

If a government has no economic credibility then the ability to borrow may not be an option, and so pay as you go may be necessary. Also, if government debt to GDP were very high, the additional borrowing may raise the risk premium on government debt and therefore incur additional costs in excess of benefits for income-smoothing purposes. (McKibbin, 2011, p.42).

However, with Australian government debt to GDP at around 20 percent post-disaster borrowing was not seen as risky, and could in fact be viewed by financial markets as a positive response to the Queensland floods (McKibbin, 2011).

While tax policy makers raised various post-disaster funding alternatives, there was no commentary on the appropriate mix of sources. There was also no discussion about how to implement changes. This is particularly challenging as Australia has undertaken a number of reviews to improve its post-disaster response and recovery, however, most recommendations have failed to be implemented (Deloitte, 2013).

6.4. Summary

The first aim of this research is to provide a narrative of responses to natural disasters as a useful resource for future tax policy makers. Using Todd & Todd's (2011) three phase model, this chapter provided an overview of the tax responses to the Queensland floods, as illustrated in Figure 6.5.

Queensland Floods 0 Immediate Pre-disaster Recovery response Disaster Tax fund or Admin Land swap discretions insurance issues scheme Ad hoc disaster tax Flood levy Exemptions provisions Other post-Insurance Charitable disaster taxes tax issues financing

Figure 6.5 – Tax responses to the Queensland floods

In summary, Australia's pre-disaster tax settings consisted of broad discretionary powers for the tax authority to defer, remit and share information and a number of ad hoc disaster provisions which had been previously legislated in response to Australia's frequent natural disasters. From a public finance perspective, Australia primarily employed a pay as you go funding model for natural disasters, with no national natural disaster insurance or funding scheme and limited investment in mitigation. There was also a reliance on private insurance, potentially in conflict with high levels of Australian taxes on insurance.

Following the Queensland floods, Australia made a range of immediate tax responses. These included administrative assistance to extend payment and filing deadlines for federal, state and local taxes, generally without penalty or interest; the provision of disaster information; and assistance with record reconstruction. The ATO worked as part of a coordinated cross-government response supported by common systems, information-sharing powers, community networks and clearly-agreed responsibilities. Australian government support and relief payments were exempted from income tax (unlike for previous disasters) and the tax system was used to support charitable relief by approving

new relief funds, so that donations were tax deductible, and through legislating an expanded definition of charity.

Australia also made a number of tax responses to support longer-term recovery. Changes were proposed (but not legislated) to give CGT relief from land swap transactions and ex gratia relief was provided from state transfer duty in limited circumstances. A one-year flood levy was implemented to raise A\$1.8 billion of the estimated A\$5.6 billion cost of recovery. Cuts and delays to Australian government expenditure raised an additional A\$3.8 billion and there were also state asset sales. Policy makers queried the quality of government expenditure cuts and appropriate split of costs between the federal and state governments. They also highlighted the need to update the NDRRA to incentivise mitigation and better target hardship payments. While not implemented, there was also support for increased borrowing to spread the cost of recovery.

7. Queensland Floods: How responses related to the strength of the existing tax system

7.1. Introduction

After providing an overview of the pre-disaster, immediate response and recovery tax responses to the Queensland floods in Australia, the second aim of this research is to assess how the tax responses related to the strength of the existing tax policy system. The following chapter therefore completes the Australian case study by evaluating the tax responses to the floods against the standard economic principles of good tax policy, and investigating the relationship between the responses and the strength of the existing tax policy system. In order to do that, it is necessary to evaluate the Australian tax policy framework (and policy process) prior to the Queensland floods.

7.2. Australian policy framework

In 2008, the Australian Treasury produced an overview of Australia's tax system (Australian Treasury, 2008). In 2010, the OECD (2010) reviewed Australia's tax system. PricewaterhouseCoopers and the World Bank also compile an annual study of the world's tax systems (PricewaterhouseCoopers & World Bank, 2012). These documents, along with relevant commentary by tax officials, practitioners and academics have been used to assess the strength of the Australian tax system prior to the Queensland floods.

The Australian tax system broadly aims to follow the standard tax policy principles (AU Official 6, AU Practitioner 1). However, policy makers felt that there was an emphasis on revenue adequacy (AU Academic 1), more could be done with respect to efficiency (AU Official 7), and there are differing views on what fairness or equity requires (AU Academic 5). There was also a feeling that while tax policy makers may strive to apply the standard tax policy framework, many tax changes were driven by political rather than principled consideration:

Australia has a track record of policy on the hoof. Some Minister stands up and says I think it would be a good if ---, and then the Treasury and the ATO are left with the responsibility of trying to enact it in some way. (AU Academic 4).

Australia's tax system, like those of other developed countries, was built to meet the public revenue needs of major wars and the steadily expanding welfare state (Smith, 2010). However, by OECD standards Australia has a low tax and expenditure framework (OECD, 2008).

Australia's mix of direct and indirect taxes is broadly comparable to other OECD countries, but the composition differs, due to its dividend imputation system and lack of social security tax.⁶² Compared with other OECD countries, Australia has a low share of tax revenue from labour income and broad-based consumption taxes⁶³ and greater reliance on tax revenue from capital (with an above average company tax rate, broader company tax base and higher percentage of taxes on property) (Smith, 2010). The tax-transfer system is also highly redistributive (Australian Treasury, 2008).

An international ranking of the Australian tax system against other tax systems is provided by the PricewaterhouseCoopers and World Bank Paying Taxes study (2012). For the period 2004 to 2011, it ranked the Australian tax system as 16th out of 34 OECD countries. The study measures both the cost of taxes borne and the administrative burden of tax compliance for a standardised business using three sub indicators. These results and the OECD average are summarised in Table 7.1:

Table 7.1 – Paying Taxes study – Australian results compared to OECD average

Indicator	Australia	OECD Average
Total Tax Rate (the cost of all taxes borne)	47.5 percent	44.0 percent
Time needed to comply	109 hours	192 hours
Tax payments per year	11 payments	12 payments

Perhaps in line with this average ranking, the Henry Review (Henry et al., 2010) raised a number of areas for reform with respect to the Australian tax system. They concluded that Australia had too many taxes and too many complicated ways of delivering multiple policy objectives through the tax and transfer system. Many taxes are levied on similar transactions by different Australian governments with little consistency across jurisdictions (Australian Treasury, 2008). The resulting complexity exceeds the capacity of legislative

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⁶² While there is no social security tax, Australian tax residents are required to pay a 2 percent levy to help fund Medicare, a scheme that gives access to free or low cost medical care. Employers also make compulsory superannuation contributions of 9 percent on behalf of individual employees (Smith, 2010).

⁶³ The introduction of the GST increased indirect taxes only from 21 percent to 25 percent of Commonwealth total revenues. Other aspects of the Commonwealth indirect tax base have been subject to erosion with continuing shift away from protective tariffs, while tobacco, alcohol and fuel excise bases have declined relative to total consumption (Smith, 2010).

systems and taxpayers, meaning the tax and transfer architecture is beginning to fail in dealing efficiently and effectively with multiple policy goals and demands.

Similarly, the OECD (2010) made a number of recommendations to improve the quality and effectiveness of the Australian tax system. They supported many of the proposed changes outlined in the Henry Review (Henry et al., 2010), although noted that relatively few of the 138 recommendations had been acted upon. Specifically, the OECD (2010) supported: a reduction in the corporate tax rate coupled with the proposed mineral tax; promoting higher labour participation; the reduction of distortions; and the simplification of the tax system. They suggested this could be achieved by broadening the base and raising the GST rate, while increasing the tax-free threshold and streamlining the transfer structure. The OECD (2010) also argued that increased GST could be used to fund the simplification and rationalisation of the state taxation systems.

Other writers have also commented on the complexity of the Australian tax system. A survey by Per Capita revealed that Australians find the tax system 'burdensome' (Hetherington, 2013), with over 70 percent of Australian tax lodgers relying on tax agents to complete their personal tax returns (Heferen, Mitchell, & Amalo, 2013).⁶⁴ Slemrod (2009) recommended a number of ways that the Australian tax system could be simplified. These included coordinating the criteria for assessing tax liability and transfers, as there are currently differences in the financial basis of assessment, the income unit, and the period of assessment. A second suggestion was to harmonise tax policy between the federal and state governments. In Australia there are over 125 different taxes, 65 with state taxes (often transaction taxes levied on narrow tax bases with different thresholds, rates and exemptions) accounting for only 15 percent of total tax revenue in 2006/2007 (Australian Treasury, 2008). Finally, Slemrod (2009) suggested Australia restrict the number of objectives leading to tax expenditures. The 2008 Tax Expenditures Statement outlined 300 separate tax expenditures, including tax concessions for research and development, mining and petroleum resource exploration, agri-businesses, film-making and small businesses (Smith, 2010).

Similar concerns about complexity have been made by the tax policy makers interviewed for this project ("There is naturally a bit of work to do, particularly around opportunities

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⁶⁴ The 3rd highest rate of personal tax returns filed by tax agents in the OECD.

⁶⁵ Of these, 99 are levied by the Australian government, 25 by the states and 1 by local government (Australian Treasury, 2008).

to increase efficiency" (AU Official 5), "Everyone knows our income tax system has got all these anomalies which are costing money" (AU Academic 2), and "In one sense it is sort of a patchwork approach" (AU Practitioner 2)) and the issue has been acknowledged by the Australian Treasury (2008, p.xxi) who commented that "levels of complexity and operating costs are likely to be above the level that is optimal for society as a whole".

In summary, the Australian policy framework prior to the Queensland floods was described by the OECD, the Henry Review (Henry et al., 2010) and other commentators as having the following characteristics:

- highly redistributive with differing measures of well-being for the tax and transfer systems;
- complex and inefficient, with multiple ways of delivering a range of policy objectives and a significant number of narrow state taxes with varying thresholds, rates and exemptions, causing large distortions and contributing to a 'vertical fiscal imbalance' by yielding little revenue;
- high compliance costs, with the 3rd highest rate of personal tax returns filed by tax agents in the OECD; and
- an emphasis on revenue adequacy.

However, to fully assess how tax responses related to the strength of the existing tax system, it is also necessary to understand how tax policy change is effected.

7.3. Australian policy process

In terms of the Australian tax policy process, Smith (2010) writes that most reform has been pursued through either of two different pathways. Sometimes it has used open consultative processes. ⁶⁶ Other times, the Australian government has used its advisers to develop behind-doors, semi-secretive in-house reform packages. ⁶⁷ Heferen et al. (2013) summarised the stages of policy development under the first pathway. In close conjunction with the ATO, the Treasury formulates and provides advice to the Australian government.

⁶⁶ Examples are the Asprey and Campbell reports, the 1985 community tax summit, the Business Tax Review committee chaired by John Ralph and the establishment of a standing Board of Taxation which has undertaken a series of detailed policy reviews (Smith, 2010).

⁶⁷ Examples include the 'Reform of the Australian Tax System' package which included CGT, FBT and dividend imputation, the 1988 tax package which brought major reforms to company taxes and the taxation of superannuation, and the development of the 'New Tax System' including the GST in 1998 (Smith, 2010).

In doing so, Treasury officials apply both the standard tax policy principles and the Treasury wellbeing framework. This framework requires them to take a view that "encompasses more than is directly captured by commonly used measures of economic activity" (Australian Treasury, 2012a, p.1). While there are similarities between the wellbeing framework and various tax reviews, there is no single agreed set of principles.

In addition to the application of various principles, tax policy in Australia is an increasingly contested policy debate. It is "a lot more of a tussle in tax policy rather than a collaborative approach" (AU Official 3). Tax policy options are generated from many sources, including electoral parties, Senate inquiries, academics, think tanks, lobby groups, tax representatives, and even the media (AU Practitioner 3). While the policy process can involve a wide number of stakeholders, it was the role of political influence that was strongly emphasised by interview participants: "I used to think tax reform was about rational tax policy... I don't believe that anymore" (AU Practitioner 3) and "The government will change the tax basis, notwithstanding that it breaches those principles, and they won't consult with industry" (AU Academic 3).

Once a political decision requiring legislative change is made, the Treasury is responsible for instructing legislative drafters, producing explanatory materials and conducting community consultation, managing the legislation program, and assisting the Australian government to secure passage of bills through the Parliament. For a tax bill to become an Act, it must be passed in the same form by the House of Representatives and the Senate, who performs a 'house of review' function, with tax policy considered by the Senate Standing Committee on Economics.

An outcome of both the strong political influence and lack of collaboration over tax policy has been lengthy delays in legislating tax changes with a large number of announced but un-enacted tax measures. This was commented on by tax policy makers from across the spectrum: "It's not as planned, as evidenced by over a hundred announced but not enacted measures" (AU Official 3), "They use the tax system for political motives and so make announcements here, there and everywhere, so it just backs up. What we have got is legislation by announcement" (AU Academic 3), and "It is part of a bigger issue which is the sheer volume of what we call announced but un-enacted" (AU Practitioner 1). These delays have resulted in reliance on administrative practice.

For each proposed change, the ATO decides whether to allow taxpayers to file on the basis of the tax announcement.⁶⁸

The final phase of the policy process is post-implementation. As part of the regulation impact analysis, departments are required to provide information on how the preferred regulatory option will be implemented, monitored and reviewed. In addition, specific post-implementation reviews on tax policy are conducted by the Board of Taxation. Australia also has an extensive history of tax policy reviews.⁶⁹

The Henry Review (Henry et al., 2010) recommended changes with respect to Australian tax policy-making and administration processes. They noted that these should be as responsive as possible to problems experienced by taxpayers, which required Australia to move to a more transparent and understandable system, and more effective mechanisms to respond to both policy and administrative issues as they arise.

Therefore, in addition to the tax framework identified, the Australian tax system prior to the floods was seen as having a policy process with strong political influence and lengthy delays in legislating tax changes, resulting in reliance on administrative practice. The next section assesses how the tax responses related to the strength of the existing policy system.

7.4. How the tax response related to the strength of the existing tax policy system

For this section of the study, a smaller subset of nodes has been selected to allow for more in depth analysis and description of the tax policy approach taken. As outlined in the methodology chapter, nodes for further analysis were selected to provide a maximum variation sample (Maykut & Morehouse, 1994) to understand how tax responses to natural disasters relate to the strength of the existing tax policy system. The nodes for further analysis, summarised in Figure 7.1, were selected because they represent responses at all three phases of a disaster: pre-disaster, immediate response and recovery, with examples of good and bad tax policy. Selection was also based on those responses of most importance to policy makers (determined by the number of sources and references), and by the ability to separate out policy makers' comments on individual responses, meaning those nodes with multiple responses, such as ad hoc disaster tax provisions were not selected. Finally,

⁶⁸ Tax practitioner submissions commented that such protections can "advantage 'first movers' lodging returns based on anticipated law changes of benefit to them" (Institute of Chartered Accountants Australia, 2014)

⁶⁹ Significant reviews prior to the Henry Review (Henry et al., 2010) include the 1975 Taxation Review Committee full report (the Asprey review) and the 1999 Ralph Review.

the links between nodes were considered. For example, where responses were related, such as the flood levy and charitable responses, only one of these was selected for further analysis.

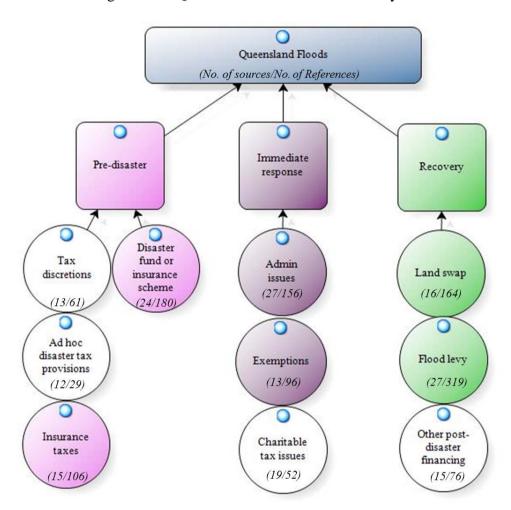


Figure 7.1 – Queensland floods nodes for analysis

7.4.1. Pre-disaster

In investigating the tax responses to the Queensland floods, it is necessary to consider the pre-existing rules for dealing with natural disasters in place prior to the Queensland floods. The tax policy approach to insurance taxes and disaster funds and insurance schemes, as examples of the pre-disaster tax settings, are discussed below.

7.4.1.1. Insurance taxes

Who talked about it?

There were 106 references to insurance taxes. Six interviewees discussed this aspect of the existing tax system (three academics, two practitioners and one tax official) and there were

also references to insurance taxes in eight secondary source articles: a practitioner report, two documents produced by tax officials in the form of technical guidance and formal reports, and five academic articles (Barker & Tooth, 2008; Biggs, 2012; Mendelson & Carter, 2012; PricewaterhouseCoopers Australia, 2011b; Smart, 2012). As shown in Figure 7.2, this was a tax response focussed on by tax officials and academics, rather than by practitioners.

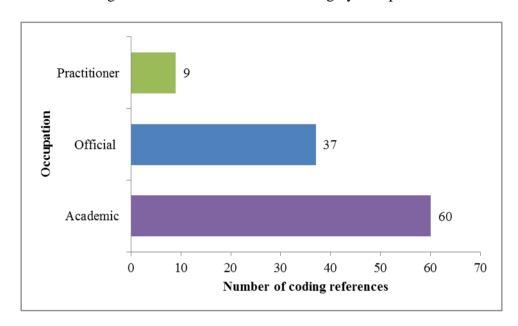


Figure 7.2 – Insurance taxes – coding by occupation

How did they talk about it?

Prior to the Queensland floods the tax treatment of insurance had been subject to criticism. Officials and academics (and to a limited extent practitioners) criticised the existing tax treatment of insurance on the basis of concerns over efficiency, equity, and compliance and administration costs.

Efficiency

The Henry Review (Henry et al., 2010) observed that insurance taxes can impose significant costs and are one of the least efficient taxes available to states. Insurance taxes mean that people pay more to achieve the same level of risk reduction which can reduce the level of cover they purchase or deter them from insuring at all. This reduces the size of the insurance market and therefore the ability to pool risk, further increasing premiums. While states with higher taxes do not always have higher rates of non-insurance and underinsurance, the Henry Review (Henry et al., 2010) cited studies which found a correlation between taxes on insurance and the level of non-insurance. By encouraging under-

insurance and non-insurance, insurance taxes may lead to an increase in Australian government expenditure in the event of a disaster.

In response to these concerns, the Henry Review (Henry et al., 2010) recommended that all specific taxes on insurance products should be abolished, with insurance products treated like most other services consumed in Australia and subject to only one broad-based tax on consumption. The Victorian Bushfires Royal Commission (2010) also recommended replacing the fire services levy with a property based tax, which would substantially reduce the amount that consumers pay for a given level of insurance cover.

Tax academics also commented on the inefficiency of the state taxes on insurance. Tooth & Barker (2008) conclude that compounding insurance taxes can result in a total premium that is 44 percent higher than would be the case in a non-taxed environment. This taxation impacts on the level of private insurance:

If state taxes on insurance premiums were replaced, there would be a significant increase in the take-up of house and contents insurance and increases in the level of cover for contents insurance. It is estimated that state premium based taxes are the cause of around 300 thousand households being without contents insurance and 69 thousand households being without house insurance. The projected increase in take-up of house insurance if these taxes were removed represents over 1/3 of the estimated number of households that are uninsured. (Barker & Tooth, 2008, p.35).

Similar concerns were raised by tax practitioners: "we have a bunch of state taxes that are highly inefficient" (AU Practitioner 3). However, one tax academic, and former tax practitioner, challenged the inefficiency argument and its impact on levels of insurance coverage:

I know the insurance companies jump up and down. ...it is a paper based tax like most stamp duties, and they are pretty inefficient taxes. ... But whether more people would insure if they got rid of it, I don't know. I doubt it. People insure for personal reasons, they don't insure because it is cheap. (AU Academic 3).

Revenue adequacy

While policy makers across the spectrum raised concerns about the inefficiency of preexisting insurance taxes, they also acknowledged the heavy reliance on these taxes (Henry et al., 2010). The National Disaster Insurance Review (2011) recognised that these taxes are a significant source of revenue for state governments, and that any consideration of their removal would need to be made in the context of broader state level fiscal reform. The difficulty in finding alternative sources of state revenue was also conceded by tax academics and practitioners: "The governments have very few areas where they can collect taxes" (AU Academic 3) and "I suspect the trade-off in relation to those will be GST allocation, and possibly a reduction in company tax rate" (AU Practitioner 3).

In contrast, Tooth & Barker (2008, p.6 and p.32) discuss finding alternative sources of funding for emergency services and its impact on state revenue for NSW and Victoria. They noted that: "ACT, South Australia and Western Australia have in the last 10 years successfully moved to alternative methods of funding fire and emergency services" and argued that "...if the FSL were replaced these States would raise significantly more revenue from insurance stamp duties, particularly on contents insurance, due to the increased demand for insurance without any change to stamp duty rates".

Equity

Whereas tax policy makers highlighted efficiency and revenue adequacy concerns with respect to insurance taxes, there was only limited discussion of the distributional impacts. For example, Tooth & Barker's (2008) study examined the factors that drive insurance demand but did conclude that a reduction in state insurance taxes would have a larger effect for those with lower incomes. Similarly, the Henry Review (Henry et al., 2010, p.473) analysis of state insurance taxes concentrated on efficiency but did include a short comment on equity: "insurance taxes can also be inequitable. Rates of non-insurance (for building and content insurance) generally decline with higher incomes, and non-insurance can also be higher for certain demographic groups, such as retirees with mortgages and single parents". The review noted that one option for increasing equity might be to consistently apply cost recovery. However, due to the public good nature of fire services, such an approach could create a risk that the uninsured do not call the fire service, increasing the risk of damage to other properties (Henry et al., 2010).

The exception is the Victorian Bushfires Royal Commission final report (2009). Their discussion on state insurance taxes focussed on inequity and lack of transparency with the current arrangements. They commented that the uninsured do not generally contribute and no levy is collected on motor vehicle insurance, despite the fire service attending motor vehicle accidents (Department of Treasury and Finance, 2009). Possibly, the fact that this

review was a specific post-disaster response meant a greater emphasis was placed on equity rather than other tax policy principles.

Compliance and administration costs

None of the policy makers interviewed commented specifically on compliance and administration costs in relation to the pre-disaster insurance tax settings. However, the Henry Review (Henry et al., 2010) noted that one of the attractions of insurance taxes is their ease of administration. The tax liability is calculated by multiplying the insurance premium by a flat tax rate. This was disputed by submitters to that review who argued that not all insurance taxes are that simple, for example, the fire services levy requires insurers to forecast the market when applying the tax, as this is required to be paid in advance.

What else was or should have been discussed?

Most of the commentary from tax policy makers related to the standard tax policy principles. However, one tax academic commented on the political rationale behind the taxation of insurance:

The fire service levy is very political. ...I think the left side of politics sees the fire service levy as reducing insurance companies' profitability because they are helping protect property, which is what the insurance companies insure. In terms of stamp duty, I think there is probably a political spin on that as well. (AU Academic 3).

Also, while there was substantial discussion around the state insurance taxes, the income tax treatment of insurance recoveries was not seen as problematic by policy makers. "I think it was just the normal rules for when you've got replacement property or cash. … I think it was just question of interpretation when you derived it' (AU Practitioner 2).

7.4.1.2. Disaster fund or insurance scheme

The literature identifies the pre-disaster phase as important for lessening disruption caused by a natural disaster, saving lives and protecting property. In addition to encouraging private insurance, governments may be able to reduce losses where individuals underprepare for disasters. However, Australia has no formal natural disaster prefunding or insurance scheme.

Who talked about it?

There were 180 references to Australia establishing a natural disaster fund or insurance scheme, to pay for mitigation and the costs of future disasters. Eleven interviewees discussed this aspect of pre-disaster preparation (four academics, four practitioners and three tax officials) and there were also references to a natural disaster fund in 14 secondary source documents. These were in the form of articles (Arklay, 2012; Dempsey, 2011; Fleming et al., 2015; Howes et al., 2013; Institute of Chartered Accountants Australia, 2012; Kirby et al., 2011; Mendelson & Carter, 2012; Smart, 2012), reports (Australian Treasury, 2012c; Deloitte, 2013, 2014; Department of Finance and Deregulation, 2012) and two submissions (Bradley, 2011; McGowan & Tiernan, 2014). The establishment of a natural disaster fund was a focus for all types of policy makers, particularly academics and practitioners, as shown in Figure 7.3.

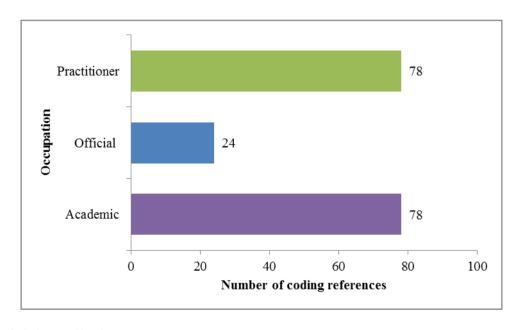


Figure 7.3 – Disaster fund or insurance scheme – coding by occupation

How did they talk about it?

Efficiency

The establishment of the Terrorism Insurance Scheme in 2003 and the Future Fund for Commonwealth superannuation liabilities in 2006 were contrasted with the lack of arrangements for natural disasters (AU Academic 1, AU Academic 3, and AU Practitioner 4). The perceived gap has led to numerous calls for Australia to move to a pre-funding model. Tax practitioners and some academics supported the creation of a natural disaster relief fund, particularly given the frequency of natural disasters in Australia (AU

Practitioner 1). Similar comments were made by the Institute of Chartered Accountants Australia (2012) and by some academics (AU Academic 1).

However, policy makers acknowledged that money locked away in a special purpose fund may not be the most efficient use of the funds at the time. There is also the risk that once reserves build up they will be used for another purpose, as has happened with the Terrorism Insurance Scheme (Australian Treasury, 2012c).

Efficiency arguments were also raised against the creation of an insurance scheme. Biggs (2012) notes that the equivalent United States scheme encourages people to live in high-risk areas and has high levels of debt due to the fact that premiums are only designed to cover years where there are 'average' levels of flooding. As a result, she concludes that a national insurance may not be appropriate in Australia (Biggs, 2012). Similar points were made during consultation on the Natural Disaster Insurance Review proposals (Johnston, 2011; Mahon & Mahon, 2012).

Revenue adequacy

Both academics (McGowan & Tiernan, 2014; Mendelson & Carter, 2012) and practitioners argued that Australian needs to have a broader approach to dealing with natural disasters, citing evidence of the economic returns that can be expected from investing in mitigation and precautionary long-term measures:

...an annual program of Australian Government expenditure on pre-disaster resilience of \$250 million at the national level has the potential to generate budget savings of \$12.2 billion for all levels of government (including \$9.8 billion for the Australian Government) and would reduce natural disaster costs by more than 50% by 2050. (Deloitte, 2013, p.9).

However, despite these benefits: "Current policy and funding frameworks reinforce the traditional emphasis on response and recovery" (McGowan & Tiernan, 2014, p.21).

Betterment provisions were included in the NDRRA in 2007. However, despite the policy change and multi-billion dollar recovery bills, "it appears that the betterment

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⁷⁰ The betterment provisions provide funding for state governments to restore or replace essential public assets to a more disaster resilient standard than their pre-disaster standard. The intent of betterment is to increase the resilience of Australian communities to natural disasters, while at the same time reducing future expenditure on asset restoration, reducing incidents, injuries and fatalities during and after natural disasters, and improving asset utility during and after natural disasters .

provisions ...have not been widely accessed. Government infrastructure and assets are still being rebuilt 'like for like'; missing the opportunity to fundamentally rethink the vulnerability of key infrastructure" (Regional Australia Institute, 2013, p.11, as cited in McGowan & Tiernan, 2014, p.20). The lack of impact is illustrated by the fact that none of the official costings prepared for responding to the Queensland floods included replacing infrastructure in a way to mitigate against loss from future natural disasters: "Certainly we have not allowed in our estimates for substantial betterment" (Bradley, 2011, pp.31-32). As a result, assets repaired following the Queensland floods are likely to suffer damage from future events, meaning costs to future Australian governments.

While Australian governments have acknowledged the need for more investment in mitigation (Fleming et al., 2015), a number of reasons were given for the lack of investment. Funding was raised as an obstacle: "The Australian Local Government Association describes current levels of funding for potential mitigation measures as 'clearly inadequate compared with the scale of damage and substantial returns for mitigation investments'" (Australian Local Government Association, 2011, p.15, as cited in Fleming et al., 2015, p.2). State and federal Budget processes are seen as contributing to the lack of investment in mitigation:

Part of the problem is that your pre-disaster expenditure is a budget line item. In circumstances where spending money upfront but at a time when the Government is, understandably, trying to achieve a balanced budget, they don't want budget line items that involve...not insubstantial expense. (McClelland, Transcript ABC Radio, 2 April 2012, as cited in McGowan & Tiernan, 2014, p.13).

These issues have led practitioners (Deloitte, 2013) and academics (Fleming et al., 2015; Howes et al., 2013; McGowan & Tiernan, 2014) to call for the creation of a pool of public funding to significantly boost investment in mitigation measures. In terms of an official response, following the extreme weather events during the summer of 2010/11, a review of the existing Australian and state government arrangements for natural disaster recovery and resilience was announced by then Assistant Treasurer Bill Shorten (Natural Disaster Insurance Review Panel, 2011). This led to an Australian government commitment to a National Insurance Affordability Initiative involving investing A\$100 million over two years in mitigation projects, such as funding flood levees in at-risk areas (Shorten, 2013).

However, while policy makers commented about the benefits of increased investment in mitigation and the scale of investment contemplated: "This might require major investments in disaster mitigation measures and upgrading infrastructure" (Ferris and Petz, 2012, p.38, as cited in McGowan & Tiernan, 2014, p.5), there was no discussion about how the required funds would be raised. Also, while academics and officials highlighted the need to create the right incentives on decision makers: "key investment decisions to be taken at a localised level, often property by property. Those decisions can be supported by government through the provision of information and incentives" (Deloitte, 2013, p.12)), it was interesting that there was no discussion about using tax incentives to achieve this result. Instead, in practice, mitigation investment decisions have been influenced by market pressure, as following the Queensland floods insurance companies began risk adjusting insurance levies based on the level of mitigation. This put pressure on local and state governments to take action: "Roma built a levee and apparently their premiums have gone right down now that the levee is in place" (State Revenue Official). "So rather than a tax response it was about working out what are the issues in the market and intervening to address them" (State Treasury Official).

Tax practitioners and academics also advocated for an Australian government insurance scheme or disaster fund to pay for the costs of future disasters on the grounds of revenue adequacy:

We have advocated for the ... government to establish a natural disaster relief fund for Australia, and for that to be funded out of consolidated revenues and money tipped into that on a regular basis. That would then circumvent the need to create one-off special temporary levies or taxes. (AU Practitioner 1).

However, while practitioners and academics supported establishing a fund to reduce the need to raise revenue on an ad hoc basis, they did acknowledge the revenue risks: "when government gets squeezed for revenue they would probably put their hand on any monies that they have hypothecated for this use and say, 'if we need it in the future we will just raise taxes" (AU Academic 3). Similar comments were made by tax practitioners. There was also no discussion that in the short-term establishing a fund would require tax increases.

Compliance and administration costs

Policy makers also argued for an Australian government insurance scheme or disaster fund on the grounds that it would reduce the need for one off levies and other post-event funding arrangements, thereby increasing certainty for both the Australian government and for taxpayers.

What else was or should have been discussed?

While policy makers raised efficiency, revenue adequacy, and compliance and administration cost arguments both for and against moving to a pre-funding model, there was no discussion of the distributional or intergenerational impacts of all current taxpayers being required to fund such as scheme.

Outside the standard tax policy principles, policy makers saw political motivation behind the lack of investment in mitigation or government insurance scheme or disaster fund in Australia: "Well I think it says something about the politics of it, the fact that we can't set up a long term fund" (AU Academic 2). Academics raised the political difficulty of being able to sell a long-term fund as compared to a one-off levy: "that would be harder to sell. It is more abstract, unless you are going to have a few of these events" (AU Academic 2), and both practitioners and academics (AU Academic 1) saw a natural disaster fund as helping to address a problem of political economy where governments make short-term investment decisions:

Australia had the benefit of huge terms of trade changes through 2000.... the benefit of the terms of trade advantage was A\$270 billion. The amount of money that the government put aside for investment ... was about A\$10 billion. The rest was pushed back into tax reductions, or into one off bonus type things... Insufficient funds were set aside for infrastructure and certainly not for insurance. (AU Practitioner 3).

Interestingly, one academic drew a distinction between the use of a national insurance scheme where shocks are expected but not preventable and the situation where losses from natural disasters result from individual choice:

I can imagine there could be an optimal mix, particularly in terms of an insurance framework where you tax everybody in the system under the assumption that you don't know where these shocks are going to occur, then when they do occur you

draw it like an insurance mechanism and it is already funded. ... You might argue that Australia should have had some sort of flood relief fund, but again, I think we knew enough to know that there was a problem. The whole reason for the dam mitigation was because there was the probability of a flood, yet the government still allowed people to build in a risky area and not have insurance. (AU Academic 5).

7.4.1.3. Pre-disaster summary

Features of the Australian tax policy system can clearly be seen in policy makers' comments on Australia's pre-disaster insurance settings. Policy makers were concerned about the inefficiency of the existing insurance taxes, in particularly their impact on levels of insurance coverage. They were also concerned about increasing inefficiency by establishing a special purpose fund or insurance scheme. This may also be why, while academics and officials highlighted the need to create the right incentives on decision makers, there was no discussion about using tax incentives to achieve this result.

There was also a heavy emphasis on revenue adequacy, particularly at a state level, with any consideration of removing state insurance taxes needing to take place within the context of broader fiscal reform. Revenue adequacy was also a focus in relation to the establishment of an Australian government insurance scheme or disaster fund to pay for mitigation and the costs of future disasters. Practitioners and academics supported creating a fund to reduce the cost of future disasters and need to raise revenue on an ad hoc basis. However, there was no discussion about how the required funds would be raised or how to avoid the risk that future Australian governments raid the fund when squeezed for revenue.

While high compliance and administration costs were not emphasised in the commentary on existing insurance taxes, it was a strong rationale given for introducing an Australian government insurance scheme or disaster fund, with this primarily argued on the grounds of its impact on certainty, both for the Australian government (reduced administration costs) and for taxpayers (reduced compliance costs).

There was limited discussion on distributional aspects, other than one specific post-disaster review. However, in terms of the policy process and influences outside the standard tax policy principles, political pressure was highlighted both in relation to existing insurance taxes and the absence of a natural disaster insurance scheme or disaster fund to pay for mitigation and the costs of future disasters.

7.4.2. Immediate response

Tax policy's role in the response phase is to fund immediate relief. The tax policy approach to administrative responses and tax exemptions, as examples of Australia's immediate responses, are discussed below.

7.4.2.1. Administrative issues

Who talked about it?

There were 156 references to the use of administrative tax measures in response to the Queensland floods. 13 interviewees discussed this aspect of the immediate disaster response (five tax officials, four practitioners and four academics) and there were also references in 17 secondary source documents. These were in the form of articles (Arklay, 2012; Farmer, 2011a; Howes et al., 2013; Mendelson & Carter, 2012; PricewaterhouseCoopers Australia, 2011b; Smart, 2012), reports (Deloitte, 2013, 2014), technical guidance (ATO, 2011a, 2011b, 2012a, 2013a; KPMG, 2011a), policy advice (ATO, 2012b, 2013b) and two submissions (McGowan & Tiernan, 2014; Willcock, 2011). As illustrated in Figure 7.4, this was an area of focus for all policy makers, but particularly for practitioners.

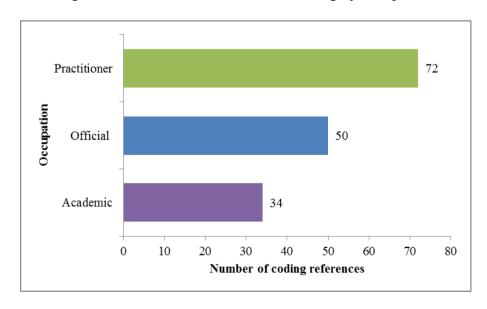


Figure 7.4 – Administrative issues – coding by occupation

How did they talk about it?

Equity

Tax academics and tax practitioners identified equity as the tax policy rationale for administrative responses made to the Queensland floods: "I would have thought that the

tax system dealing with natural disasters in a tax neutral way for the person involved is probably about equity. ...It is treating people appropriately in their economic circumstances" (AU Practitioner 4). In doing so, while one tax official emphasised the uniformity of responses (AU Official 6), tax policy makers generally acknowledged that such treatments contravene horizontal equity: "I can imagine that consistency is going to be impugned in all sorts of ways. ...you haven't got any sort of horizontal equity in the sense of this taxpayer versus that taxpayer" (AU Academic 4). Tax policy makers justified the treatment on the basis of needing to segment taxpayers, perhaps acknowledging ability to pay or vertical equity:

I would suggest that there would be graded responses which depend on the nature of the taxpayer, for example, an employee compared to the self-employed would have very different needs, and you look at not only the nature of the taxpayer or the nature of the entity affected, but also the impact on that person. An employee whose place of employment has just been flooded or burnt down is presumably going to be treated differently from an employee who may live close to the area but who works outside the area. I think there has to be that sort of graded response. (AU Academic 4).

Similar views were expressed by tax practitioners (AU Practitioner 4), officials and in ATO guidance (ATO, 2011b).

The obvious question is how to differentiate between taxpayers. On this point, the ATO does provide some guidance. In assessing areas impacted by natural disasters they consider: the extent of property damage and loss, the impact on business premises and infrastructure (postage and banking facilities), the extent of damage to productive land, significant or extended closures or denial of access, the impact to utilities, transport and telecommunications, and the likelihood of bulk deferral requests (ATO, 2013b). Tax practitioners also questioned the role of death in determining tax responses: "How does death play into it, because you can have a natural disaster such as the Victorian bushfires where there were a very high number of deaths, whereas I don't think there were that many deaths in the Queensland floods" (AU Practitioner 3).

In applying or accepting differentiated responses, academics and officials were clear that any lack of horizontal equity was only acceptable in the short-term: "I would see it as time limited" (AU Academic 4) and "All these sorts of short term things are really just

temporary measures to ease everybody's burden while they get back on their feet" (AU Official 5).

Compliance and administration costs

Minimising compliance costs for affected taxpayers was also a strong justification in the way that the responses were provided, with the Commissioner able to make automated deferrals for a class of taxpayer (ATO, 2012b). However, automatic relief was not provided in all cases, for example in relation to PAYG instalments:

Without formally requesting a variation, taxpayers will be required to pay instalments calculated by reference to business activity of prior years, and in many cases, payment of these amounts will have a material adverse impact on the cash flows of the business. (PricewaterhouseCoopers Australia, 2011b, p.3).

Similarly, in relation to record recreation: "Where records are recreated in this manner, it will be necessary in many cases to liaise with the revenue authorities to confirm the appropriateness of the methodology used" (PricewaterhouseCoopers Australia, 2011b, p.3). State authorities also required taxpayers to take action even for payment or lodgement deferrals: "So we were …able to provide that assistance to taxpayers. They just have to contact us and that is how the decision was made to deal with them" (AU Official 6).

Speed was seen as an important part of managing compliance concerns for affected taxpayers. This was reflected in ATO guidance (ATO, 2011a, 2011b, 2012b) and acknowledged by tax practitioners: "The immediacy of their response was fantastic. There are some very strong positives there for the ATO and the Australian community more broadly, that such a large organisation like the ATO can respond so quickly" (AU Practitioner 1). Similar comments were made by two tax practitioners.

From an administration cost (and equity) perspective, the ATO put significant emphasis on providing an ordered response (ATO, 2011a), following an internal policy for providing support to the community during disaster events (ATO, 2012b). This policy is based on a number of principles, including that the ATO's response will be centrally-coordinated with a Community Disaster Rapid Response Group activated to propose affected client strategies and all treatments being authorised by a crisis team leader (ATO, 2012b). This coordination was acknowledged by practitioners: "for such a large organisation with lots of process and protocols and internal policies and all the rest of it, they obviously had a

very well-oiled machine in train very quickly around responding to the natural disaster" (AU Practitioner 1).

In terms of designing how immediate responses can and will be provided, thought needs to be given to the impact of a natural disaster on tax authorities themselves. As well as damage to tax office buildings, important factors will include the impact on staff ("We had 2,500 staff that were unable to attend work for that period of time, and we had about 16 to 20 that were severely impacted"), transport ("we didn't want to clog up transport lines and roads were closed, so we thought the easiest thing was just let people stay at home"), whether tax officials have the ability to work remotely ("We had very limited capability in terms of people working from home") and whether work can be transferred to other offices ("we mobilised the rest of the ATO to carry on with the rest of the work") (AU Official 5).

Luckily, in terms of the Queensland floods, the impact on the ATO was fairly limited: "We had 10 buildings that were impacted, anywhere between three and five days. We got off pretty lightly" (AU Official 5). This was possibly due to the type of natural disaster which allowed time to respond: "With floods it is a creeping event, so …we said 'let's get everybody out, look after them and then let's look at what we need to do to protect the building'" (AU Official 5), and the fact that lessons from early on in the disaster were applied straight away: "We had a few learnings from that process in the early days of the flood itself, and then we had cyclone Yasi bearing down on us in the north, and so we used those learnings straightaway" (AU Official 5).

Revenue adequacy

While less common than for the other two tax principles, there were a few comments made about revenue adequacy. The ATO talked about revenue adequacy being the principle traded-off in determining how far to go with administrative responses to a natural disaster: "We balance it with the impact to revenue and that is where we have gotten to this codified approach. We go if it is this kind of impact then this is the trade-off" (AU Official 5). Tax practitioners saw the localised nature of natural disasters as allowing the ATO to act without putting revenue at risk:

Well, you hope that relieving ...the relatively small number of people affected by the natural disaster as compared to 22 or 23 million people that we have got in the country, giving them some relief from the rigours of the tax system isn't really going to affect your revenue adequacy or your sustainability. (AU Practitioner 4).

What else was or should have been discussed?

While tax policy makers related the administrative responses to equity, compliance and administration costs, and revenue adequacy there was no real discussion about efficiency. Possibly this was due to the short-term application of many of the administrative responses. However, some tax academics considered that the standard tax policy principles did not apply at all:

In a sense I see it as all bets are off as far as a tax policy process is concerned. What you are trying to do is to deal with an emergency and you deal with it in a pragmatic and practical fashion. (AU Academic 4).

Despite significant discussion of the administrative responses, both as they fit with standard tax policy principles and as part of a wider Australian government response, there was no real discussion on when to cease these special arrangements and return to normal. This is particularly challenging as impacts can differ between taxpayers: "There are a lot of businesses and taxpayers impacted and the impacts will go on for many years, and some businesses will be unviable after significant events. It is case by case support" (AU Official 5). It is important that there is clear communication about when special measures will come to an end and that there is sufficient time for taxpayers to then meet their obligations. Specific legislative responses are likely to have a set expiry date and may need to be rolled-over, leading to taxpayer uncertainty and extra administration and legislative costs. Administrative responses provided under a discretionary power have more flexibility. However, such flexibility does need to be applied in a consistent way. In the ATO's case this is assisted by their administrative framework.

There was also no discussion of alternatives to the current discretionary power, as there are different views on whether broad discretionary powers are a good idea. In interviews, tax academics discussed the trade-off between certainty for taxpayers and the flexibility to deal with individual cases, effectively a trade-off between minimising compliance and administration costs and equity. Some policy makers thought that it "is not the right way to run a system because everybody should know what the rules are, and the rules should be the same for everybody" (AU Academic 3). However, others recognised that there is a lot to be said for having flexibility in administration. The "Commissioner has the responsibility, and this implies powers too, for the general administration of the Act. That ... can be interpreted very broadly. It is precisely for this kind of thing" (AU Academic 1).

A policy alternative between the need for ex post legislative amendments and a broad discretionary power could be a limited discretion that only comes into effect once a state of emergency is declared. This would help balance concerns about generic discretionary powers and the benefits of speed and flexibility from an operational power.

7.4.2.2. Exemptions

As well as administrative assistance, the Australian government provided support to households and businesses following the Queensland floods. From a tax policy perspective, the provision of financial assistance raises the question of whether support payments should be subject to tax or treated as exempt income.

Who talked about it?

There were 96 references to the use of tax exemptions in relation to emergency support payments made in response to the Queensland floods. Four interviewees discussed this aspect of the immediate disaster response (two tax officials and two practitioners) and there were also references in nine secondary source documents. These were in the form of technical guidance (ATO, 2012a, 2013a; KPMG, 2011a), policy advice (Australian Treasury, 2011c, 2011d, 2011e, 2011g, 2012d), and legislative documents (Australian Treasury, 2011f). As illustrated in Figure 7.5, this was primarily an area of focus for officials. It was not an issue raised by academics.

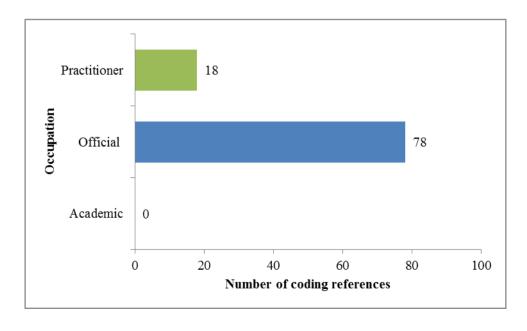


Figure 7.5 – Exemptions – coding by occupation

How did they talk about it?

Equity

Tax policy makers talked about equity being a driver for immediate responses to natural disasters: "I think it does come back to equity..., that is what the purpose of these types of provisions is, they are designed to assist people" (AU Practitioner 4). Specifically, policy makers considered that consistency and horizontal equity are important in the treatment of emergency assistance payments: "We have the issue with New Zealand visas. ...To make sure that they have equal tax treatment with Australians we continue to exempt those payments. It is a sort of consistency rule" (AU Official 3). Similar statements were made in legislative documents (Australian Treasury, 2011c). However, despite these comments there appears to be a lack of consistency in terms of how different emergency support payments are treated for tax purposes.

The AGDRP is a one-off payment to individuals affected by a natural disaster: "it's not an income support, it's a one-off compensation payment. ...it's to recognise any inconvenience or losses you may have suffered" (AU Official 3). As such, it is generally treated as exempt income under Section 52-10 of the Income Tax Assessment Act 1997: "99 times out of 100 it has been classed as a tax free payment" (AU Official 5). However, the tax treatment of other emergency support payments seems to fluctuate.

ATO technical guidance notes that income support received by way of grants or subsidies will generally be assessable income (ATO, 2013a). As such, NDRRA payments are generally taxable. However, in respect of the Queensland floods, emergency assistance grants were treated as non-taxable (ATO, 2012a). The (*Tax Laws Amendment (2011 Measures No. 1) Act 2011*) amended section 51-30 of the ITAA 1997 to exempt DIRS paid to those affected by the Queensland floods and by Cyclone Yasi (Australian Treasury, 2011f). While tax officials describe the DIRS as an income replacement: "it's to straddle that period where you would have to show that you were looking for work but not in receipt of payments.... You get the disaster payment for that period ... so that's more in the income replacement sphere" (AU Official 3), they justified the tax exemption on the basis that it would lessen financial hardship (Australian Treasury, 2011f) and was not income in the ordinary sense: "we exempt the Disaster Recovery Payment because it's not income in its normal sense, in that it's not regular" (AU Official 3).

Regarding relief payments, ATO technical guidance notes that the tax treatment depends on the specific circumstances of the payments (ATO, 2012a). In respect of clean up and recovery grants provided under the NDRRA, such payments are generally treated as assessable income (Australian Treasury, 2011f). However, in response to the Queensland floods, the Australian government legislated to provide an income tax exemption (Australian Treasury, 2011d; *Tax Laws Amendment (2011 Measures No. 1) Act 2011)*. The rationale given by tax officials was that the exemption ensured consistency with the treatment of similar payments made following the 2009 Victorian bushfires (Australian Treasury, 2011f). However, there was no discussion as to why this treatment should differ from the standard rules, despite specific statements indicating other support payments would still remain taxable:

While the Government has announced a number of measures to assist both individuals and businesses to recover from the recent flooding and from Cyclone Yasi, this measure only applies to the grants paid to small businesses and primary producers for clean up and recovery. (Australian Treasury, 2011f, p.14).

This lack of horizontal equity has been criticised by other tax policy makers:

There are times when we go to Treasury ... to say, 'here is what has been announced, what is the tax treatment of it?'. It is a bit annoying sometimes when it is case by case stuff, because then the person who had their house impacted doesn't care if the whole street was gone or the whole suburb was gone, it was their house affected. The tax treatment should be the same regardless, but we are trying to work with that group to standardise the treatment of some of those payments. (AU Official 5).

Similarly, tax practitioners criticised the broad-brush nature of the tax relief as contravening vertical equity:

Because the government assistance was tax exempt the idea was if you were socially inclined, you claim your assistance, it is not assessable to you, then you donate it back and you claim the deduction for your donation. You get a tax benefit and the money goes to where it needs to go rather than into your pocket. (AU Practitioner 4).

Revenue adequacy

The fiscal impact of making tax exemptions for emergency support and assistance payments was also a consideration for tax policy makers. While tax practitioners were less worried about cost: "revenue adequacy is not going to be a problem" (AU Practitioner 4), initial policy advice on the tax treatment of Queensland Flood Business Assistance Grants was that: "Exempting the grant payments from income tax would involve a cost to revenue" (Australian Treasury, 2011g, p.2). This was followed up by further advice which noted that:

It is too early to be able to accurately estimate the number of recipients of the grants. Accordingly, the total cost to revenue of exempting the grants from tax is currently unquantifiable. However, for every \$10 million of grants provided, the estimated cost to revenue would be around \$2.7 million. (Australian Treasury, 2011d, p.2).

Subsequently, the explanatory note to the amending legislation included the following revenue impact of the tax exemption: A\$45m (2011/12), A\$25m (2012/13), A\$10m (2013/14) and A\$2.5m (2014/15. However, the estimates did not include any allowance for the extension of assistance to those affected by Cyclone Yasi or any allowance for future events (Australian Treasury, 2011f).

Amendments were also announced in the 2011/2012 Budget to allow farmers affected by a natural disaster to access their farm management deposits within 12 months while retaining the concessional tax treatment (Australian Treasury, 2011c). The amendment was expected to have an ongoing unquantifiable revenue impact (Australian Treasury, 2011c). However, officials argued that allowing farmers access to these deposits without foregoing concessional tax treatment enables "them to recover and rebuild their primary production businesses more quickly and/or providing an income in times of severe hardship" (Australian Treasury, 2011c, p.5).

In terms of exempting the DIRS income support payments for Australian and New Zealand recipients, despite the fact that such payments are normally taxable and a legislative amendment was required to effect a tax exemption, no fiscal cost was recorded in the explanatory note to the amending legislation (Australian Treasury, 2011f).

Compliance and administration costs

Legislative documents also commented on the compliance cost implications of the various tax exemptions. In general, these were considered to be low, with a zero compliance cost impact estimated for the tax exemption for the DIRS, tax exemption for ex gratia payments to New Zealand visa holders and for the recovery grants exemption (Australian Treasury, 2011f). This was supported by comments from tax practitioners (AU Practitioner 4). However, the farm management deposit amendments were expected to increase costs by requiring more frequent reporting and communication and compliance with prescribed conditions within a set time frame (ATO, 2013a; Australian Treasury, 2011c).

From an administration perspective, the nature of some of the emergency support payments provided considerable freedom. The DIRS were not legislated, with the decision to make ex gratia payments made by the Prime Minister and/or Cabinet, allowing the Australian government to deliver financial relief at short notice. However, their flexibility also made them difficult to administer:

From a tax perspective, we initially started going 'if we are issuing payments to those people, let us identify that population to then apply the tax concessions to as well'. The issue was, particularly from that 2011 response, after a couple of weeks or so they changed the rules to be very, very loose. It became a very blunt instrument very quickly, to the point where post codes were almost a tighter instrument. (AU Official 5).

The payments were also not subject to the accountability and reporting measures that apply to legislated payments. As such, in 2013 a decision was made to allow for payments to be made in similar circumstances but under a legislative scheme (the Disaster Recovery Allowance) (Social Security Legislation Amendment (Disaster Recovery Allowance) Act 2013). This was supported by tax practitioners: "I think previously each payment had to be specifically regulated or legislated but now they have made a generic exception. I think that is sensible" (AU Practitioner 4).

What else was or should have been discussed?

As with the administrative responses to the floods, while tax policy makers commented on the equity, revenue and compliance and administrative cost implications of the tax exemptions, efficiency was not mentioned. Potentially this was because the exemptions were targeted and in place for only a short time (Australian Treasury, 2011f).

Also, while tax policy makers discussed the importance of equity, they did not explain why certain emergency support and relief payments were receiving a different tax treatment. Some of the policy advice was withheld from the Freedom of Information request and may have shed light on why exemptions were provided in certain cases. Another explanation could be the impact of politics:

You could argue that the Australian tax system has got lots of exemptions and carveouts, some of which are for natural disasters, which at least have a basis in policy, and if they are well directed and well setup then that is probably not so much of a problem. It is the tax system being able to adapt properly. But there are lots of other exemptions that aren't necessarily the result of good tax policy. They are the result of political horse-trading which doesn't work so well. (AU Practitioner 4).

7.4.2.3. Immediate response summary

The immediate tax responses to the Queensland floods are also consistent with features of the Australian tax policy system prior to the disaster.

Unlike the pre-disaster settings, policy makers emphasised equity rather than efficiency as a key policy rationale for both the administrative responses and tax exemptions. This is consistent with Australia's highly redistributive tax and transfer system. Immediate tax responses were justified on the basis of vertical equity and ability to pay, with taxpayers segmented depending on the impact of the disaster. While both measures contravened horizontal equity, policy makers were happy to accept this in the short-term. A well-ordered and centrally co-ordinated response also helped to manage consistency.

Rather than legislated support payments with standard tax exemptions, emergency relief was reliant on a political rather than legislated process, which while flexible and fast, raised administrative issues. Political influence was also raised as a reason for certain emergency support and relief payments receiving a different tax treatment.

While concern over revenue adequacy is normally a feature of the Australia tax system, the cost of the responses (where this could be estimated) was accepted due to the short-term and localised nature of the responses.

Finally, while high compliance costs were a feature of the existing tax system, in general, compliance costs associated with immediate responses were considered to be low. However, the changes to allow access to farm management deposits and administrative responses where automatic relief was not available did increase compliance costs for taxpayers.

7.4.3. Recovery

The final phase is recovery which involves providing support to businesses to restart, rebuilding homes and industry, and investing in disaster risk reduction measures. The tax policy approach to the land swap and flood levy, as examples of tax responses to support recovery from the Queensland floods, are discussed below.

7.4.3.1. Land swap

Who talked about it?

There were 164 references to tax changes associated with land swap. Twelve interviewees discussed this aspect of the immediate disaster response (five academics, four tax officials and three practitioners) and there were also references in six secondary source documents. These were in the form of policy advice (Australian Treasury, 2011b, 2012b), submissions (Institute of Chartered Accountants Australia, 2011; Molesworth, 2011) and academic literature (Fleming et al., 2015; Smart, 2012). As illustrated in Figure 7.6, this was primarily an area of focus for officials and practitioners.

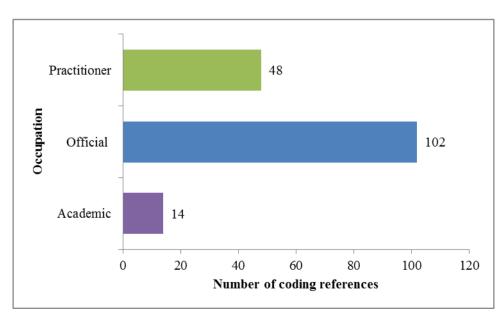


Figure 7.6 – Land swap – coding by occupation

How did they talk about it?

Efficiency

Tax officials argued that the proposed CGT changes would remove tax barriers to economic decisions and thereby improve the efficiency of the tax system: "these changes remove CGT obstacles identified as restricting participation in Australian government agency replacement asset programs" (Australian Treasury, 2011b, p.vii).

Equity

Tax officials also supported the proposed changes on the basis of equity, in that they would allow taxpayers to maintain their pre-CGT status: "This will ensure that taxpayers with pre-CGT assets are not disadvantaged in tax terms by participating in an Australian government agency replacement asset program to assist taxpayers affected by natural disasters" (Australian Treasury, 2011b, p.5).

Other tax policy makers saw the changes as consistent with vertical equity and recognising ability to pay, as there was no cash being received: "To the extent that technically it is caught by the rules at the moment, I don't think it should be. You are not actually liquidating an asset" (AU Academic 3). The tax treatment could also be differentiated on the basis of emotional suffering: "This will therefore allow taxpayers to make a decision for emotional reasons to abandon a property that they (or their tenants) do not wish to return to, without being penalised" (Molesworth, 2011, p.2).

However, tax practitioners raised a number of horizontal equity concerns in relation to aspects of the proposed land swap changes. In terms of horizontal equity, practitioners were worried about consistency with other CGT rollover provisions ("we consider that it would be more appropriate, and more in keeping with the general replacement asset rollover provisions, to allow taxpayers to choose" (Molesworth, 2011, p.2). Other tax practitioners were worried about a lack of consistency with earlier disaster relief payments ("taxpayers ...received rights under ...cash grant programs before 1 July 2011. ...we suggest that the ...1 July 2011 date be explained ... to allay any concerns that taxpayers adversely affected by the same natural disaster are being treated differently") and with the tax exemptions provided for other Australian government support payments ("the Explanatory Memorandum should explain the interaction between the proposed CGT relief measures and the amendments...it is important that all taxpayers adversely

affected by the same event(s) be treated equally" (Institute of Chartered Accountants Australia, 2011, p.3)).

Compliance and administration costs

Despite horizontal equity concerns, tax officials considered that the proposed CGT changes would reduce compliance costs for taxpayers (Australian Treasury, 2011b). Without the proposed changes, taxpayers participating in a land swap program might face multiple taxable events and the need to apportion their cost base, obtain market valuations and meet record keeping requirements, by finding or reconstructing records, for more than one CGT calculation (Australian Treasury, 2011b).

While tax academics and practitioners also viewed the land swap changes as reducing compliance costs for affected taxpayers ("The proposals when enacted will significantly simplify the application of the CGT provisions to those adversely affected by natural disasters" (Molesworth, 2011, p.1)), from the aspect of certainty, the process around the changes was less than ideal. Initially, advisors involved in the land swap tried to apply the existing legislation: "In the first instance we tried to get the Tax Office to agree that there was no tax problem because the existing legislation has a loss or destruction section" (AU Practitioner 4). However, following a negative response from the ATO, the land swap transactions were restructured: "we rewrote, very slightly, the land swap programme... ... we got an agreement from the Tax Office that that will then meet the requirements of the current law" (AU Practitioner 4). However, despite this agreement, officials felt pressure to make a legislative change. There were concerns about the psychological compliance costs associated with the way the land swap had been restructured:

...the Tax Office, I think through Treasury, ... said the fact that we had to go there and put people under that psychological pressure ... that doesn't really seem appropriate. Surely there is a very small amendment to that provision which will deal with voluntary programmes which are declared after natural disasters. (AU Practitioner 4).

Subsequently, the Australian government announced the proposed legislative changes (Australian Treasury, 2011b). Initial consultation was followed up by a second discussion document in June 2012 (Australian Treasury, 2012b). However, no tax legislation was forthcoming. Due to a significant backlog of tax announcements awaiting legislation, the proposed changes were not enacted into law and taxpayers entering land swap transactions

were reliant on an administrative agreement that the ATO would honour the press release (AU Official 2). Tax officials saw the administrative process as providing flexibility to respond immediately which also took the pressure off needing to speed up the legislative process (Australian Treasury Officials 1 and 2). However, it created uncertainty and risk for taxpayers, exacerbated by the fact that in December 2013 (three years after the flooding), the Assistant Treasurer announced the outcome of consultations over the backlog of unlegislated tax and superannuation measures. Forty-eight measures, including the CGT relief for taxpayers affected by natural disasters, would not proceed (Sinodinos, 2013).⁷¹

Tax academics (AU Academic 4) and practitioners criticised the poor tax policy process:

It is an area of our framework, around government announcements and policy announcements translating into legislative fixes, which we do need to do a better job of. In an ideal world I think it would be reasonable to say that announcements around exemptions or relief from tax on the acquisition of swapped land in the context of natural disasters should have already been legislated now, because the reality is it has already happened in the market, or happening in some cases, and so there should not be a degree of uncertainty around this. (AU Practitioner 1).

What else was or should have been discussed?

While tax officials, academics and practitioners commented on the equity, efficiency and compliance and administration cost aspects of the proposed land swap changes, there were no specific comments with respect to revenue adequacy. However, tax policy makers did discuss the revenue implications of the proposed CGT changes in terms of its impact on future Australian government finances. They argued that providing tax relief for land swap transactions would mean less post-disaster support in the future, reducing the amount of taxation that needs to be raised over time: "They are being offered this opportunity to essentially put themselves in a flood proof position where the government doesn't have to get involved in support payments in the future" (AU Practitioner 4).

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⁷¹ Some protection was provided for taxpayers at this time. The Australian government legislated to provide protection for taxpayers who had relied on announcements that were no longer proceeding (*Tax and Superannuation Laws Amendment (2014 Measures No. 2) Act 2014*).

State policy officials also saw the tax response to the land swap as part of a wider Australian government response. However, in contrast to other tax policy makers, they did not see this as an application of any of the normal tax policy principles:

I think something like that land swap is unique. I don't think anyone ever tried to apply a framework to it. ...Because it was so unique, we don't treat that as a precedent so it doesn't really impact on our policy principles. (AU Official 7).

7.4.3.2. Flood levy

While the land swap was a significant investment for the Lockyer Valley, it was only a fraction of the total reconstruction expenditure associated with the Queensland floods. To finance re-building of flood affected areas the Australian government announced that it would impose a flood levy on individual taxpayers for the 2011/2012 financial year.

Who talked about it?

There were 319 references to the flood levy. 12 interviewees discussed this aspect of the disaster recovery (five academics, four practitioners and three tax officials) and there were also references in 15 secondary source documents. These were in the form of policy advice (Australian Treasury, 2011e), submissions (Bradley, 2011; McKibbin, 2011; Mrakovcic, 2011; Parker, 2011; Ray, 2011; Willcock, 2011), reports (Deloitte, 2013; Department of Finance and Deregulation, 2012) and academic literature (Arklay, 2012; Biggs, 2012; Farmer, 2011a; Mendelson & Carter, 2012; Smart, 2012; Taylor, 2013). As illustrated in Figure 7.7, this was an issue for all policy makers.

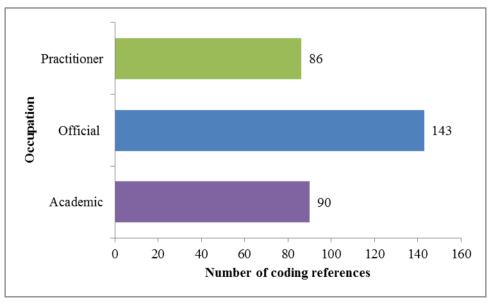


Figure 7.7 – Flood Levy – coding by occupation

How did they talk about it?

Revenue adequacy

While officials acknowledged the limitations of special purpose taxes ("I think in terms of general tax policy we would say that hypothecated levies or taxes are not desirable" (AU Official 4)), the flood levy was justified as necessary to fund reconstruction (Ray, 2011). Officials stressed the importance of having a confirmed source of funding early in the recovery process: "Given the scale of the rebuild, having assurance around the quantum of funding available and available quickly is very important to Queensland" (Bradley, 2011, p.23). However, while officials were clear about the size of the disaster ("the severity and scale of this disaster is unprecedented" (Bradley, 2011, p.23)), they were less certain about the quantum of funding required: "we would stress that the estimates are preliminary. ... We will not get final estimates for a number of years" (Ray, 2011, p.8). Despite this, rather than spreading the cost of reconstruction over time, Australia opted for a temporary revenue increase.

As well as the scale of the disaster, officials defended the levy on the basis that it was necessary to main fiscal credibility because of wider macroeconomic conditions at the time of the floods: "the economy is at or approaching a full employment situation. There are pressures, particularly in the labour markets" (Parker, 2011, p.14) and "it is quite important for macro management for the market to have confidence in the future path of what the government's budget position is going to be" (Ray, 2011, p.12). They also argued that the macroeconomic conditions at the time of the Queensland floods were more challenging than those for earlier natural disasters where levies were not imposed (Ray, 2011).

Comments from other policy makers on the need to raise revenue were more mixed. While academics acknowledged the macroeconomic constraints (McKibbin, 2011; Mendelson & Carter, 2012), they rejected this as a rationale for imposing a levy: "Whether we were running surpluses or whether we were running deficits, with debt to GDP of a low 20 percent or so, I do not think it has any impact on whether the tax is the optimum policy or not" (McKibbin, 2011, p.43). Academics and practitioners argued that the scale of the levy in terms of the Australian economy was small (AU Practitioner 3) and therefore concerns regarding the impact of alternative funding sources on the overall economy were not justified.

Some policy makers agreed with the additional need for funding ("the Australian Government was faced with undertaking an unprecedented infrastructure rebuilding program" (Deloitte, 2013, p.22)), with the levy seen as a response to the vertical tax imbalance between the states and federal government:

I suppose the flood levy was a recognition that the States, particularly Queensland, although it happened to some extent in New South Wales, they did not have the resources from their tax base to cover this. Hence the need for the Feds to step in. (AU Academic 1).

However, practitioners criticised the short-term nature of the levy: "it may be seen as a more reactive, rather than sustainable, approach" (Deloitte, 2013, p.23). They were concerned that the levy gave a false impression of paying for the entire recovery effort and challenged whether the scale of the disaster actually justified a new source of Australian government funding: "The flood levy was A\$1.8bn out of expenditure of A\$5.6bn. We have an economy of A\$1.5 trillion" (AU Practitioner 3). Subsequently, taxpayers have queried the amounts collected by the levy ("we have had a lot questions from people about how much we actually raised" (AU Official 3)), with A\$1.6 billion eventually raised from 4.7 million taxpayers (ATO, 2014).

Efficiency

Even though tax officials argued for a new source of revenue, they were concerned about the efficiency of the levy. In response, they traded off the level of funding against the levy rate:

...the decision was made only to raise that amount through the levy, ...I think it might have been weighing up that efficiency cost. The more you increase the rate, the more effects you may have on the broader personal tax base. (AU Official 3).

The choice of base was also a deliberate tax policy design to avoid efficiency issues ("it was only on individuals and not on companies, to minimise any continuing distortions from the company tax rate" (AU Official 3)), despite calls for wider application (I think ACOSS and the ACTU wanted it to be levied on companies as well" (AU Practitioner 3)).

Other tax policy makers were less convinced that efficiency concerns had been managed with the design of the levy. They were worried about the restrictions of a hypothecated tax ("you don't want levies or taxes linked to something because it just constrains what the

government can do with the pool of revenue" (AU Practitioner 3)), and criticised the efficiency of the levy as a funding source. Specifically, they were worried about its impact, as taxation "further reduces private demand and therefore reduces economic activity even further" (McKibbin, 2011, p.41), and the levy's influence on individual decision making: "it will reinforce the public's reliance on government grants in preference to private insurance" (Bligh, 2011, as cited in Mendelson & Carter, 2012, p.5). Similar comments were made by practitioners (AU Practitioner 2) and academics (AU Academic 3).

One aspect that was subject to considerable comment was the interaction (and potential conflict) between the Australian government subsidising donations through the tax system and introducing a flood levy, which was seen as working against the provision of charitable relief: "Here at the Institute we fielded a lot of comments from very cranky members ...saying '...had we known we were going to be paying 0.5 percent more on our tax bill, we might have reconsidered" (AU Practitioner 1) and (McKibbin, 2011). Tax officials acknowledged the public outcry:

We got a fair amount of correspondence, over 2000 ministerials.... There was such an overwhelming public response to the disaster, and a lot of people had donated to charities. A lot of them said 'I've already made my contribution. Why am I paying more tax?'. (AU Official 3).

The official response was that the payments were targeted at different aspects of the disaster response, with donations being for personal relief, while the levy was to rebuild infrastructure (AU Official 3). However, the reforms to broaden the tax treatment of charitable relief to cover rebuilding infrastructure weaken the explanation given.

Tax policy makers were also concerned about the links between the levy, NDRRA and state insurance: "Commonwealth assistance is not intended to remove incentives for States to plan, mitigate or allocate resources for natural disasters or otherwise discourage governments purchasing insurance to protect their assets" (Department of Finance and Deregulation, 2012, p.5). They were critical of taxpayers having to pay for the fact that the Queensland government had relied on the NDRRA and not taken adequate insurance (Biggs, 2012). Unlike other states which had commercial insurance policies backed by reinsurance, the Queensland government had chosen to self-insure and rely on the federal reimbursement arrangements: "We have considered the issue or reinsurance for our captive insurer, but at the time ... we did not consider that that represented value for

money for the state" (Bradley, 2011, p.25). In response, as a condition of approving the levy, the federal government amended the NDRRA to require states to insure their own losses, with those insurance arrangements assessed by an independent specialist (Biggs, 2012; Department of Finance and Deregulation, 2012). The aim was to eradicate significant differences between state governments regarding the levels of insurability, with increased transparency and scrutiny of state government decisions regarding insurance (Department of Finance and Deregulation, 2012; Mendelson & Carter, 2012). To ensure compliance, extra powers to refuse or withdraw assistance were also introduced (Department of Finance and Deregulation, 2012; Mendelson & Carter, 2012).

Equity

Concerns over efficiency led to the levy being imposed on a restricted base. However, natural disasters also raise the issue of ability to pay: "Who should bear the burden of a disaster in one jurisdiction? Is it the whole of society or is it just that jurisdiction?" (AU Academic 5). In response, officials designed the levy with horizontal and vertical equity in mind, broadly sharing the burden of taxation across Australia, while excluding flood victims and those on low incomes: "it was decided to make it slightly more progressive by saying you don't have to pay until you earn \$A50,000, and then there were exemptions for people who were affected. So I think that progressivity was ...a central consideration" (AU Official 3). Similar comments were made by Bradley (2011) and Ray (2011). With these boundaries in place, officials estimated that approximately half of all taxpayers, or 4.7 million people, would be subject to the levy, with 185,000 people exempt as a result of receiving Australian government assistance payments (Mrakovcic, 2011).

While the progressive structure ensured broad public support for the levy ("ACOSS, the Greens and the ACTU supported it because of its equitable framework" (AU Practitioner 3)), tax practitioners and academics were more critical. They felt there was limited ability to incorporate vertical equity ("There is a lack of progressiveness because you can't hold too many levels. They are generally a blunt instrument" (AU Practitioner 3)) and were concerned that the simple exemption for those receiving Australian government assistance did not accurately reflect ability to pay. The levy was seen as being too generous in some cases ("The tabloid media said government assistance is available for these people that live down at Chelmer in Brisbane, which is right on the river, 5 million dollar houses" (AU Practitioner 4)) and not generous enough in others:

...there are lots of exemptions in the taxation bill. ...I think this will have to be revisited, because there are people who were affected by floods that did not receive payments through the government agencies...They will now be hit with the levy. (McKibbin, 2011, p.47).

In terms of horizontal equity, there were concerns about intertemporal fairness. While victims of the Queensland floods were excluded from the levy (with no assessment of ability to pay) taxpayers who may well be future victims of natural disasters were required to contribute. Practitioners and academics recommended that Australia: "use taxes to smooth income, ...rather than levy another big tax on the current generation" (AU Academic 5). They were worried about taxpayers with uneven income: "people that were made redundant or took their super payments ...got slammed by that because it was that year they picked" (AU Practitioner 2). These issues were acknowledged by officials: "If they draw down such a large lump sum payment during 2011-12, in the period in which the levy would apply, that would form part of their taxable income and would then be subject to the levy" (Willcock, 2011, p.18). Officials noted that it might be possible for such individuals to structure their affairs to minimise the impact of the levy, and suggested they:

...ought to seek some advice on their circumstances, including, if they wish, approaching the ATO to consider what the possible implications for them might be and make their decisions in a way that presumably results in them having the best possible outcome. (Willcock, 2011, p.19).

However, such advice seems to run contrary to taxing based on ability to pay, as well as raising compliance and administration cost issues.

Academics and practitioners were also worried about the lack of transparency with the levy. This was both in terms of the policy process ("The flood levy was just "bang". It was announced, that was it, and it was in a new bill" (AU Practitioner 2)) and the lack of ongoing accountability arrangements (Mendelson & Carter, 2012). Tax officials defended the process ("I think that came down to timing. It happened quite soon after the disaster. We had both the cyclone and the flooding in quite close proximity. Having said that, we don't normally consult on any tax or tax rate change" (AU Official 3)) but did put in place new arrangements to manage, report and account for the funds received from the flood levy: "The Queensland government is working quickly to put in place the necessary

organisational and accountability framework to ensure that all funds provided are managed effectively and efficiently" (Bradley, 2011, p.22).

Compliance and administration costs

New arrangements to manage the flood levy meant additional administration costs. However, while Treasury officials noted that there were simpler options available ("the easy response ... would have just been to increase the Medicare levy" (AU Official 3)) they generally thought that the levy had been implemented in a way that made it easy to administer and comply with:

Thinking around how to do things quickly and easily, working with pre-existing systems, influenced the design. ... It was a temporary levy that was built into the withholding schedules, so for employers there wasn't any major difference. It would just be employees, trying to seek an exemption, who would be able to identify quite easily whether they were eligible or not. (AU Official 3).

This was disputed by the ATO ("the real sticking point was around …eligibility….. That was a cause for some debate, particularly where we had fairly loose application of other types of concessions. It did take a task force within the ATO to set it up" (AU Official 5)) and in other comments about the ongoing need to make exemptions (AU Official 3).

Both academics (McKibbin, 2011) and practitioners criticised the levy for increasing compliance and collection costs: "In terms of efficiency, there were exceptions if you were in flood affected areas, received compensation, etc. So in that sense it was more administratively complex than a simple increase in the Medicare levy" (AU Practitioner 3). Academics estimated that up to 10 percent of the revenue raised could be eaten up in collection costs (McKibbin, 2011) and were concerned that the small amount of funding being generated did not justify the administration and compliance costs involved: "The scale was so small in terms of the costs. It couldn't possibly be transactionally worth doing the levy" (AU Academic 5). They were also worried that similar levies could be introduced in response to other disasters, creating further uncertainty and cost for taxpayers: "You are never going to be able to plan sensibly as an individual or as a corporate because you just don't know what the tax rates are going to be for future years" (AU Academic 4).

In contrast, a small number of practitioners considered that the levy was reasonably simple to administer and comply with ("I think it was pretty simple because in the PAYG

schedules it is just slotted into employer's calculations. ...Also there was a label on the tax return where you had to say 'I had an exemption from the levy" (AU Practitioner 2)). Similar comments were made by a Policy Representative from an Accounting Organisation.

What else was or should have been discussed?

While a significant number of concerns were raised about the levy, there was limited discussion on when such a response might be necessary or appropriate, although one academic did acknowledge that macroeconomic constraints could be relevant depending on the scale and impact of a natural disaster (AU Academic 5).

There was also no discussion about how the response fitted with the Queensland government proposal to introduce a state levy which was announced but did not proceed: "It was floated. …I think it was going be on rates. I don't know how it was going be collected, but there was some talk about it and then I think it all fell over within 24 hours" (AU Practitioner 2).

Finally, while tax officials commented on the tax policy behind the levy, they were less vocal about the non-tax policy reasons emphasised by tax academics and practitioners. Other policy makers highlighted Australia's history of 'one-off' levies⁷² which provided a precedent for the Australian government's response to the Queensland floods: "I think it became easy to impose the flood levy because of the gun levy" (AU Academic 4). They commented that this form of raising revenue is seen as more acceptable ("Levies are perceived as more acceptable in Australian society because of support for social policies and the historical resistance to introducing further taxes" (Taylor, 2013, p.8)), particularly in relation to emergencies (AU Academic 2). However, while easier to sell to taxpayers, such ad hoc taxes are inefficient in terms of increasing the dead weight loss of the tax system, lead to uncertainty for taxpayers and were criticised as a political revenue grab ("governments tend to use these events...to collect revenue while these things are fresh in the public mind so the public feel less disgruntled about making the contribution and then

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⁷² These include: a temporary 0.2 percent increase in the Medicare levy to fund a firearms buy-back program in response to the 1996 Port Arthur massacre (Ray, 2011; Taylor, 2013); a temporary levy to partially offset Australia's defence costs in East Timor, commencing on 1 July 2000 (Ray, 2011; Taylor, 2013); a domestic sugar levy introduced in 2003 to fund a support package for sugar farmers at a time of plummeting world sugar prices (The Australian, 2013); and a \$10 levy was imposed on plane tickets in October 2001 to help pay for workers' entitlements after Ansett's collapse (The Australian, 2013). More recently, levies were announced to fund a national disability insurance scheme (The Australian, 2013) and to help balance the budget (Commonwealth of Australia, 2014b).

they pocket some of the surplus from the levy" (AU Academic 1)). Similar comments were made by three Australian Academics, and by several practitioners. This view is supported by the fact that while the levy was portrayed as raising revenue in response to the Queensland floods, and was referred to by some policy makers as a hypothecated tax, section 81 of the Australian Constitution requires all revenues raised by the federal government to be included in the Consolidated Revenue Fund. Therefore, there was no separate accounting for the flood levy or restriction on how the funds could be spent, despite government announcements about how they planned to spend the funds raised.

Academics and practitioners saw the introduction of the levy as a political response (McKibbin, 2011). Specifically, they identified the Australian government commitment to returning to surplus as the key reason behind the levy: "the government did have a commitment to bring the budget back into surplus. I think, to be honest, that was probably driving a lot of their policies" (AU Practitioner 2). Similar comments were made by two other tax practitioners. At the senate hearing for the levy, the committee heard evidence from economists who suggested that there were other options available to the federal government for funding the rebuilding process, including cutting Australian government spending and increasing the fiscal deficit temporarily (The Senate Economics Legislation Committee, 2011, p.15). Despite these arguments, the Australian government remained committed to obtaining a budget surplus in 2012/2013 and to the introduction of the flood levy.

7.4.3.3. Recovery summary

As with the pre-disaster settings and immediate tax responses, the tax responses aimed at recovery from the Queensland floods also reflected characteristics of the Australian tax policy system prior to the disaster.

Tax policy makers emphasised equity as a key rationale for both the land swap changes and flood levy, in line with Australia's highly redistributive tax and transfer system. Officials argued that the land swap changes reflected vertical equity and ability to pay as no cash was received and taxpayers could be differentiated based on emotional suffering. Distributional concerns were also central to the design of the flood levy, with horizontal and vertical equity reflected in the broad application across Australia and exclusions for flood victims and those on low incomes. However, other policy makers were more critical, arguing that the land swap changes raised horizontal equity concerns and that significant

progressivity was difficult to achieve with a levy whose simple exemptions did not reflect ability to pay. There were also concerns about intertemporal equity.

Policy makers were also worried about the flood levy's influence on decision-making and economic activity. While officials had tried to manage these efficiency concerns through rate and base choices, other taxpayers were less convinced that this had been achieved.

While the land swap reliefs were intended to reduce barriers to decision making and compliance costs by avoiding multiple CGT calculations, market valuations and record reconstruction, the poor policy process (driven by a backlog of political announcements) had the opposite effect. Taxpayers were initially required to restructure their transactions to fit within pre-existing exemptions. Proposed changes were then cancelled after three years. Similarly, the lack of certainty, transparency and accountability around ad hoc levies, including official advice for taxpayers to engage in tax planning, meant the flood levy increased compliance costs.

Finally, policy makers highlighted that the land swap transactions would reduce future costs and revenue commitments. Revenue adequacy was also the reason given for the flood levy (although the size of funding required was unclear). Other policy makers were less convinced, arguing that the levy was short-term and small in terms of the Australian economy, although it did respond to the vertical fiscal imbalance between the federal and state governments. Instead, they highlighted the non-tax policy rationale behind the flood levy, including political commitments to a surplus which meant other options for funding recovery, like increased borrowing, were rejected.

7.5. Australian case study: summary findings

Chapter six provided an overview of the tax responses to the Queensland floods in line with the first aim of this research, to provide a narrative of responses to natural disasters as a useful resource for future tax policy makers. The second aim of this research was to assess how tax responses to natural disasters relate to the strength of the existing tax system. Prior to the Queensland floods, the Australian tax system was described by the OECD, the Henry Review (Henry et al., 2010) and other commentators, including tax policy makers interviewed for this research, as having a number of characteristics. These can also be seen in Australia's tax response to the Queensland floods.

Highly redistributive

The Australian tax and transfer system is seen as highly redistributive which is reflected in the administrative responses made to the Queensland floods. Administrative arrangements and discretions enable the tax system to respond to differences in ability to pay, allowing the ATO to alter its responses depending on the scale and impact of the natural disaster, with taxpayers segmented based on the extent of damage and disruption. However, tax policy makers generally acknowledged that such treatments contravene horizontal equity but were prepared to accept this for a short time.

While administrative responses were seen as broadly in line with the redistributive nature of the Australian tax system, the lack of horizontal and vertical equity in terms of how different emergency support payments in the immediate response period were treated for tax purposes was criticised by academics and practitioners. While the AGDRP is generally treated as exempt income, the tax treatment of other emergency support payments seems to fluctuate.

In terms of longer-term recovery, the proposed amendments to facilitate land swaps were supported by tax officials on the basis of horizontal equity, in that they would allow taxpayers to maintain their pre-CGT status. Other tax policy makers also saw the changes as consistent with vertical equity, as there was no cash being received and the tax treatment could also be differentiated on the basis of emotional suffering. However, tax practitioners raised horizontal equity concerns in relation to consistency with other CGT rollover provisions and the treatment of earlier disaster relief payments.

Similarly, the flood levy was designed by officials with horizontal and vertical equity in mind, reflected in the broad application across Australia and exclusions for flood victims and those on low incomes. The progressive structure ensured broad public support. However, tax practitioners and academics noted that there was limited ability to incorporate vertical equity and that the simple exemptions did not accurately reflect ability to pay. They were also worried about intertemporal equity, particularly for those with uneven income. This issue was acknowledged by officials who noted such individuals could structure their affairs to minimise the levy, advice contrary to taxing based on ability to pay, as well as raising compliance and administration cost issues.

Complex and inefficient

Tax policy makers have criticised the complex and inefficient nature of the Australian tax system. This weakness is also reflected in the Queensland floods responses. While tax policy makers were keen to talk about how tax exemptions and administrative responses improved equity in the tax system, there was no discussion about the efficiency impacts, perhaps because tax discretions have a temporary rather than permanent effect, there are only a limited number of specific exemptions and administrative responses operate only for a short time. The lack of emphasis on efficiency could also be because this is harder to conceptualise in simple terms and to measure empirically as compared to equity.

Tax policy makers did comment on the inefficiency of the high state insurance taxes which mean people pay more to achieve the same level of risk reduction. By encouraging underinsurance and non-insurance, insurance taxes may lead to an increase in Australian government expenditure in the event of a disaster.

In terms of the flood levy, tax officials managed their efficiency concerns by trading off the level of funding against the levy rate and base. However, other tax policy makers were less convinced that efficiency concerns had been addressed through the levy design. They were worried about its impact on economic activity and individual decision making, including charitable donations.

One area where tax policy makers were in agreement was the proposed land swap amendments, which were supported on the basis that they would remove tax barriers to economic decisions and thereby improve the efficiency of the tax system.

High compliance costs

A highly complex tax system also means increased compliance costs, a feature of both the Australian tax system generally and of the tax responses made to the Queensland floods.

In terms of the immediate response, compliance costs for administrative responses and tax exemptions were generally considered low. Speed of communication was seen as important, with the Commissioner authorised to make automated deferrals, although these were not provided in all cases.

While the land swap reliefs were intended to reduce compliance costs by avoiding multiple CGT calculations, market valuations and record reconstruction, the poor policy process

(driven by a backlog of political announcements) had the opposite effect. Taxpayers were initially required to restructure their transactions to fit within pre-existing exemptions. Proposed changes were then cancelled after three years.

Treasury officials also considered that the flood levy had been implemented in a way that made it easy to administer and comply with. This was disputed by the ATO, academics and practitioners. Academics estimated collection costs of up to 10 percent and were concerned that the small amount of funding generated did not justify the administration and compliance costs involved. They were also worried that similar levies could be introduced in response to other disasters, creating further uncertainty and cost for taxpayers. Both academics and practitioners were worried about lack of transparency, both in terms of the policy process and ongoing administrative arrangements. While tax officials defended the process, they did put in place new accountability arrangements for the flood levy, meaning additional administration costs. Other tax policy makers felt the administration and compliance costs associated with special disaster levies could be avoided by establishing a natural disaster fund.

Emphasis on revenue adequacy

Australia's tax system, like those of other developed countries, was built to meet the public revenue needs of major wars and the steadily expanding welfare state. Similarly, natural disasters can place huge cash demands on governments at short notice and policymakers must decide to finance emergency-related spending and balance-of-payments shortfalls, or to reduce or divert spending to cover immediate needs. However, finding sources of alternative revenue (as evidenced by the debate over state insurance taxes) can be difficult.

In terms of immediate responses, officials emphasised the need to balance the use of deferrals and other administrative responses against the impact on revenue collection. However, practitioners considered that, due to the relatively small number of people affected and localised nature of natural disasters, the tax system could afford to put more weight on assisting people without compromising revenue adequacy.

Similarly, fiscal costs were accepted in relation to tax exemptions for emergency support payments. In terms of exempting income support payments, despite the fact that such payments are normally taxable and a legislative amendment was required to effect a tax exemption, no fiscal cost was recorded in the explanatory note to the amending legislation.

One way that tax policy makers suggested managing future revenue impacts from natural disasters was to invest more up front. Both academics and practitioners cited evidence of the economic returns that can be expected from prevention and mitigation. However, despite these benefits, other than the proposed land swap relief, the traditional focus in Australia continues to be on responding to rather than preparing for natural disasters. As a result, assets repaired following the Queensland floods are likely to suffer damage from future events, meaning costs to future Australian governments.

As a result of the lack of upfront investment, funding for longer-term recovery was seen as a significant issue for the Queensland floods. The flood levy was justified as necessary to fund reconstruction, although officials were unclear about the quantum of funding required. Comments from practitioners on the need to raise revenue were mixed. Some agreed with the need for funding. However, they criticised the short-term nature of the levy, as rather than spreading the cost of reconstruction over time, Australia opted for a temporary revenue increase. Other practitioners were concerned that the levy gave a false impression of paying for the entire recovery effort and challenged whether the scale of the disaster justified a new source of Australian government funding. Subsequently, taxpayers have queried the amounts collected.

In contrast to officials, tax practitioners and academics raised the prospect of alternative methods of post-disaster financing. Increased borrowing was seen as advantageous because it smooths income, spreads risk and cost and does not directly reduce economic activity in the short term. Compared to increasing taxation, borrowing is also perhaps a less obvious method of financing. Academics did note that these advantages might not hold in the case of every disaster. However, with Australian government debt to GDP at around 20 percent, post-disaster borrowing was not seen as a risk.

Strong political influence and reliance on administrative practice

Some of the rationale for the types of tax responses made to the Queensland floods can be found in Australia's highly political tax policy process, lengthy delays in legislating tax changes and reliance on administrative practice.

While Australia was quick to announce land swap tax changes and ran a public consultation process, it was nearly three years after the floods that a further decision was taken to cancel these changes as part of addressing the backlog of announced but unlegislated tax measures. This legislation by press release, and subsequent back-tracking,

causes considerable uncertainty for taxpayers who have already suffered the emotional and financial effects of a large scale natural disaster (although the total number affected by the land swap scheme was small compared to those affected by the overall disaster).

The strong political influence on Australia's tax policy process can be seen in the options taken to fund recovery from the Queensland floods. There were a number of comments on the political rationale behind the current natural disaster funding arrangements. Academics and practitioners raised the political difficulty of being able to sell a long-term fund as compared to a one-off levy. However, they saw a natural disaster fund as helping to address a problem of political economy where governments make short-term investment decisions. Similarly, a number of non-tax policy reasons were given for the lack of investment in mitigation, including: funding, state and federal Budget processes and politics. There was significant discussion of the non-tax policy rationale behind the flood levy, including Australia's history of creating special levies, and the political commitment to a surplus.

As a result of the political pressure surrounding legislative responses, Australia relied on its strong administrative tax processes for responding to the Queensland floods, including tax discretions, information-sharing provisions, the provision of disaster response information, support for tax agents, extensions of time to lodge tax documents and pay taxes, and assistance with record reconstruction. From an administration perspective, the ATO puts significant emphasis on managing its response, both internally and as part of a coordinated response with other Australian government agencies and industry groups. This is supported by common systems, clearly agreed responsibilities and information-sharing arrangements.

While reliance on administrative arrangements avoids the need for a rushed legislative response and allows fast provision of support, thought also needs to be given to the impact of a natural disaster on tax authorities themselves. As well as damage to tax office buildings, important factors include the impact on staff, transport, whether tax officials have the ability to work remotely and whether work can be transferred to other offices. In terms of the Queensland floods, the impact on the ATO was fairly limited. This was possibly due to the type of natural disaster which allowed time to respond, and the fact that early lessons were applied straight away.

There was also no discussion of when to cease special administrative arrangements. However, as impacts can differ between taxpayers, it is important that there is clear communication about when special measures will come to an end and that there is sufficient time for taxpayers to then meet their obligations. Specific legislative responses are likely to have a set expiry date and may need to be rolled-over, leading to taxpayer uncertainty and extra administration and legislative costs. Administrative responses provided under a discretionary power have more flexibility, however, this does need to be applied in a consistent way.

From an administration perspective, the nature of some of the emergency support payments also provided considerable freedom. While this allowed the Australian government to deliver financial relief quickly, such payments are not subject to the same accountability measures as legislated payments and access to information about the payment is much more limited. As such, in 2013 a decision was made to allow for payments to be made in similar circumstances but under a legislative scheme. This may also help to address the inconsistent tax treatment between different emergency support and relief payments.

One area which has been subject to considerable political influence, and where following the Queensland floods, Australia may be moving closer to 'good' tax policy, is the state taxation of private insurance. The Victorian government replaced their fire services insurance levy in response to the 2009 Victorian Bushfires Royal Commission, and Queensland and NSW have also both now moved to a property based funding regime for emergency services (Emergency New South Wales, 2015; Furler, 2013).

8. Cross-Case Theme Analysis

8.1. Introduction

This chapter brings together findings from the case studies on the Canterbury earthquakes and Queensland floods and conducts a cross-case theme analysis for each research question. Yin (2012) argues that multiple-case designs are preferred over single-case studies as they provide a broader array of evidence, use the logic of replication and result in more powerful analytical conclusions than a single case. Multiple case-studies generally involve a small number of cases, with a detailed description of each case and its themes (within-case analysis), and a thematic analysis across the cases (Creswell, 2013; Yin, 2012).

8.2. Tax responses to natural disasters

The first aim of this research is descriptive - to provide a narrative of responses to natural disasters as a useful resource for tax policy makers. A descriptive case study presents an account of a phenomenon within its context, with the aim of reporting what happened (Yin, 2012). An analytic strategy for this type of case study involves developing a descriptive framework for the analysis, with ideas for the framework coming from an initial review of the literature (Yin, 2009). The data (narrative and words) is then systematically organised into hierarchical relationships, matrices or other arrays (Miles & Huberman, 1994 as cited in Yin, 2012). This is done by assembling word tables to display data from the individual cases and searching for patterns across them. Table 8.1 provides a comparison of tax responses to the Canterbury earthquakes and Queensland floods using Todd & Todd's (2011) three phase model (pre-disaster, disaster response, and post-disaster recovery).

Consistent with the summary of issues faced by individuals, firms and governments in Appendix C, tax responses in the pre-disaster phase covered both businesses and individuals. In the immediate response, tax changes were primarily targeted at individual relief, and in the recovery phase, New Zealand responses were mostly business-related as compared to a more mixed response in Australia. This split between business and individual responses could be an area for further investigation in subsequent research.

The similarities and differences at each phase of the disaster response are further discussed in the next section.

8.2.1. Pre-disaster - similarities and differences in the tax responses made

While both countries had pre-existing provisions (summarised in Appendix D), Australia had much more established policies and procedures for responding to natural disasters. Australia's exposure to frequent natural disasters led to the creation of centralised 24-hour business continuity arrangements by the ATO. These operate under the Commissioner's broad discretionary powers and use a standardised disaster response framework. Australia's ability to rely on broad discretionary powers avoids the need for rushed legislation, allowing a faster response to a disaster situation. It also recognises that different disasters have different impacts as the administrative framework allows the ATO to alter its responses depending on the scale and impact of the natural disaster. As such, it provides significant flexibility for responding to natural disasters, as well as having a clear framework to ensure consistency of treatment between different events.

Table 8.1 – Tax responses to the Canterbury earthquakes and Queensland floods

Canterbury Earthquakes	Queensland Floods		
Pre-disaster			
Ad hoc disaster tax provisions Ad hoc disaster tax provisions			
EQC	Disaster fund or insurance scheme		
Earthquake strengthening			
	Tax discretions		
	Insurance taxes		
Immediat	e response		
Administrative issues	Administrative issues		
Social policy responses			
Charitable tax issues	Charitable tax issues		
Employee welfare support			
Donated trading stock			
Extension of redundancy tax credit			
	Exemptions		
	er recovery		
Timing of insurance payments and business deductions			
Damaged assets			
Special tax rates			
Rollover relief	Land swap		
Employee allowances			
Earthquake levy and other financing	Flood levy		
	Other post-disaster financing		

In contrast, while the New Zealand tax authority did have discretions to allow late filing and remit penalties and interest, these were not applied under a consistent framework. New Zealand also lacked information-sharing discretions and special rules to allow taxpayers to vary their provisional tax payments, although they considered the latter unnecessary.

In terms of emergency support, while both countries provided tax relief for charitable donations, Australia also had tax exemptions for government and employer support.

Australia's rollover relief rules were more extensive, covering trading stock, depreciating assets and assets subject to CGT. In contrast, New Zealand's rollover relief provision was limited to donated livestock, buildings, aquaculture, farming, forestry improvements, and for goods not used in deriving income because they were destroyed or rendered useless. The New Zealand rules were ineffective in avoiding a tax liability as a result of a natural disaster in cases where structures were insured, as owners are taxable on insurance proceeds received, with depreciation deductions no longer available for replacement buildings.

Both countries had specific tax rules for farming businesses, including the ability to obtain early release of deposits from income spreading accounts. New Zealand also had a specific adverse event scheme which allows farmers who experience adverse events to carry income from forced livestock sales over to the next income year.

Australia had further provisions that allowed businesses who might be denied deductions as a result of becoming non-commercial operations following a disaster, to defer deductions and be granted relief from the non-commercial loss and deemed dividend anti-avoidance rules.⁷³

In both Australia and New Zealand, having a pre-existing set of tax rules avoids the need to rush through changes for each event and means that taxpayers do not need to worry about the tax consequences of a disaster. However, in both countries there were gaps and a lack of consistency in the rules as a result of these developing as ad hoc responses to earlier events, with these issues more pronounced in New Zealand. This is particularly because many of New Zealand's pre-disaster provisions were targeted at agricultural assets and businesses, whereas the earthquakes largely affected urban areas.

While Australia had established policies and procedures for responding to natural disasters, from a public finance perspective, Australia primarily employed a pay-as-you-go funding model for natural disasters. Australian government funding is focussed on emergency support and infrastructure replacement, with no national natural disaster insurance or funding scheme. Instead there is heavy reliance on private insurance, potentially in conflict with comparatively high levels of Australian taxes on insurance.

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⁷³ These are the non-commercial business rules. They are specific anti-avoidance provisions in the Australian Income Tax legislation which quarantine losses from some business activities unless certain bright line tests are met. There are no equivalent provisions in New Zealand. Refer Smith (2015).

In contrast New Zealand had a national insurance scheme (managed by EQC) as part of its pre-disaster tax settings. The scheme is one of the principal sources of finance for reconstruction and a key mitigation strategy. It provides coverage to the owners of privately insured residential properties for loss from natural disasters and is financed by a mandatory levy on home and contents insurance, collected by insurance companies.

Section 7.4.1.1 discusses the Australian state insurance taxes which formed part of the predisaster settings for the Queensland floods. Analysis of comments from policy makers against the standard economic principles of good tax policy highlighted that, while a significant source of state revenue, these taxes were criticised for being highly inefficient and encouraging under-insurance and non-insurance leading to unequitable results. In response, Victoria replace their fire services levy in 2009 and Queensland and NSW have now moved to a property based funding regime for emergency services.

In contrast, New Zealand continues to fund its EQC insurance scheme with an insurance based levy. Section 4.3.1.2 discusses the role of EQC as part of New Zealand's predisaster settings. Section 5.4.1.1 analyses comments from policy makers about the EQC fund against the standard economic principles of good tax policy. These were primarily focussed on the contribution the scheme makes to funding recovery and the corrective role the scheme is seen as playing. Policy makers did raise some efficiency concerns with the fund as a result of its hypothecated nature, although it was not seen as having a significant impact on the insurance market. This is supported by statistics on disaster insurance, with EQC appearing to perform a valuable role in helping support unusually high rates of catastrophe insurance among homeowners (insurance coverage for over 70 percent of losses incurred), rather than discouraging insurance from being taken out (New Zealand Treasury, 2015b). In terms of equity concerns, some policy makers commented on whether the scheme should move from a benefit based model (where the levy is charged on property owners who take out private insurance) to a broader-based funding model which takes account of ability to pay given the general risk of natural disasters in New Zealand.

This contrast in the view of policy makers between two forms of insurance taxation is interesting, particularly when both have relatively high levels of taxation on insurance premiums. In Australia, prior to recent changes, taxes in NSW and Victoria, excluding GST, were 30 percent of insurance premiums (Henry et al., 2010). In New Zealand, taxes on insurance premiums are approximately 40 percent, including GST (AMI Insurance,

2016), although this amount has risen significantly in recent years with increases in both GST and the EQC levy. Possible reasons for the differing views of policy makers in New Zealand and Australia could be:

- that the EQC benefit principle model means that only those that take out insurance and pay the levy receive disaster coverage, as compared to insurance levies for emergency services in Australia;
- that until recently insurance rates were lower in New Zealand, meaning less concern with efficiency risk;
- there is less government support provided post-disaster in New Zealand which could mean homeowners place more reliance on insurance despite the EQC levy; or
- the hypothecated nature of the EQC levy could potentially alter how taxpayers view this payment. Rather than viewed negatively as a contribution to government revenues, like state insurance taxes in Australia, it could be seen positively as contributing to a welfare fund available to support citizens post-disaster.

This could be an issue explored in future research.

Both a national insurance scheme and private insurance are methods of spreading the cost of post-event funding. An alternative or complementary strategy is to invest upfront in mitigation to reduce the costs and tax revenue required to fund future disaster responses. However, despite these benefits, the tax responses in both countries were focused on responding to rather than preparing for natural disasters. While betterment provisions are included in the NDRRA in Australia, these have not been widely accessed, due to the cost of undertaking mitigation and lack of funding, a position driven by the pressure to balance state and federal budgets and political influence.

Similarly in New Zealand the importance of mitigation has been recognised, with policy makers commenting on the risk of unreinforced masonry buildings. However, while predisaster tax responses can include incentivising property owners to invest in mitigation, such as earthquake strengthening, since 1 April 2011, no tax deduction has generally been available in New Zealand for such expenditure. As such, there is little tax incentive to strengthen a building, unless taxpayers are able to recharacterise the expenditure as a repair.

8.2.2. Immediate response - similarities and differences in the tax responses made

Reflecting the comparative lack of pre-disaster tax settings in New Zealand, a large number of changes were made in the period immediately after the Canterbury earthquakes. Part of the immediate response was establishing New Zealand government support arrangements for employees and employers, as unlike Australia's pre-existing financial assistance arrangements, New Zealand's arrangements were limited.

From a tax policy perspective, the provision of financial assistance raises the question of whether support payments should be treated as exempt income. In Australia the tax treatment of relief arrangements varies. The AGDRP is generally treated as exempt income on the basis that it is a one-off payment to help individuals who have suffered as a result of a natural disaster. In contrast, income support by way of grants and relief payments will generally be taxable. However, in respect of the Queensland floods, NDRRA emergency grants, NDRRA clean up and recovery grants and the DIRS were treated as non-taxable. Similar tax changes were made in New Zealand to support the earthquake support package, including the creation of special information-sharing powers, excluding the ESS from GST and exempting the Earthquake Job Loss Cover from income tax.

The tax response to the Canterbury earthquakes also involved changes to tax and social policy regimes administered by the IRD, including amendments to ensure that entitlements to various social policy benefits were not affected by relief payments, and expanding the KiwiSaver financial hardship definition so that members could withdraw funds early. New Zealand also amended the tax system to provide tax relief for employer welfare contributions, businesses that donated stock, and lump sum redundancy payments. Such changes were not required in Australia due to pre-existing provisions. However, unlike the general disaster relief provisions in Australia for employer welfare and donated trading stock, the New Zealand changes were restricted to the Canterbury earthquakes and time limited. Similarly, the extension of the redundancy tax credit for a set period was described as special Canterbury earthquake relief.

As well as government and business support, the immediate tax response in both countries included actions to support charitable relief. In Australia, the Queensland floods were declared to be a disaster, meaning donations to new disaster relief funds qualified for tax deductions, and payments received from these charitable funds were not subject to tax. In New Zealand, while charities are not required to establish new funds for each disaster, the

tax status of new charitable vehicles still needed to be determined. As a result supporting charitable relief in both countries involved significant administrative effort. Australia also made a legislative change to support charitable bodies involved in rebuilding activities. Following the experience in Queensland, they extended the common law definition of charity to cover the rebuilding of not-for-profit community assets. In New Zealand, tax policy changes to support general charitable efforts were considered but did not proceed. However, the tax system was used to incentivise business support, in the form of employer welfare support and donations of trading stock discussed above.

The final aspect of the immediate response in both countries was significant administrative tax responses in the form of provision of information, tax and payment extensions, assistance with record reconstruction and participation in cross-government relief efforts.

8.2.2.1. Provision of information

Both the ATO in Australia and the IRD in New Zealand provided disaster response information, including:

- public announcements using a range of communication channels, including website information;
- an emergency information line;
- deployment of staff at welfare centres;
- free seminars and presentations about complying with tax requirements; and
- tax agent liaison officers to support businesses and maintain compliance behaviour.

In New Zealand, the IRD made particular use of its close relationship with the professional accounting body to provide support to their members and the wider community. In Australia, perhaps reflecting the greater population and number of tax agents, there was separate call centre support for affected people and a dedicated natural disaster line for tax agents. The ATO was also more proactive in clarifying the tax treatment around common issues such as donations, grants and CGT.

8.2.2.2. Payment and filing extensions

In Australia, tax payment and filing extensions were automatically made under the existing business continuity arrangements. State and local authorities also announced temporary relief from the payment of taxes and lodgement of returns. In New Zealand, while the

IRD's Emergency Response Committee was called together for the first time, there was less structure to the response. The existing law provided some discretion for dealing with natural disasters, and the IRD used these powers to establish payment plans for overdue tax, remit penalties, seek adjournments for tax disputes and put debt, late return letters and tax audits on hold. However, officials felt that the existing discretions were insufficient and temporary earthquake Orders were passed to provide the IRD with additional powers. These included powers to remit UOMI until 1 October 2012, if taxpayers were physically prevented from making payments, and the discretion to grant extensions of any time limit until 1 October 2012.

8.2.2.3. Assistance with record reconstruction

In the initial period following both disasters one of the key issues for businesses was access to essential accounting records. Both the ATO and the IRD responded by granting leniency for businesses that could not access their accounting systems, providing assistance to help recreate records, and allowed the use of estimates when lost records could not be recreated or duplicated.

8.2.2.4. Participation in cross-government relief efforts

In both countries the tax authorities were part of cross-government relief efforts. In Australia, the tax office worked as part of a coordinated response, with ATO staff working on call centres and processing emergency claims. This was supported by common systems, strong connections to the community, clearly agreed responsibilities, and natural disaster information-sharing powers. Similarly, in New Zealand, the IRD worked closely with other New Zealand government departments, co-locating with MSD, and sharing information with other agencies to ensure that social assistance and other New Zealand government services could continue to be delivered in a timely way. However, unlike Australia, there were no common systems or existing arrangements to allow for the sharing of information. Therefore, another special earthquake Order was passed to allow the IRD to share information with other New Zealand government agencies from 24 February 2011 to 31 October 2012.

8.2.3. Post-disaster recovery - similarities and differences in the tax responses made

As with the immediate response period, New Zealand made a large number of changes to support post-disaster recovery which similarly reflected the comparative lack of predisaster tax settings. Post-disaster recovery changes included amendments in relation to the timing and taxation of revenue amounts, the timing of capital expenditure, and tax changes to alter the capital revenue boundary, ⁷⁴ as summarised in Appendix E. There were three approaches taken in respect of these changes. Generic changes were made to treat amounts as taxable, such as reinsurance payments and capital amounts received for damaged assets. Where changes related to deferring deductions or income in a taxpayer's favour or capping or excluding the taxation of capital amounts, amendments were time-limited and Canterbury specific. Finally, there were a limited number of generic changes to clarify when income should be recognised in line with normal accrual accounting rules or common sense as to when amounts would be known.

Such changes were not required in Australia following the Queensland floods. This is because timing issues for revenue expenditure had previously been addressed by earlier generic tax changes, for example, the rules that normally apply to defer deductions for non-commercial operations do not apply where a business has been affected by a natural disaster. With respect to the timing or taxation of capital expenditure, Australia's comprehensive CGT also meant it did not have the same need to legislate for damaged assets or to correct an unclear capital revenue boundary. However, despite its broad capital base, Australia did propose additional CGT tax reliefs following the Queensland floods to deal with post-disaster mitigation (voluntary land-swaps). However, no tax legislation was forthcoming, and in December 2013 the Australian government announced that the relief would not proceed. From a state tax perspective (an issue not faced in New Zealand), there were tax responses in connection with the land swap transactions. However, rather than a legislative exemption, state officials provided ex-gratia relief utilising an existing power to cover transfer duty.

Section 7.4.3.1 discusses the Australian tax changes associated with the land swap transaction. Analysis of comments against the standard economic principles of good tax policy highlighted that policy makers saw the changes as efficient, in that they would remove barriers to economic decisions. They also thought that providing tax relief for land swap transactions would reduce risk and future taxation needed to fund post-disaster support. In comparison, New Zealand's rollover relief was restricted to structures rebuilt in Canterbury, as discussed in section 5.4.3.1.

⁷⁴ The terms capital, revenue and the capital revenue boundary refer to a legal distinction made for income tax purposes between amounts that are taxable or deductible for tax purposes (revenue income and expenditure) and amounts that are not taxable or immediately deductible for tax purposes (capital receipts or expenditure) (OECD, 2000).

The contrast between two forms of recovery tax changes is interesting, with one aimed at reducing risk and cost from further events, while the other actively worked against risk diversification. This contrast was picked up in comments by policy makers, with New Zealand tax policy makers raising efficiency concerns about the relief. Officials initially did not support the tax incentive as the proposal ran counter to New Zealand's tax policy framework which generally discourages tax preferences. Tax practitioners were also worried about incentivising behaviour contrary to the accepted investment strategy of risk diversification. Despite these concerns, the targeted relief did proceed, with efficiency issues overruled by equity considerations and non-tax policy drivers, such as a political influence and broader government objectives with respect to rebuilding Christchurch.

As well as tax changes to ensure the appropriate treatment of income and expenses (primarily necessary in New Zealand due to the limited pre-existing provisions for responding to natural disasters), both countries were also forced to consider funding options for recovery. New Zealand's approach to funding shocks is to run a strong fiscal position with low Crown debt levels which allows the cost of an event to be absorbed without unduly affecting core public services or the wider economy. However, the Canterbury earthquakes had a devastating impact on New Zealand's fiscal position. To a certain extent, pressure was mitigated by New Zealand's high levels of public (EQC) and private insurance. Despite this, in the aftermath of the disaster there were calls to introduce an earthquake levy to help fund recovery. In response, officials provided advice on using time-limited disaster taxes, including an income tax levy, a payroll tax, a central government levy on ratepayers, and a special increase in the EQC levy. However, the New Zealand government elected to rely on existing taxes and instead increase debt. This was combined with partial asset sales, spending cuts, and transferring costs onto local government. While increased borrowing spreads the burden of recovery over time, concerns about the level of government debt led to New Zealand's long-term sovereign rating being downgraded in early 2012.

In contrast, the Australian government, which did not have a disaster fund or insurance scheme, announced that it would impose a one-year flood levy on individuals to help fund re-building. Other funding was raised through the sale of assets, delaying major infrastructure projects and spending cuts (primarily carbon abatement programmes). While tax policy makers were supportive of reducing Australian government expenditure, they raised concerns about the particular programmes that had been targeted given the links to

natural disasters. Tax practitioners and academics also supported borrowing as an alternative to a short-term levy, because it smooths income, spreads risk, allocates the cost of rebuilding over time, and is perhaps a less obvious and a lower cost method of financing. In contrast, cutting spending and raising taxes worsens economic activity in the short term. Policy makers also questioned the appropriate split of costs between federal and state disaster funding, with the NDRRA arrangements criticised for being administratively complex, out-of-date, and creating an expectation of support rather than incentivising mitigation. Borrowing was also seen as more consistent with intertemporal equity, as while victims of the Queensland floods were excluded from the levy (with no assessment of ability to pay) taxpayers who may well be future victims of natural disasters were required to contribute. This would also be a reason for not introducing an earthquake levy in New Zealand, although it was not an issue commented on by tax policy makers.

Finally, there is the question of tax incentives to promote recovery. In New Zealand, the normal response to natural disasters is to operate within existing tax laws and avoid tax concessions. However, following the Canterbury earthquakes, tax changes to fix timing issues and alter the capital revenue boundary were considered insufficient to incentivise recovery and thought was given to ways the tax system could be used to promote recovery. Several taxpayers advocated reducing or deferring GST, and the New Zealand government contemplated reducing the company tax rate for Canterbury businesses and allowing the carry back and cashing out of losses. Another alternative was to give immediate or accelerated tax deductions for capital expenditure as an incentive to rebuild in Canterbury. While this was a scalable option, it would still be expensive and require a range of design issues to be resolved. Therefore, on balance, officials considered that it would be preferable to provide support for reconstruction through other measures, such as optional Canterbury rollover relief.

Tax incentives were also considered at an individual employee level. Calls were made to exempt foreign insurance assessors working in New Zealand. However, officials were concerned about the precedent this would set for other foreign rebuild workers. Instead, the New Zealand government utilised administrative measures and legislated a special discretion which allowed the IRD to waive interest for any foreign workers in the first year following the earthquakes. The New Zealand government also provided tax concessions for employer-provided accommodation for rebuild workers.

In contrast to the tax incentives provided in New Zealand, no such measures were proposed or enacted in Australia. This is due to:

- Australia's comprehensive CGT which already incorporates rollover relief provisions;
- the extensive range of Australian government disaster recovery grants available for individuals and businesses which reduce pressure for tax incentives to aid recovery;
 and
- existing rules for employee accommodation which only tax these benefits where they
 are the employee's usual place of residence, and also exempt housing in remote
 areas.

8.3. How tax responses related to the strength of the existing tax policy system

The second aim of this research is to assess how tax responses to natural disasters relate to the strength of the existing tax policy system. While noting the limitations of a qualitative case study methodology outlined in Chapter two, this aspect of the research has an explanatory purpose – to present data on a cause-effect relationship and explain how or why events happened (Yin, 2012). The next section therefore outlines the expected relationship between the strength of the existing tax policy framework and policy process and the types of tax responses made to natural disasters. This is then compared to the findings from the Canterbury earthquake and Queensland flood case studies with a brief examination of three possible rival explanations. This approach follows best practice for conducting multiple explanatory case studies (Mills et al., 2010).

8.3.1. Predicted findings

In assessing how tax responses to natural disasters relate to the strength of the existing tax policy system, the predicted findings from this comparative case study were that jurisdictions with a stronger existing tax policy system, as measured by OECD, World Bank and other expert reviews, would have tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy.

8.3.2. Comparison against empirically based patterns

The next section compares the findings from the Canterbury earthquake and Queensland flood case studies against the pattern of predicted findings.

Prior to the Christchurch earthquakes, the New Zealand tax system was described by the OECD, the Tax Working Group and other commentators as having one of the best and most efficient designs in the OECD, with a simple, consistent and coherent policy framework, and a structured and transparent policy process, driven by policy makers and BBLR. PricewaterhouseCoopers and the World Bank ranked the New Zealand tax system as 8th out of 34 OECD countries in terms of taxes borne and the burden of tax compliance. In comparison, the Australian tax system was ranked 16th out of 34 OECD countries and described as highly redistributive but complex and inefficient, having high compliance costs, an emphasis on revenue adequacy, strong political influence and lengthy delays in legislating tax changes, resulting in reliance on administrative practice.

Tables 8.2 and 8.3 summarise each of the selected disaster responses nodes for the Canterbury earthquakes and Queensland floods in terms of alignment with the standard tax policy principles, as per the analysis in Chapters Five and Seven. Tables 8.4 and 8.5 then compare the characteristics of the existing tax policy systems in New Zealand and Australia and characteristics of the selected disaster responses. Based on this systematic comparison, conclusions are drawn regarding whether the alignment or non-alignment to standard tax policy principles and the existing policy system is important, positive, necessary, and should be repeated in the future. The analysis highlights the strengths, risks and likely weaknesses of existing systems for disaster tax policy responses.

Table 8.2 – Canterbury earthquake responses - alignment with the principles of good tax policy

Response	Aligned with standard tax policy principles	Not aligned with standard tax policy principles
EQC	 Revenue adequacy – EQC reduces the need for other post-disaster funding. Equity – Part of social policy which helps soften impact of BBLR. Based on the benefit principle but some argue should move to ability to pay scheme. Efficiency – plays a corrective role which helps address market failures such as non-availability of insurance and consumer myopia. 	 Revenue adequacy – Government exposed to claims in excess of fund. Efficiency – Hypothecated fund interferes with the allocation of revenue but does not materially affect the market. Compliance and administration costs – concerns about capacity to deal with a major disaster. Political influence – risk of fund being used for other purposes.
Earthquake strengthening	 Revenue adequacy – Large fiscal cost associated with tax response to encourage earthquake strengthening (although options for mitigating this). Efficiency – The current treatment is appropriate as gains are not currently taxable. A corrective tax would give rise to unintended distortions, recharacterisation, increase costs for other taxpayers and be ineffective for those outside the system. 	 Revenue adequacy – Risk that policy decision being made on fiscal grounds alone, with the current lack of deductions linked to previous drive for revenue neutral reforms. Efficiency – A comprehensive definition of taxable income should recognise earthquake strengthening costs. A corrective tax is required to address externalities including the public benefits from strengthening and preserving heritage buildings. Equity – Concerns about lack of horizontal equity between different types of assets and where an asset is destroyed in an earthquake versus preventative expenditure. Current treatment also criticised as inconsistent with transparency (as normal business expenses are not currently deductible) and transitional fairness given greater enforcement of building standards. Compliance and administration costs – Lack of certainty as a result of case law, an unclear capital-revenue boundary and a lack of guidance for taxpayers likely to result in recharacterisation leading to higher costs. Tax deduction likely to have lower costs than grants. Wider government considerations outside the tax system.
Admin issues	 Equity – Policy rationale behind administrative responses as unreasonable to penalise taxpayers or deny benefits as a result of being affected by the earthquakes. However, officials were keen to limit relief by using a discretion rather than blanket exemption. Revenue adequacy – Trade-off with equity. Decisions took into account IRD's revenue collection role, particularly given drop in tax filing and payments and increase in tax debt. Balance between leniency in the survival phase and returning to normal practices, including tough approach on avoidance. Compliance and administration costs – Less emphasis placed on this although some aspects seen as important, such as convenience in terms of ability to comply (particularly where access to records was an issue), speed of response and certainty with respect to confirming relief. 	 Equity – Horizontal and vertical equity concerns about IRD's ability to apply discretion due to apparent absence of a framework for applying concessions. Also disagreement about how long special treatment was required. Concerns about short transition period once special treatment ended. Compliance and administration costs – Responses led to an increase in compliance and administration costs as an application was required. Earthquakes had a significant impact on IRD operations with a significant drop in productivity putting resources under pressure at the same time that there was increasing demand for local support. Need for a special response may have been driven by New Zealand's tough compliance regime. Need to plan and prepare for future events to avoid unsanctioned administrative responses and administrative hassle. Efficiency – Much less focus on this although negative incentives of taking a lenient approach with respect to record keeping was raised. Other drivers outside the standard policy principles, including: the need to support collaboration between agencies not permitted by existing information sharing rules, political pressure to support the disaster response and declining interest from officials in the disaster response.
Employer welfare support	 Efficiency – Support should remain taxable in line with BBLR. Also argued that support should be excluded because not in the nature of income, employers had suffered a loss of wealth and the context changed the nature of payments. Corrective tax to encourage/not discourage employer support. Equity – Exemption consistent with ability to pay principle and exempt Job Loss Subsidy. Addresses horizontal equity concerns with respect to treatment of support on business premises and elsewhere, support to employees and non-employees and support in response to both the September 2010 and February 2011 earthquakes. Limited time period consistent with welfare benefits. Revenue adequacy – Decisions took into account fiscal costs. Concerns with tax planning managed by short exemption period. Compliance and administration costs – Exemption eventually supported due to concerns over lack of certainty for employers regarding benefits provided and to avoid imposing tax after-the-fact, prevent costs associated with disputes and ensure employers could quickly finalise returns. 	 Equity – Contrary to vertical equity as those with generous employers benefit. Horizontal equity concerns with respect to the inconsistent treatment between disasters, initial and later support, Canterbury employees and those elsewhere (justified on the basis of scale) and taxable Earthquake Support Subsidy. Should be addressed by a general exemption. Revenue adequacy – Concerns about undue focus on avoidance. Compliance and administration costs – may increase costs if taxpayers reverse their initially correct tax treatment. Other drivers outside the standard policy principles, including: the need to take a broader perspective, impact of an abnormal situation, need to respond quickly and political pressure. Desire for a fast response impacted evaluation and policy process.

Rollover relief	 Equity – Vertical equity seen as justification for providing an alternative treatment for those aff by a disaster, with the clawback and revenue account property rules seen as inequitable in a di context. Other options such as regional tax cuts and carry back of losses less likely to focus on affected. Horizontal equity seen as important in the design of the relief in terms of which assapplied to and extending to the earlier September 2010 earthquake. Transitional fairness was driver. Did not want to impose tax for events outside taxpayers' control resulting in a unexpected revenue stream as a result of the disaster. Revenue adequacy – Fiscal concerns led to the rejection of a number of other options for provassistance, such as tax deductions for new capital investment, regional tax rates and a good discretion to eliminate windfall gains. There was also a focus on restricting tax planning opportution which may have had the opposite effect. Compliance and administration costs – certainty (through speed of response at the cost of an and consultation), convenience (avoiding the need for a tax payment on a windfall gain simplicity (e.g. broad definition of replacement assets) considered in designing the relief. options for providing relief such as carrying back losses and reduced tax rates not seen as simple 	other events beyond a taxpayer's control and other windfall gains. Officials happy to accept a lack of horizontal equity in the short-term and where it only affected a limited number of taxpayers. Geographically targeted relief would not fully address vertical equity concerns and would raise horizontal equity issues. • Efficiency – Incentivising rebuilding ran counter to BBLR with concerns about targeting, unintended distortions, boundary issues and encouraging businesses to remain even when more efficient to relocate and counter to risk diversification. However, prepared to accept on the basis that it was a relief provision, removed an obstacle to reconstruction, was location specific and a deliberate (although ineffective) incentive in response to the disaster. • Compliance and administration costs – Extra compliance costs incurred from lack of simplicity in legislation design and notification and documentation requirements, mistakes in the legislation and lack of guidance, and confusion with amendments spread over multiple acts. May have been better to follow the standard policy process. • Other drivers outside the standard policy principles: shield against other less palatable responses, political influence, broader government objectives, and response to an extraordinary event.
Earthquake levy and other financing	 Revenue adequacy – a number of options for a temporary levy considered but not supported of concerns about speed of implementation, appropriating tax bases in place for other purposes are inability to raise sufficient revenue. Policy makers also queried the need to raise additional reduce to high levels of public and private insurance, New Zealand's relatively strong fiscal pospossible options for reducing government expenditure, partial asset sales, and the ability to pacosts to local government. Ultimately government chose to rely on these other sources of funding may not be able to do the same in the future. Contrast to views about local government furoptions. 	from this would set a pattern for future levies. However, some policy makers thought political influence did play a role in respect of reluctance to increase taxes so soon after recent reforms to lower taxes.
	 Efficiency – Could reduce pressure on New Zealand's credit rating and therefore lower borrocosts. However, such levies are seen as inefficient as they are counter to tax smoothing, on negative incentives for work and employment, savings and investment, are potentially incons with BBLR, harmful to economic growth and if ring-fenced, would suffer same problems as hypothecated taxes. Negative impacts could be minimised if levy seen as truly temporary by usity option that was simple to introduce and repeal. Equity – Some argued for regional taxation on the basis of the benefit principle (new infrastrum and local property repairs). However, in general policy makers favoured that any levy was base ability to pay (exclude those affected by disaster, use a progressive rate structure). This exceptable is a property option of the property options such as central government levy on rates. Temporary levies with narrow were also seen as inconsistent with horizontal equity. Intergenerational equity was also seen issue with temporary levies. 	reate stent other tog an ecture do on tog and ecture do sases as an ecture tog and ec
	 Compliance and administration costs – to minimise costs temporary levies need to be simple quick to implement and reverse. This restricted certain options such as a payroll levy. A broad levy would affect more taxpayers and therefore have greater compliance costs. Applicati companies given the recent tax rate reduction was a particular complication. 	ased

Table 8.3 – Queensland flood responses - alignment with the principles of good tax policy

Response	Aligned with standard tax policy principles	Not aligned with standard tax policy principles		
Insurance taxes	 Revenue adequacy – Significant source of revenue for state governments. Any consideration of their removal would need to be made in the context of broader state level fiscal reform. Compliance and administration costs – One of the attractions of insurance taxes is their general ease of administration. 	 Efficiency – Insurance taxes can impose significant costs and are one of the least efficient taxes available to states. Can encourage under-insurance and non-insurance. Equity – Insurance taxes can be inequitable. Rates of non-insurance generally decline with higher incomes, and non-insurance can also be higher for certain demographic groups. One option for increasing equity might be to consistently apply cost recovery. Other drivers outside the standard policy principles: political rationale behind the taxation of insurance. 		
Disaster fund or insurance scheme	 Revenue adequacy – Evidence of economic returns from investing in mitigation. However, current policy and funding frameworks reinforce the traditional emphasis on response and recovery rather than mitigation. In response, tax practitioners and academics have advocated for an Australian government insurance scheme or disaster fund to pay for the costs of future disasters on the grounds of revenue adequacy. No discussion about how the required funds would be raised. Efficiency – No discussion about using tax incentives. Instead, mitigation investment decisions have been influenced by market pressure. Compliance and administration costs – Policy makers also argued for an Australian government insurance scheme or disaster fund on the grounds that it would reduce the need for one-off levies and other post-event funding arrangements, thereby increasing certainty, both for the Australian government (reduced administration costs) and for taxpayers. 	 Revenue adequacy – Risk that once reserves build up they will be used for another purpose. Efficiency – Money in a special purpose fund may not be the most efficient use of the funds at the time. Insurance can encourage people to live in high-risk areas and premiums may only be designed to cover 'average' levels of risk. Equity – No discussion of the distributional or intergenerational impacts of all current taxpayers being required to fund such as scheme. Other drivers outside the standard policy principles: political difficulty of being able to sell a long-term fund as compared to a one-off levy leading to short-term investment decisions. 		
Admin issues	 Equity – Identified as the tax policy rationale for administrative responses made to the Queensland floods. Revenue adequacy – The principle traded-off in determining how far to go with administrative responses to a natural disaster. However, the localised nature of natural disasters seen as allowing the ATO to act without putting revenue at risk. Compliance and administration costs – Minimising compliance costs for affected taxpayers was a strong justification, with automated deferrals. From an administration cost (and equity) perspective, the ATO put significant emphasis on providing an ordered response, following an internal policy for providing support during disaster events. In terms of designing how responses, thought needs to be given to the impact of a natural disaster on tax authorities themselves, including damage to tax office buildings, impact on staff, transport, whether tax officials have the ability to work remotely or work can be transferred to other offices. In respect of the Queensland floods, the impact on the ATO was fairly limited due to the type of disaster which allowed time to respond and the fact that lessons were applied straight away. It is important that there is clear communication about when special measures will come to an end and that there is sufficient time for taxpayers to then meet their obligations. Specific legislative responses are likely to have a set expiry date and may need to be rolled-over, leading to taxpayer uncertainty and extra administration and legislative costs. Administrative responses provided under a discretionary power have more flexibility. However, such flexibility does need to be applied in a consistent way. 	 Equity – Such treatments contravene horizontal equity. Treatment justified on the basis of needing to segment taxpayers, perhaps acknowledging ability to pay or vertical equity, on the basis of: the extent of property damage and loss, the impact on business premises and infrastructure, the extent of damage to productive land, significant or extended closures or denial of access, the impact to utilities, transport and telecommunications, the likelihood of bulk deferral requests and number of fatalities. In applying or accepting differentiated responses, any lack of horizontal equity is only acceptable in the short-term. Compliance and administration costs – Automatic relief was not provided in all cases or in relation to record recreation. State authorities also required taxpayers to take action even for payment or lodgement deferrals. Efficiency – Not a focus. Other drivers outside the standard policy principles: Some tax academics considered that the standard tax policy principles did not apply to an emergency situation. 		
Exemptions	 Revenue adequacy – The fiscal impact of making tax exemptions for emergency support and assistance payments was a consideration for tax policy makers, although limited information was provided about actual impact. Compliance and administration costs – Legislative documents commented on the compliance cost implications of exemptions. In general, these were considered to be low. Efficiency – Not a focus, potentially because the exemptions were targeted and in place for only a short time. 	 Equity – Consistency and horizontal equity considered important in the treatment of emergency assistance payments. However, there appears to be a lack of consistency in terms of how different emergency support payments are treated for tax purposes. While the AGDRP is generally treated as exempt income, the tax treatment of other emergency support payments seems to fluctuate. Compliance and administration costs – The nature of some of the emergency support payments provided considerable freedom, allowing the Australian government to deliver financial relief at short notice. However, their flexibility also made them difficult to administer. The payments were also not subject to the accountability and reporting measures that apply to legislated payments. As such, in 2013 a decision was made to allow for payments to be made in similar circumstances but under a legislative scheme. 		

Land swap Efficiency - Tax officials argued that the proposed CGT changes would remove tax barriers to Equity - Tax practitioners raised horizontal equity concerns, including lack of consistency with other economic decisions. CGT rollovers, earlier disaster relief payments and tax exemptions provided for other Australian Equity – Tax officials also supported the proposed changes on the basis of equity, in that they government support payments. would allow taxpayers to maintain their pre-CGT status. Other tax policy makers saw the changes Compliance and administration costs – The process around the changes led to uncertainty. Initially, as consistent with vertical equity and recognising ability to pay, as there was no cash being advisors tried to apply the existing legislation. However, following a negative response from the ATO, the received. The tax treatment could also be differentiated on the basis of emotional suffering. land swap transactions were restructured. Despite this, officials felt pressure to make a legislative change. Revenue adequacy – Providing tax relief for land swap transactions would mean less post-disaster Subsequently, the Australian government announced proposed legislative changes. Due to a significant backlog of tax announcements awaiting legislation, the proposed changes were not enacted into law and support in the future, reducing the amount of taxation that needs to be raised over time. taxpayers entering land swap transactions were reliant on an administrative agreement with the ATO. Tax Compliance and administration costs - Tax officials considered that the proposed CGT changes would reduce compliance costs for taxpavers. Without the proposed changes, taxpavers officials saw the administrative process as providing flexibility to respond immediately which also took the pressure off needing to speed up the legislative process. However, it created uncertainty and risk for participating in a land swap program might face multiple taxable events and the need to apportion taxpayers, exacerbated by the fact that in December 2013 it was announced that the CGT relief would not their cost base, obtain market valuations and meet record keeping requirements, by finding or proceed. reconstructing records, for more than one CGT calculation. Other drivers outside the standard policy principles: Part of a wider government response not subject to normal tax policy principles. Flood levy Revenue adequacy - Justified as necessary to fund reconstruction with officials stressing the Revenue adequacy - While other policy makers acknowledged the macroeconomic constraints, they importance of having a confirmed source of funding early in the recovery process. However, while rejected this as a rationale for imposing a levy. They criticised the short-term nature of the levy, were officials were clear about the size of the disaster, they were less certain about the quantum of concerned that it gave a false impression of paying for the entire recovery effort and challenged whether the scale of the disaster justified a new source of government funding. funding required. Despite this, rather than spreading the cost of reconstruction over time, Australia opted for a temporary revenue increase. As well as the scale of the disaster, officials defended the Efficiency – Tax officials were concerned about the efficiency of the levy, trading off the level of funding levy on the basis that it was necessary to main fiscal credibility because of wider macroeconomic against the levy rate and choice of base. Other tax policy makers were less convinced that efficiency conditions at the time of the floods, which were seen as more challenging than those for earlier concerns had been managed. They were worried about the restrictions of a hypothecated tax (even though natural disasters where levies were not imposed. Some policy makers agreed with the additional it was not such), and criticised the efficiency of the levy as a funding source. Specifically, they were need for funding, with the levy seen as a response to the vertical tax imbalance between the states worried about its impact, as taxation further reduces private demand and therefore further reduces and federal government. economic activity, and influence on individual decision making. One aspect that was subject to Equity -Natural disasters raise the issue of ability to pay. In response, officials designed the levy considerable comment was the interaction (and potential conflict) between the Australian government with horizontal and vertical equity in mind, broadly sharing the burden of taxation across Australia, subsidising donations through the tax system and introducing a flood levy, which was seen as working while excluding flood victims and those on low incomes. The progressive structure ensured broad against the provision of charitable relief. Tax policy makers were also concerned about the links between public support for the levy. the levy, NDRRA and state insurance. They were critical of taxpayers having to pay for the fact that the Compliance and administration costs – While Treasury officials noted that there were simpler Queensland government had relied on the NDRRA and not taken adequate insurance. In response, as a options available they generally thought that the levy had been implemented in a way that made it condition of approving the levy, the federal government amended the NDRRA to require states to insure their own losses. easy to administer and comply with. Equity - Tax practitioners and academics felt there was limited ability to incorporate vertical equity and were concerned that the simple exemption for those receiving government assistance did not accurately reflect ability to pay. There were concerns about intertemporal fairness. Academics and practitioners were also worried about the lack of transparency, both in terms of the policy process and the lack of ongoing accountability arrangements. Tax officials defended the process but did put in place new arrangements to manage, report and account for the funds received from the flood levy. Compliance and administration costs - The ATO and the majority of academics and practitioners criticised the levy for increasing compliance and collection costs in proportion to the small amount of funding being generated. They were also worried that similar levies could be introduced in response to other disasters, creating further uncertainty and cost for taxpayers. Other drivers outside the standard policy principles: Australia's history of 'one-off' levies which are

perceived as more acceptable because of support for social policies and the historical resistance to introducing further taxes. Academics and practitioners also saw the introduction of the levy as a political

response linked to the government commitment to returning to surplus.

Table 8.4 – Links between New Zealand tax system and Canterbury earthquake responses

	Highly efficient with BBLR framework	Lack of neutrality for	Less emphasis on redistribution	Slow policy process which can
	righty effective with DDER frame work	saving and investment	Dess emphasis of redistribution	be abandoned for political
				expediency/to protect base
Pre-	EQC: In contrast to the BBLR system, it plays a corrective	Earthquake	Earthquake strengthening: Concerns about lack of horizontal equity between different types of	EQC: Political risk of fund
disaster	role which helps address market failures such as non-	strengthening: Lack of	assets and where an asset is destroyed in an earthquake versus preventative expenditure.	being used for other purposes
	availability of insurance and consumer myopia. A	certainty as a result of	Current treatment also criticised as inconsistent with transparency (as normal business expenses	although no evidence that this
	hypothecated fund also interferes with the allocation of	case law, an unclear	are not currently deductible) and transitional fairness given greater enforcement of building	has occurred. The tripling of
	revenue (although does not materially affect the market).	capital-revenue	standards.	the EQC levy appeared to be
	However, can be seen as part of the social policy system,	boundary and a lack of		more of a political rather than
	helping to soften the impact of BBLR rather than align with	guidance for taxpayers		policy response.
	it. Also reduces the need for other funding sources post-	likely to result in recharacterisation		English with a strong through
	disaster but does leave government exposed to claims in excess of fund.	leading to higher costs.		Earthquake strengthening: Wider government
	excess of fulld.	A comprehensive		considerations outside the tax
	Earthquake strengthening: In line with BBLR, argued that a	definition of taxable		system.
	corrective tax would give rise to unintended distortions,	income should recognise		system.
	recharacterisation, increase costs for other taxpayers and be	earthquake strengthening		
	ineffective for those outside the system. However, others	costs. However, argued		
	saw a corrective tax as required to address externalities	that the current treatment		
	including the public benefits from strengthening and	is appropriate as gains		
	preserving heritage buildings. Tax deductions also seen as	are not currently taxable.		
	having lower costs than grants.	However, risk that		
		policy decision being		
		made on fiscal grounds alone, with the current		
		lack of deductions linked		
		to previous drive for		
		revenue neutral reforms.		
Response	The immediate responses did demonstrate some	Te venue neutral referms.	Admin issues: Seen as unreasonable to penalise taxpayers or deny benefits as a result of being	Admin issues: Other drivers,
response	inconsistency with the existing system:		affected by the earthquakes. However, officials were keen to limit relief by using a discretion	including the need to support
			rather than blanket exemption. Decisions took into account IRD's revenue collection role,	collaboration between agencies
	Admin issues: Much less focus on efficiency although		particularly given drop in tax filing and payments and increase in tax debt. Balance between	not permitted by existing
	negative incentive of taking a lenient approach with respect		leniency in the survival phase and returning to normal practices, including tough approach on	information sharing rules,
	to record keeping was raised. Responses led to an increase		avoidance. Horizontal and vertical equity concerns about IRD's ability to apply discretion due	political pressure to support the
	in compliance and administration costs as an application		to apparent absence of a framework for applying concessions. Also disagreement about how	disaster response and declining
	was required. Need for a special response may have been		long special treatment was required. Concerns about short transition period once special	interest from officials in the
	driven by New Zealand's tough compliance regime. Need to plan and prepare for future events to avoid unsanctioned		treatment ended.	disaster response.
	administrative responses and administrative hassle.		Employer welfare support: Exemption seen as consistent with ability to pay and exempt Job	Employer welfare support:
	Earthquakes had a significant impact on IRD operations		Loss Subsidy. Also addressed horizontal equity concerns with respect to treatment of support	Other drivers, including the
	with a significant drop in productivity putting resources		on business premises and elsewhere, support to employees and non-employees and support in	need to take a broader
	under pressure at the same time that there was increasing		response to both the September 2010 and February 2011 earthquakes. However, decisions took	perspective, impact of an
	demand for local support.		into account fiscal costs. Concerns with tax planning managed by short exemption period equal	abnormal situation, need to
			to that for welfare benefits. Response seen as contrary to vertical equity as those with generous	respond quickly and political
	Employer welfare support: Corrective tax to encourage/not		employers benefit. Horizontal equity concerns with respect to the inconsistent treatment	pressure. Desire for a fast
	discourage employer support.		between disasters, initial and later support, Canterbury employees and those elsewhere (justified	response impacted evaluation
			on the basis of scale) and taxable Earthquake Support Subsidy. Concerns about undue focus on	and policy process.
			avoidance and feeling that issue should be addressed by a general exemption.	

Recovery

Rollover relief: Certainty (through speed of response at the cost of analysis and consultation), convenience (avoiding the need for a tax payment on a windfall gain) and simplicity (e.g. broad definition of replacement assets) considered in designing the relief. Other options for providing relief such as carrying back losses and reduced tax rates not seen as simple.

Earthquake levy and other financing: Levy could reduce pressure on New Zealand's credit rating and therefore lower borrowing costs. However, levies seen as inefficient as they are counter to tax smoothing, create negative incentives for work and employment, savings and investment, are potentially inconsistent with BBLR, harmful to economic growth and if ring-fenced, would suffer same problems as other hypothecated taxes. To minimise costs temporary levies would need to be simple and quick to implement and reverse. This restricted certain options. A broad based levy would affect more taxpayers and therefore have greater compliance costs. Application to companies given the recent tax rate reduction was a particular complication. A number of options for a temporary levy considered but not supported due to concerns about speed of implementation, appropriating tax bases in place for other purposes and the inability to raise sufficient revenue. Policy makers also queried the need to raise additional revenue due to high levels of public and private insurance, New Zealand's relatively strong fiscal position, possible options for reducing government expenditure, partial asset sales, and the ability to pass on costs to local government. Ultimately government chose to rely on these other sources of funding but may not be able to do the same in the future. Contrast to views about local government funding options.

Responses to support recovery did demonstrate some inconsistency with the existing system:

Rollover relief: Incentivising rebuilding ran counter to BBLR with concerns about targeting, unintended distortions, boundary issues and encouraging businesses to remain even when more efficient to relocate and counter to risk diversification. However, prepared to accept on the basis that it was a relief provision, removed an obstacle to reconstruction, was location specific and a deliberate (although ineffective) incentive in response to the disaster. Extra compliance costs incurred from lack of simplicity in legislation design and notification and documentation requirements, legislative mistakes and lack of guidance, and confusion with amendments spread over multiple acts. May have been better to follow the standard policy process.

Rollover relief: Transitional fairness was a key driver. Did not want to impose tax for events outside taxpayers' control resulting in a large unexpected revenue stream as a result of the disaster. Vertical equity seen as justification for providing an alternative treatment for those affected by a disaster, with the clawback and revenue account property rules seen as inequitable in a disaster context. Horizontal equity also seen as important in the design of the relief in terms of which assets it applied to and extending to the earlier September 2010 earthquake. However, there were concerns about lack of horizontal equity with respect to voluntary disposals, other disasters, other events beyond a taxpayer's control and other windfall gains. Geographically targeted relief criticised for not fully addressing vertical equity concerns and raising horizontal equity issues. However, officials happy to accept a lack of horizontal equity in the short-term and where it only affected a limited number of taxpayers. Other options such as regional tax cuts and carry back of losses less likely to focus on those affected. Fiscal concerns also led to the rejection of a number of other options for providing assistance, such as tax deductions for new capital investment, regional tax rates and a general discretion to eliminate windfall gains. There was also a focus on restricting tax planning opportunities which may have had the opposite effect.

Earthquake levy and other financing: Some argued for regional taxation on the basis of the benefit principle (new infrastructure and local property repairs). However, in general policy makers favoured that any levy was based on ability to pay (exclude those affected by disaster, use a progressive rate structure). This excluded certain levy options such as central government levy on rates. Temporary levies with narrow bases were also seen as inconsistent with horizontal equity. Intergenerational equity was also seen as an issue with temporary levies.

Rollover relief: Other drivers outside the standard policy principles, including shield against other less palatable responses, political influence, broader government objectives, and response to an extraordinary event.

Earthquake levy and other financing: General view that strong policy framework led to absence of a levy, with concerns that departing from this would set a pattern for future levies. However, some policy makers thought political influence did play a role in respect of reluctance to increase taxes so soon after recent reforms to lower taxes.

Table 8.5 – Links between Australian tax system and Queensland flood responses

	Highly redistributive	Complex and inefficient	High compliance costs	Emphasis on revenue adequacy	Strong political influence and reliance on administrative practice
Pre-disaster	Disaster fund or insurance scheme: No discussion of the distributional or intergenerational impacts of all current taxpayers being required to fund such as scheme. The pre-disaster settings did demonstrate some inconsistency with the existing system: Insurance taxes: Insurance taxes can be inequitable. Rates of non-insurance generally decline with higher incomes, and non-insurance can also be higher for certain demographic groups. One option for increasing equity might be to consistently apply cost recovery.	Insurance taxes: While insurance taxes are generally easy to administer, they can impose significant costs and are one of the least efficient taxes available to states. Can encourage under-insurance and non-insurance. Disaster fund or insurance scheme: Policy makers argued for an Australian government insurance scheme or disaster fund on the grounds that it would reduce the need for one-off levies and other post-event funding arrangements, thereby increasing certainty, both for the Australian government (reduced administration costs) and for taxpayers. However, money in a special purpose fund may not be the most efficient use of the funds at the time. Insurance can encourage people to live in high-risk areas and premiums may only be designed to cover 'average' levels of risk. The pre-disaster settings did demonstrate some inconsistency with the existing system: Disaster fund or insurance scheme: No discussion about using tax incentives. Instead, in practice, mitigation investment decisions have been influenced by market pressure.		Insurance taxes: Significant source of revenue for state governments. Any consideration of their removal would need to be made in the context of broader state level fiscal reform. Disaster fund or insurance scheme: Evidence of economic returns from investing in mitigation. However, current policy and funding frameworks reinforce the traditional emphasis on response and recovery rather than mitigation. In response, tax practitioners and academics have advocated for an Australian government insurance scheme or disaster fund to pay for the costs of future disasters on the grounds of revenue adequacy. However, no discussion about how the required funds would be raised. Also risk that once reserves build up they will be used for another purpose.	Insurance taxes: Political rationale behind the taxation of insurance. Disaster fund or insurance scheme: Political difficulty of being able to sell a long-term fund as compared to a one-off levy leading to short-term investment decisions.
Response	Admin issues: Equity identified as the tax policy rationale for administrative responses made to the Queensland floods. Treatment justified on the basis of needing to segment taxpayers, perhaps acknowledging ability to pay or vertical equity. Noted that in applying or accepting differentiated responses, any lack of horizontal equity is acceptable in the short-term. Exemptions: While consistency and horizontal equity were considered important in the treatment of emergency	Admin issues: Efficiency not a focus. Exemptions: Efficiency not a focus, potentially because the exemptions were targeted and in place for only a short time. While the compliance cost implications were generally considered to be low, the nature of some of the emergency support payments provided considerable freedom, allowing the Australian government to deliver financial relief at short notice. However, their flexibility also made them difficult to	Admin issues: Minimising compliance costs for affected taxpayers was a strong justification, with automated deferrals. However, automatic relief was not provided in all cases or in relation to record recreation. State authorities also required taxpayers to take action even for payment or lodgement deferrals. Exemptions: While the compliance cost implications were generally considered to be low, the nature of some of the emergency support payments provided considerable freedom, allowing the Australian government to deliver financial relief at short notice. However, their flexibility also made them difficult to administer. The payments were also not subject to the	Exemptions: The fiscal impact of making tax exemptions for emergency support and assistance payments was a consideration for tax policy makers, although limited information was provided about actual impact. The pre-disaster settings did demonstrate some inconsistency with the existing system: Admin issues: Revenue adequacy traded-off in determining how far to go with administrative responses to a natural	Admin issues: Some tax academics considered that the standard tax policy principles did not apply to an emergency situation. In respect of the Queensland floods, the impact on the ATO (damage to tax office buildings, impact on staff, and transport) was fairly limited, due to the type of disaster which allowed time to respond and the fact that lessons were applied straight away. From an administration perspective, the ATO put significant emphasis on providing an ordered response, following an internal policy for providing support during disaster events. It is important

assistance payments, there appears to be a administer. The payments were also accountability and reporting measures that apply to that there is clear communication about disaster. However, the localised nature lack of consistency in terms of how not subject to the accountability and legislated payments. As such, in 2013 a decision was of natural disasters seen as allowing the when special measures will come to an end different emergency support payments are reporting measures that apply to made to allow for payments to be made in similar ATO to act without putting revenue at and that there is sufficient time for taxpayers treated for tax purposes. While the legislated payments. As such, in 2013 circumstances but under a legislative scheme. to then meet their obligations. Specific legislative responses are likely to have a set AGDRP is generally treated as exempt a decision was made to allow for income, the tax treatment of other payments to be made in similar expiry date and may need to be rolled-over, emergency support payments seems to circumstances but under a legislative leading to taxpaver uncertainty and extra fluctuate. administration and legislative costs. Administrative responses provided under a discretionary power have more flexibility. However, such flexibility does need to be applied in a consistent way. Recovery Land swap: Tax officials supported the Responses to support recovery did Land swap: The process around the changes led to Land swap: Providing tax relief for land Land swap: Part of a wider government proposed changes on the basis of equity, in demonstrate some inconsistency with uncertainty. Initially, advisors tried to apply the existing swap transactions would mean less postresponse not subject to normal tax policy that they would allow taxpayers to the existing system: legislation. However, following a negative response from disaster support in the future, reducing principles. maintain their pre-CGT status. Other tax the ATO, the land swap transactions were restructured. the amount of taxation that needs to be policy makers saw the changes as Land swap: Tax officials argued that Subsequently, the government announced proposed raised over time. Flood levy: Academics and practitioners also consistent with vertical equity and ability the proposed CGT changes would legislative changes. Due to a significant backlog of tax saw the introduction of the levy as a political to pay, as there was no cash being received remove tax barriers to economic announcements awaiting legislation, the proposed Flood levy: Justified as necessary to response linked to the government and the tax treatment could also be decisions and reduce compliance costs changes were not enacted and taxpayers were reliant on fund reconstruction with officials commitment to returning to surplus. differentiated on the basis of emotional for taxpayers. Without the proposed an administrative agreement with the ATO. Tax officials stressing the importance of having a Australia has a history of 'one-off' levies suffering. However, tax practitioners did changes, taxpayers participating in a saw the administrative process as providing flexibility to confirmed source of funding early in the which are perceived as more acceptable raise horizontal equity concerns, including land swap program might face respond immediately which also took the pressure off recovery process. However, while because of support for social policies and the lack of consistency with other CGT multiple taxable events and the need needing to speed up the legislative process. However, it officials were clear about the size of the historical resistance to introducing further rollovers, earlier disaster relief payments to apportion their cost base, obtain created uncertainty and risk for taxpayers, exacerbated by disaster, they were less certain about the and tax exemptions provided for other market valuations and meet record the fact that in December 2013 it was announced that the quantum of funding required. Despite Australian government support payments. keeping requirements, by finding or CGT relief would not proceed. this, rather than spreading the cost of reconstructing records, for more than reconstruction over time, Australia opted Flood levy: Officials designed the levy one CGT calculation. Flood levy: Tax officials were concerned about for a temporary revenue increase. As with horizontal and vertical equity in mind, efficiency, trading off the level of funding against the well as the scale of the disaster, officials broadly sharing the burden of taxation rate and choice of base. As a result, Treasury officials defended the levy on the basis that it was across Australia, while excluding flood thought the levy had been implemented in a way that necessary to main fiscal credibility victims and those on low incomes. The made it easy to administer and comply with. In contrast, because of wider macroeconomic progressive structure ensured broad public the ATO and the majority of academics and practitioners conditions at the time of the floods, seen criticised the levy for increasing compliance and support for the levy. However, tax as more challenging than those for practitioners and academics felt there was collection costs. They were worried about the restrictions earlier natural disasters. Some policy limited ability to incorporate vertical of a hypothecated tax (even though it was not one), and makers agreed with the additional need equity and were concerned that the simple criticised the efficiency of the levy. Specifically, they for funding, with the levy seen as a exemption for those receiving government were worried about its impact, as taxation further reduces response to the vertical tax imbalance assistance did not accurately reflect ability private demand and therefore further reduces economic between the states and federal to pay. There were concerns about activity, and influence on individual decision making. government. While other policy makers intertemporal fairness. Academics and One aspect that was subject to considerable comment acknowledged the macroeconomic practitioners were also worried about the was the interaction (and potential conflict) between the constraints, they rejected this as a lack of transparency, both in terms of the government subsidising donations through the tax system rationale for imposing a levy. They policy process and the lack of ongoing and introducing a flood levy. Tax policy makers were criticised the short-term nature of the accountability arrangements. Tax officials also concerned about the links between the levy, levy, were concerned that it gave a false defended the process but did put in place NDRRA and state insurance. Looking ahead, policy impression of paying for the entire new arrangements to manage, report and makers were worried that similar levies could be recovery effort and challenged whether

uncertainty and cost for taxpayers.

introduced in response to other disasters, creating further

the scale of the disaster justified a new

source of government funding.

account for the funds received from the

flood levy.

The same characteristics that give the New Zealand tax system its relative strength can be seen in responses to the Canterbury earthquakes. In respect of pre-disaster settings, New Zealand's BBLR framework and lack of support for tax incentives overrode wider considerations supporting tax deductions for seismic strengthening. Officials argued that tax incentives for strengthening should be avoided due to concerns about boundaries between types of capital expenditure, unintended distortions, the ineffective nature of relief for those outside the tax system, and the fiscal cost of subsidising a select group of taxpayers. These concerns were shared by other policy makers, who, even when sympathetic to externality arguments, felt that New Zealand government support would be better provided in other ways.

In the immediate response, policy makers acknowledged the importance of an administrative response that did not give rise to negative incentives by being too lenient but minimised compliance and administration costs through convenience, certainty, and speed of reaction. Officials also initially advised that employer support should remain taxable in line with BBLR, but were eventually convinced to support a limited exemption, due to concerns over compliance and administration costs.

In the post-disaster recovery phase, the choice of responses was determined by concerns about misalignment with BBLR, inefficiency, revenue adequacy and, to a lesser extent, the need to minimise compliance and administration costs. For example, officials and practitioners did not support targeted rollover relief as it ran counter to BBLR and risk diversification, but once a decision was taken to proceed, officials stressed the need for an appropriate and convenient time for payment, quick response to provide certainty, and benefits of a relatively simple design compared to more complex alternatives. Similarly, commentary on whether or not to impose an earthquake levy was focussed on revenue adequacy and efficiency concerns, with officials also worried about the complications of extending the levy to companies and the impact on a large number of taxpayers.

In contrast, the responses to the Queensland floods were more reflective of weaknesses in the Australian tax system, such as its complex and inefficient nature, high compliance costs, emphasis on revenue adequacy and strong political influence and lengthy delays in legislating tax changes (as illustrated in Table 8.5).

In respect of pre-disaster settings, Australian policy-makers commented on the inefficiency of its state insurance taxes which are influenced strongly by political concerns, and argued

that future revenue impacts from disasters, and high administration and compliance costs associated with special disaster levies, could be avoided by establishing a natural disaster fund and investing in mitigation. Academics and practitioners commented on the political difficulty of selling such a fund, as compared to a one-off levy, and identified a number of non-tax reasons for the lack of investment in mitigation, including funding, state and federal budget processes and politics.

In the immediate response, as a result of political pressure surrounding legislative responses, Australia relied on its strong administrative processes. In doing so, officials emphasised the need to balance the use of administrative responses against the impact of revenue collection. The Australian government also made significant use of emergency support payments to provide fast relief. However, these were not subject to strong accountability and reporting measures. There was also inconsistent tax treatment between relief payments.

In the post-disaster recovery phase, while the land swap reliefs were intended to reduce compliance costs and remove tax barriers to economic decisions, the poor and politically driven policy process had the opposite effect (although the total number affected by the land swap scheme was small compared to those affected by the overall disaster). Similarly, while revenue adequacy was a key justification for the flood levy, there was significant discussion of the non-tax policy rationale, including Australia's history of creating special levies and the political commitment to a surplus. Other policy makers also commented on the levy's high collection costs, impact on economic activity and individual decision making (as compared to other financing options, such as government debt), and the lack of transparency around the policy process and levy's administrative arrangements.

This analysis demonstrates that the empirical patterns from the Canterbury earthquake and Queensland flood case studies support the predicted findings that jurisdictions with a stronger existing tax policy system, as measured by OECD, World Bank and other expert reviews, have tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy.

However, while the relative strength of the New Zealand tax system can be seen in the responses to the Canterbury earthquakes, as compared to the tax responses to the Queensland floods, several potentially negative features of the existing New Zealand tax system were also identified by the OECD, the Tax Working Group and other

commentators. As discussed in Chapter five, the New Zealand tax system places less emphasis on redistribution, as compared to Australia. Concerns have also been raised about the lack of neutrality for saving and investment decisions, and slow policy process which can be abandoned for political expediency or to protect the revenue base (although this is also a risk in other jurisdictions). In the same way that the strengths of the New Zealand system can be seen in the tax responses to the Canterbury earthquakes, so can these potential weaknesses (as illustrated in Table 8.4).

In the pre-disaster settings, the lack of a comprehensive definition of taxable income was used as rationale for denying tax deductions for earthquake strengthening, along with concerns about revenue adequacy. The tripling of the EQC levy was a political rather than policy response, although policy makers saw the EQC scheme as part of the New Zealand's social policy, rather than tax system, helping to soften the impact of BBLR from a distributional perspective.

In the immediate response, while officials were keen to provide an equitable administrative response, they were focussed on their role as revenue collectors, emphasising horizontal rather than vertical equity. The design of the tax exemption for employer welfare support was also driven by worries about horizontal equity and fiscal risk, rather than vertical equity. In the approach to administrative responses and employer support, policy makers highlighted drivers outside the standard tax policy principles, such as the need to respond quickly, wider New Zealand government objectives and political pressure. These impacted the policy process, both in terms of evaluation and consultation.

In the post-disaster recovery phase, the lack of neutrality for saving and investment decisions, including the absence of a comprehensive basis for taxing capital expenditure, ⁷⁵ meant New Zealand had to make a large number of responses to alter the timing and taxation of revenue and capital expenditure. In doing so, while there were some references to vertical equity, revenue adequacy led to the rejection of a number of assistance options, in preference for targeted rollover relief. New Zealand tax policy makers, who are generally united in protecting BBLR, were prepared to accept targeted rollover relief on the basis that it was a time-limited location-specific incentive. This abandonment of the

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⁷⁵ This is in contrast to Australia which has had a capital gains regime since 1985. In Australia, all assets acquired since 1985 are subject to taxation unless specifically excluded (most personal assets and depreciating assets used solely for taxable purposes). A capital gain or capital loss on an asset is the difference between what an asset cost and what is received on disposal. A capital gain is forms part of taxable income. For further detail refer to ATO (2016).

standard framework was influenced by external pressures, such as political influence and broader New Zealand government objectives. Similarly, while policy makers suggested that the strong New Zealand framework helped to avoid an earthquake levy, many felt that increasing taxes would have been politically difficult following recent reforms. Policy makers also criticised the abandonment of the standard policy process, suggesting this had led to the complex and confusing nature of the rollover relief, with its related compliance costs.

These empirically based patterns from the Canterbury earthquake and Queensland flood case studies suggest that countries with stronger existing tax policy systems have tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy. However, any weaknesses will also be reflected in the tax responses made.

8.3.3. Rival Explanations

The credibility of explanatory case study analysis is strengthened by searching for and testing rival explanations. Substantive rivals represent alternative explanations of the observed phenomenon or results of the study. They compete with the main interpretation of the study's findings and can therefore dramatically affect the study's conclusions. When case studies include the investigation of such rivals, and if the prevailing evidence can support their rejection, the research is able to place greater confidence in the case studies original explanation and conclusions (Yin, 2012). Therefore, in order to assess how tax responses to natural disasters relate to the strength of the existing tax policy system, it is necessary to examine the wider setting in which the responses were made. For example, Howes et al (2013) provides an overview of the system of government, the policymaking process, key climate adaptation policies, and disaster risk management arrangements as the institutional and policy context for discussing disaster risk management. Mendelson and Carter (2012) examine the way that catastrophic losses are regulated by statute, common law, insurance regimes, disaster relief schemes and taxation. This next section briefly examines a number of rival explanations for the types of tax responses made to the Canterbury earthquakes and Queensland floods, including the risk of natural disasters, macroeconomic and microeconomic settings, and government arrangements for responding to natural disasters. These potential rival explanations are based on a combination of those identified in the literature and influences highlighted by the policy makers interviewed.

8.3.3.1. Risk of natural disasters

One rival explanation for a country having tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy could be differences in the risk, frequency and scale of natural disasters, with a country exposed to more risk and greater loss having tax responses which step outside the normal tax policy framework.

Both Australia and New Zealand are exposed to a wide range of natural hazards. In respect of New Zealand, academics commented on the risk of geological and weather related hazards (particularly flood and earthquake risk), as well as animal and plant pests and diseases (Brookie, 2012; Hatton et al., 2012; Maples, 2012a; Miley & Read, 2013; Pawson, 2011; Wang, 2012). Similar comments were made by tax policy makers interviewed for this project (NZ Academic 2, 8, NZ Official 3). These risks and their potential impacts are summarised in Figure 8.1.

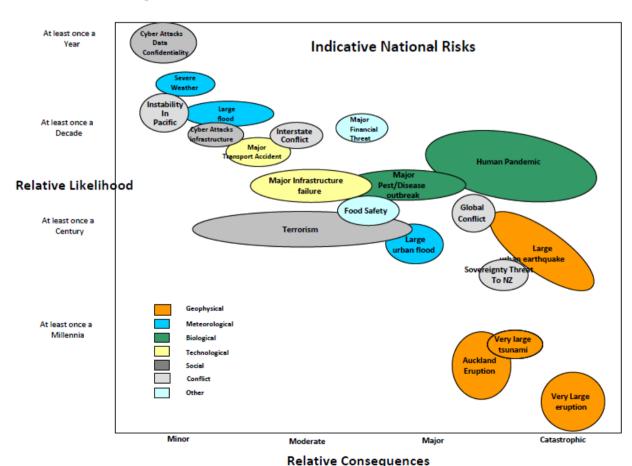


Figure 8.1 – New Zealand's relative national risks

(DPMC, 2011, p.22).

Australia is also exposed to frequent and large natural disasters, including storms, cyclones, floods, bushfires and earthquakes (Arklay, 2012; Bradley, 2011; Fleming et al., 2015; Mendelson & Carter, 2012), and the risk is growing due to the increasing urbanisation of coastal regions (Biggs, 2012; Howes et al., 2013).

On the World Risk Index, which measures the risk of becoming a victim of a natural disaster for 171 countries, New Zealand and Australia are ranked numbers 116 (4.55 percent) and 121 (4.22 percent) respectively (Bündnis Entwicklung Hilft & United Nations University, 2016). Therefore, the level of risk is similar in both case studies and does not explain differences in the tax responses made.

Perhaps frequency of events could influence tax responses to natural disasters? From 1967 to 2012, Australia experienced an average of four major natural disasters per year (Insurance Council of Australia, 2013, as cited in Deloitte, 2013). Interview participants referred to Australia's disaster season (AU Academic 1, 2, 3, AU Official 3, 5, and AU Practitioner 3). While perhaps slightly less frequent, New Zealand also suffers from regular natural disasters. From the period 1985 to 2007, there was an average of two natural disasters per year (Officials' Committee for Domestic and External Security Coordination, 2007). Therefore, there does not appear to be a significant difference in the frequency of natural disasters between the two countries. As such, this factor is unlikely to have led to differences in the tax responses made, other than perhaps explaining Australia's more extensive pre-disaster tax settings (tax discretions, centralised business continuity arrangements and more extensive pre-existing tax rules for dealing with natural disasters) and the need for New Zealand to make a greater number of changes in response to the Canterbury earthquakes.

While risk and frequency of natural disasters do not seem to explain why one country might have tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy, perhaps a country which suffers from a more significant natural disaster might opt for tax responses outside the normal tax policy framework?

In terms of the scale of the disasters, both events were substantial. The Canterbury earthquakes have been estimated to be the third most expensive insured natural catastrophe in history, according to Swiss Re (Wood, 2012). Similarly, Deloitte (2013) reported that of the last 30 years, 2011 was the most costly in terms of real annual insured losses in

Australia due to the Queensland floods and Tropical Cyclone Yasi. However, while the human and economic impact of both events was significant, this was particularly so for the Canterbury earthquakes (as set out in Table 1.1). The much larger impact of this event on New Zealand could explain differences in the tax responses made, with a country exposed to a larger natural disaster having tax responses outside the normal framework. However, New Zealand's responses were more aligned with the standard economic principles of good tax policy despite suffering a larger natural disaster. Therefore, it does not appear that the difference in scale is a possible alternative explanation.

8.3.3.2. Macroeconomic and microeconomic settings

Tax systems need to operate within fiscal constraints (Tax Working Group, 2010) and be designed for the economies in which they operate (Mirrlees, 2011). Therefore, another explanation for a country having tax responses which are more or less aligned with the standard economic principles of good tax policy could be differences in macroeconomic and microeconomic settings.

When macroeconomists study an economy they often judge its success based on three variables:

- the level of production in the economy and rate of growth;
- the unemployment rate; and
- the inflation rate (Blanchard, 2009).

The level of production in the economy and rate of growth

The OECD (2010) reviewed the economic situation and policies of Australia in October 2010. They concluded that the Australian economy has been one of the most resilient in the OECD during the GFC and was well-prepared to face major shocks. Australia had benefited from running large current account deficits to finance levels of investment that were high by OECD standards (Henry et al., 2010). This contributed to a strong fiscal position, which along with a resources boom, had significantly increased the terms of trade and boosted national incomes (Australian Treasury, 2008; OECD, 2010). Australia's GDP in 2009 was A\$1,137 billion or US\$45,251 per head of population (OECD, 2010).

The OECD (2011) similarly commented on the strength of the New Zealand economy prior to the GFC. A string of fiscal surpluses had helped offset high levels of private-sector debt, meaning the fiscal position entering the crisis was also strong based on a low public

debt-to-GDP ratio. GDP in 2010 was NZ\$194,629 million or US\$36,094 GDP per head of population. Buoyancy in Australia and Asia and large terms-of-trade gains, along with active monetary stimulus and a significant fiscal expansion resulting from structural spending increases and tax cuts supported the economy through the GFC.

The medium-term prospects in the two countries were less similar. While there were risks to Australia from further financial turmoil, a widening current account from financing investments, and inflationary pressures as business activity increased with little spare capacity in the economy, growth boosted by strong investment in the mining sector and continued immigration, together with Australia's strong fiscal position, meant prospects in Australia were generally good (Australian Treasury, 2008; OECD, 2010). Australian policy makers did however acknowledge the risks, commenting that the Australian economy was approaching full employment (Ray, 2011), with strong excess demand driven by the Australian government's GFC stimulus package (McKibbin, 2011). There were also potential vulnerabilities from a high current account deficit, which was likely to continue to widen due to increased investment, and the economy moving into deficit (Australian Treasury, 2008; Ray, 2011). While the Australian government was committed to returning to surplus (AU Practitioner 3), policy makers emphasised the need to focus on the quality rather than quantum of spending (McKibbin, 2011). Concerns were also raised about Australia's government debt to GDP ratio (McKibbin, 2011), although this was low by world standards, with net debt estimates of A\$79.6 billion or 5.7 percent of GDP (Ray, 2011).

In New Zealand, the OECD (2011) commented that weak business investment and low national saving have for some time contributed to poor growth performance, as illustrated in Figure 8.2 and Table 8.6.

Index Index •NZ •US -OECD -Australia

Figure 8.2 – GDP per capita

(OECD, as cited in 2025 Taskforce, 2009, p.22).

Table 8.6 – GDP percentage changes

	2008	2009	2010	2011	2012
Australia	2.1	1.2	3.3	3.6	4.0
New Zealand	-0.7	0.0	2.5	0.8	4.5

(OECD, 2010, 2011).

Unlike Australia, the expected gradual economic recovery in New Zealand was held back by private sector efforts to reduce debt as well as a strong currency. A widening current account deficit had been largely financed by foreign credit, adding to already high external debt. Therefore, households, businesses and farmers were attempting to repair over-extended balance sheets in the aftermath of a property boom which had prompted additional household spending. The structural spending increases and tax cuts which had supported the New Zealand economy through the GFC, along with automatic stabilisers, caused a shift to a substantial deficit of over five percent of GDP.

The unemployment rate

The employment position was also more favourable in Australia than in New Zealand prior to the disasters, as illustrated in Table 8.7:

Table 8.7 – Unemployment rate percentage changes (actual and projected)

	2008	2009	2010	2011	2012
Australia	4.4	1.8	2.9	2.8	2.9
New Zealand	4.2	6.2	6.5	7.0	6.3

(OECD, 2010, 2011).

The Henry Review (Henry et al., 2010) observed that policy reforms over the past 25 years had made the Australian economy flexible and responsive to price changes. The structural flexibility of the Australian financial and labour markets, combined with appropriate monetary and fiscal policy, restored confidence rapidly when the crisis struck (OECD, 2010).

In comparison, the OECD (2011) commented that the rise in New Zealand unemployment to over seven percent resulted from a number of factors, including: immigrants boosting the labour force, firms reducing hours, a tightening of labour-market regulations (higher minimum wage and tighter dismissal rules), disincentives from a sharp expansion between 2003 and 2008 of public transfers to working-age people, and a petering out of earlier reforms that had enabled a step-up in participation rates.

The inflation rate

The inflation position was relatively similarly in both countries, although with slightly higher average rates in New Zealand, as illustrated in Table 8.8:

Table 8.8 – CPI percentage changes (actual and projected)

	2008	2009	2010	2011	2012
Australia	4.4	1.8	2.9	2.8	2.9
New Zealand	4.0	2.1	2.3	4.6	2.7

(OECD, 2010, 2011)

Monetary tightening in both countries before the onset of the crisis left significant room for loosening once the crisis hit (OECD, 2010, 2011).

In terms of microeconomic settings, both Australia and New Zealand are recognised for the flexibility of their financial and labour markets (Australian Treasury, 2008; Frances, 2004; OECD, 2010). In 2009, the World Bank benchmarked the business regulations of 183 countries and ranked Australia 1st and New Zealand 4th in respect of the flexibility of hiring, firing and the conditions of employment in OECD countries. In terms of financial markets, the Global Competiveness Report ranked Australia 3rd and New Zealand 10th out of 139 countries in terms of financial market development (World Economic Forum, 2010).⁷⁶ The slightly lower ranking in New Zealand perhaps reflects that while New Zealand's banking sector is sound, efficient and well-developed, many other parts of the financial system (with the exception of the foreign exchange market) are relatively underdeveloped (Cameron, Chapple, Davis, Kousis, & Lewis, 2007).

For natural disasters, building and land use settings are also key (Deloitte, 2013). In Australia, the development and management of building codes is undertaken at a national level, however, building standards and land use planning are implemented and regulated at a state level, meaning different principles apply across Australia (Deloitte, 2013). While standards have undergone constant review, particularly after major natural disaster events, changes to building codes which apply to new residential buildings impact only a tiny percentage of the total housing stock (Deloitte, 2013). Also of concern is the ongoing use and development of land in areas that are continuously affected by natural disasters (Deloitte, 2013). In response, the Productivity Commission (2012, as cited by Deloitte, 2013) has recommended that state and local governments incorporate the impacts of weather volatility into land use planning decisions, to promote planning decisions that are robust across a range of climate change outcomes and are proportionate to the risks involved.

In New Zealand there are also national building and land use settings. The *Building Act* 2004 governs the building industry, including construction of new buildings and alteration and demolition of existing buildings, with a building code specifying building performance standards (Hatton et al., 2012). The *Resource Management Act 1991* (RMA) governs how the environment should be managed (Brookie, 2012), and attempts to integrate all environmental costs and objectives into private resource-use decisions (OECD, 2011).

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⁷⁶ The strength of the financial market was assessed on the ability to access capital from a sound banking and properly regulated securities market, venture capital and other financial products, that were trustworthy and transparent, with appropriate regulation.

However, like Australia, much is reliant on decisions at a local level. Under the *Building Act 2004* plans must be submitted to local councils and consents issued before construction commences. Additionally, the earthquake prone buildings section of the *Building Act 2004*, requires local authorities to develop a policy in consultation with their communities. In practice, this has meant commercial building owners have been allowed considerable time to consider strengthening their properties (Hatton et al., 2012). Similarly, implementation of the RMA is devolved to regions. The RMA mandates that any activity affecting the environment requires a consent which is granted by the regional or local council depending upon the type of activity and specific rules and standards for the area (Hatton et al., 2012). This has led the OECD to recommended that national standards and policy statements be established to better guide local decisions (OECD, 2011).

Like Australia, New Zealand continues to update its building and land use settings. Building codes for earthquake design have been modified frequently since 1931 (Wang, 2012). Despite this, consents for residential subdivisions were granted in Christchurch with little apparent consideration of the potential (and now established) liquefaction risks (Pawson, 2011). Recent events have also produced forces which exceed those allowed for in the existing codes of practice (Tompkins et al., 2012). In response, the New Zealand government has announced planned amendments to the RMA to give greater weight to managing the risks of natural hazards like earthquakes (Brookie, 2012; Hatton et al., 2012), and a review of the earthquake-prone building policy framework (Maples, 2012a). However, like Australia, many of these changes will only affect new buildings (Maples, 2012b; Tompkins et al., 2012; Wang, 2012).

In conclusion, a rival explanation for a country having tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy could be differences in macroeconomic and microeconomic settings, with a country exposed to greater macroeconomic challenges, or greater risk from its microeconomic policies, having tax responses which step outside the normal framework. However, New Zealand's tax responses were more aligned with the standard economic principles of good tax policy despite having macroeconomic and microeconomic settings prior to the Canterbury earthquakes which were similar to or more negative than those in Australia. Therefore, differing macroeconomic and microeconomic settings is not a possible alternative explanation.

8.3.3.3. Disaster response arrangements

A final rival explanation to be explored is whether differences in government arrangements for responding to natural disasters could explain why tax responses in one country are more aligned with the standard economic principles of good tax policy. While funding arrangements have been incorporated into the analysis of the tax responses made to the respective natural disasters due to their close association with the principle of revenue adequacy, both countries have an array of other legislation, organisations, instruments, and coordination mechanisms designed to manage disasters, including the building and land use settings discussed above.

In Australia, the responsibility for dealing with natural disasters rests with state governments. However, due to the need to coordinate across state boundaries, there are a range of federal measures to manage natural disasters, such as:

- Emergency Management Australia, in the Attorney-General's Department, whose role is to coordinate Commonwealth assistance to states and territories in the event of a natural disaster (Winkworth, 2007, as cited in McGowan & Tiernan, 2014);
- the Australian Emergency Management Arrangements (AEMA) which were agreed between the Australian and state governments in 2007 (AEMA, 2009, as cited in McGowan & Tiernan, 2014), and whose purpose is to more clearly define government roles and responsibilities in managing natural disasters (COAG, 2004, as cited in McGowan & Tiernan, 2014); and
- the National Emergency Management Committee (now the Australian and New Zealand Emergency Management Committee) who has responsibility for coordinating development of a National Strategy for Disaster Resilience. This includes: understanding and communicating disaster risk, supporting emergency management capabilities and reducing disaster risk to communities (McGowan & Tiernan, 2014).

While the latter does fund disaster mitigation projects, the natural disaster arrangements are primarily focussed on post-disaster response and recovery.

Brookie (2012) provided a summary of the New Zealand disaster response and recovery framework prior to the Canterbury earthquakes. Like Australia, there is a high level of devolution, with local authorities and their communities leading response and recovery. While the Ministry of Civil Defence and Emergency Management is responsible for

disaster response and recovery at a national level under the CDEM Act, CDEM Strategy, Plan, and Guide, both planning for and implementation of a disaster response is led at a local level through CDEM groups, which are partnerships between local authorities, fire, police, health services, New Zealand government departments, and lifeline utilities. Local authorities as part of the CDEM groups are legally required to prepare for and be able to respond to disasters. New Zealand does not have a specific stand-alone organisation to manage disasters or a national body for disaster risk reduction.

While New Zealand has effective, modern and well-resourced emergency services for dealing with small-scale localised emergencies, the Ministry of Civil Defence and Emergency Management (2005) has acknowledged significant gaps and deficiencies with respect to dealing with major nationally-significant disasters. Similarly, Rotimi's 2010 critique of the New Zealand disaster recovery arrangements highlighted the inadequacy of statutory powers to coordinate recovery. In response, due to the scale of the damage suffered from the Canterbury earthquakes, the New Zealand government appointed a Minister for Earthquake Recovery and established a special Cabinet Committee. Legislation was enacted and a new recovery commission established on 14 September 2010. After the February earthquake, further legislation was passed giving the Minister and a new agency (CERA) wide powers to manage recovery (Tompkins et al., 2012).

In conclusion, a rival explanation for a country having tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy could be differences in government arrangements for responding to natural disasters. However, comparing the two cases, disaster arrangements in both jurisdictions have a high level of devolution and are generally directed at response rather than prevention or recovery. Therefore, differing national disaster arrangements does not appear to be an alternative explanation.

8.4. Conclusions from cross-case comparison

The first aim of this research is descriptive - to provide a narrative of responses to natural disasters as a useful resource for tax policy makers.

In the pre-disaster phase, both Australia and New Zealand had a range of pre-existing tax rules for dealing with natural disasters. This is useful for avoiding rushed legislation for each event, allows a faster response and means that taxpayers do not need to worry about particular tax consequences of a disaster. However, in both countries there were gaps and a

lack of consistency in the rules as a result of these developing as ad hoc responses to earlier events, with these issues more pronounced in New Zealand. Australia also had much more established administrative policies and procedures for responding to natural disasters. In contrast, while the New Zealand tax authority did have discretions, these were not applied under a consistent framework. New Zealand also lacked information-sharing discretions and special rules to allow taxpayers to vary their provisional tax payments.

The case studies demonstrated differences in funding approaches. Australia primarily employed a pay-as-you-go funding model for natural disasters. In contrast New Zealand had a national insurance scheme as part of its pre-disaster tax settings. Both a national insurance scheme and private insurance are methods of spreading the cost of post-event funding. An alternative or complementary strategy is to invest upfront in mitigation to reduce the costs and tax revenue required to fund future disaster responses. However, despite these benefits, the tax responses in both countries were generally focused on responding to, rather than preparing for, natural disasters.

The immediate response in both countries involved significant administrative tax effort in the form of provision of information, tax and payment extensions, assistance with record reconstruction and participation in cross-government relief efforts. Both countries included actions to support charitable relief, including significant administrative effort, and legislation to support rebuilding activities in Australia. In New Zealand there were also a large number of legislative changes which reflected the comparative lack of pre-disaster tax settings. The tax system was used to incentivise business support, in the form of employer welfare support and donations of trading stock. However, unlike the pre-existing provisions in Australia, the New Zealand changes were restricted to the Canterbury earthquakes and time limited. Part of this immediate response also involved establishing New Zealand government support for employees and employers, as unlike Australia's preexisting financial assistance measures, New Zealand only had limited arrangements. From a tax policy perspective, the provision of financial assistance raises the question of whether payments should be treated as exempt income. In Australia the tax treatment of relief arrangements varies, although payments were generally treated as exempt following the Queensland floods. Similarly, tax changes were made in New Zealand to bolster the earthquake support package. The tax response to the Canterbury earthquakes also involved changes to tax and social policy regimes administered by the IRD. Such changes were not required in Australia due to pre-existing provisions.

As with the immediate response period, New Zealand made a large number of changes to support post-disaster recovery which similarly reflected the comparative lack of pre-disaster tax settings. These post-disaster recovery changes included amendments in relation to the timing and taxation of revenue expenditure, the timing of capital expenditure, and tax changes to alter the capital revenue boundary, with three approaches taken in respect of the changes. Generic changes were made to treat amounts as taxable. Where changes related to deferring deductions or income in a taxpayer's favour or capping or excluding the taxation of capital amounts, they were time-limited and Canterbury specific. Finally, there were a limited number of generic changes to clarify when income should be recognised. Such changes were not required following the Queensland floods, because timing issues for revenue expenditure and the timing or taxation of capital expenditure had previously been addressed by earlier generic tax changes and through Australia's comprehensive CGT, although Australia did propose additional tax reliefs to deal with post-disaster mitigation.

Both countries were also forced to consider funding options for recovery. While pressure was mitigated in New Zealand by high levels of public and private insurance, in the aftermath of the disaster there were calls to introduce an earthquake levy. However, the New Zealand government elected to rely on existing taxes and increase debt (which helps align those who benefit with those who pay, as future generations will profit from rebuilt assets but also repay debt through future taxes), combined with partial asset sales, spending cuts, and transferring costs onto local government, who also opted for a mix of debt funding and assets sales. In contrast the Australian government, which did not have a disaster fund or insurance scheme, implemented a one-year flood levy. Other funding was raised through the sale of Queensland state assets, delaying major infrastructure projects and spending cuts.

Finally, there is the question of tax incentives to promote recovery. In New Zealand, the normal response to natural disasters is to operate within existing tax laws and avoid tax concessions. However, following the Canterbury earthquakes, thought was given as to how the tax system could be used to promote recovery. While a number of options were discussed, on balance, officials thought that it would be preferable to provide support for reconstruction through optional Canterbury rollover relief. Tax incentives were also considered at an individual employee level. While calls were made to exempt foreign insurance assessors working in New Zealand, officials were concerned about the precedent

this would set for other foreign rebuild workers. Instead the IRD utilised administrative measures, including a special new discretion to waive interest. The New Zealand government also provided tax concessions for employer-provided accommodation for rebuild workers. While submitters had called for a generic exemption, officials' preference was to deal with adverse events on a case-by-case basis and legislate as necessary at the time of the event. In contrast to the tax incentives provided in New Zealand, no such measures were proposed or enacted in Australia. This is due to:

- Australia's comprehensive CGT which already incorporates rollover relief provisions;
- the extensive range of Australian government disaster recovery grants available for individuals and businesses which reduce pressure for tax incentives to aid recovery;
 and
- existing rules for employee accommodation which only tax these benefits where they
 are the employee's usual place of residence, and also exempt housing in remote
 areas.

After comparing and contrasting an overview of the tax responses to the Canterbury earthquakes and Queensland floods as a useful resource for future tax policy makers, the second aim of this research is to assess how tax responses to natural disasters relate to the strength of the existing tax policy system. The expected findings from this comparative case study were that jurisdictions with a stronger existing tax policy system would have tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy.

Three rival explanations for the types of tax responses made to the Canterbury earthquakes and Queensland floods were examined to strengthen the credibility of explanatory case study analysis. These were the risk of natural disasters, macroeconomic and microeconomic settings, and government arrangements for responding to natural disasters.

The level of risk from and frequency of natural disasters is similar in both case studies. As such, these factors are unlikely to have led to differences in the tax responses made, other than perhaps explaining Australia's more extensive pre-disaster tax settings and need for New Zealand to make a greater number of changes in response to the Canterbury earthquakes. A country which suffers from a more significant natural disaster might opt for

tax responses outside the normal tax policy framework. This explanation is also not supported by the empirical results, as the human and economic impact of the Canterbury earthquakes was greater but New Zealand's tax responses were more aligned with the standard economic principles of good tax policy.

Another explanation for a country's tax responses being more or less aligned with the standard economic principles of good tax policy could be differences in macroeconomic and microeconomic settings, with a country exposed to greater macroeconomic challenges or greater risk from its microeconomic policies having tax responses which step outside the normal framework. However, New Zealand's tax responses were more aligned with the standard economic principles of good tax policy despite having macroeconomic settings prior to the Canterbury earthquakes which were similar to or more negative than those in Australia. In terms of microeconomic settings, both Australia and New Zealand had comparable financial and labour market settings and similar challenges with respect to building and land use settings. Therefore, differing macroeconomic and microeconomic settings is not a possible alternative explanation.

A final rival explanation to be explored was whether differences in government arrangements for responding to natural disasters could explain why tax responses in one country are more aligned with the standard economic principles of good tax policy. However, comparing the two cases, disaster arrangements in both jurisdictions have a high level of devolution and are generally directed at response rather than prevention or recovery. Therefore, differing national disaster arrangements does not appear to be a possible alternative explanation.

In conclusion, the empirically based patterns from the Canterbury earthquake and Queensland flood case studies suggest that not only do countries with stronger existing tax policy systems have tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy, but that any weaknesses within these systems will also be reflected in the tax responses made.

9. Conclusions

9.1. Introduction

Recent years have seen a series of natural disasters place significant social and fiscal strain on a number of economies. Determining the appropriate tax response to natural disasters involves multiple complex policy decisions, which often need to be made under significant time pressure with limited information. While the literature discusses the impact of natural disasters on government policy generally, there has been little focus on the links between tax policy and responses to natural disasters. The literature that does exist focuses on single disaster tax issues, the taxation implications of individual disasters, or the taxation experiences of a single country. No research has systematically compared international tax policy responses to natural disasters. As well as being limited in terms of breadth, the current literature is also not based on the views of actual policy makers involved or the full range of tax policy documents behind the actions taken, and does not consider the three phases of a natural disaster. As a result it can miss the full range of tax responses made. In response to this gap in the literature, this thesis had two objectives:

- To provide a narrative of tax responses to natural disasters, focusing on the 2010/11
 Canterbury earthquakes in New Zealand and the 2010/11 Queensland floods in
 Australia.
- To assess how the tax responses related to the strength of the existing tax policy systems.

9.2. Overview of the research

9.2.1. Research conducted

To provide a narrative of tax responses to natural disasters, this thesis outlined the tax responses in the pre-disaster, disaster response, and post-disaster recovery stages of the Canterbury earthquakes in New Zealand and Queensland floods in Australia. As well as presenting individual case studies outlining the tax responses made, a cross-case comparison was conducted to analyse the similarities and differences at each phase. By summarising the responses in this way, a useful resource for future tax policy makers has been created.

To assess how tax responses to natural disasters relate to the strength of the existing tax policy system, a smaller subset of tax responses was selected for each disaster. This allowed for more in-depth analysis and description of the tax policy approach taken.

Responses for further analysis were selected because they represented actions at all three phases of a disaster: pre-disaster, immediate response and recovery, with examples of good and bad tax policy. Selection was also based on importance to policy makers (determined by the number of sources and references), and by the ability to separate out policy makers' comments on individual responses. Finally, where policy responses were related, only one was selected for further analysis.

For each case study the selected tax responses were evaluated against the standard economic principles of good tax policy, with an investigation made into the relationship between the responses and the strength of the existing tax policy system. Hence, conclusions were drawn about whether the principles of good tax policy still hold when a country is faced with a large economic shock, such as a natural disaster, and how the adherence to those principles is influenced by the strength of the existing tax system.

A cross-case comparison was then conducted which outlined the expected relationship between the strength of the existing tax policy framework and policy process, and the types of tax responses made to natural disasters. These expected findings were compared to the findings from the Canterbury earthquake and Queensland flood case studies with a brief examination of three possible rival explanations for the types of tax responses made, including the risk of natural disasters, macroeconomic and microeconomic settings, and government arrangements for responding to natural disasters.

The empirically based patterns from the Canterbury earthquake and Queensland flood case studies suggest that countries with stronger existing tax policy systems have tax responses to natural disasters which are more aligned with the standard economic principles of good tax policy. Further, any weaknesses within these systems will be reflected in the tax responses made. Assessing how tax policy responses to natural disasters relate to the strength of the existing tax policy framework adds to the current policy debate and provides lessons that are relevant to modern tax policy makers.

9.2.2. Methodology

A qualitative approach was adopted to answer both research questions because it aids interpretation of tax policy responses by allowing a picture to be formed of the features of the environment in which they were made, creates awareness of the full range of factors that led to the particular tax policy outcomes, and caters for the complexity of the situation where it is not possible to hold everything else constant while only the tax treatment of a

particular area is tested. It is also suited to investigating exploratory and descriptive questions which are not covered in the existing literature.

The primary data for the study was 44 semi-structured interviews with tax policy makers from Australia and New Zealand, selected to represent the views of government officials, tax practitioners and tax academics. As well as providing data for analysis, the interviews offered insights into the environment and clarified details in the large number of legislative documents, policy reports, formal reports, technical guidance, submissions, academic literature and media items prepared by these policy makers, which were also analysed.

The study adopted an 'interpretive-descriptive' approach to qualitative analysis. This approach is appropriate where the research is primarily concerned with accurately describing what was understood and reconstructing the data into a recognisable reality for the people who have participated in the study (Maykut & Morehouse, 1994; Strauss & Corbin, 1990). Specifically, Glaser and Strauss's (1967) constant comparative method of data analysis was adopted.

9.2.3. Limitations

A key limitation that arises from qualitative research is the potential for subjectivity in the analysis, with subjects selected by the researcher (such as a focus on policy makers as opposed to individuals affected by natural disasters) and data interpreted with the particular beliefs of the researcher (such as the experience of the researcher as an advisor on the New Zealand tax policy changes). However, it is acknowledged that researcher awareness of these limitations may assist in reducing their influence on the research output.

The research design for this thesis also incorporated a number of procedures for data collection and analysis to increase the validity of qualitative research. These included multiple methods of data collection, with data gathered from original policy documents in combination with interviewing the policy makers involved. Using multiple data sources helps address subjectivity within particular sources and improves the external validity of the research. Member checks were also conducted with research participants. In an informal sense, member checks were carried out throughout the conduct of the fieldwork, with the researcher constantly checking her understanding by utilising techniques such as paraphrasing and summarisation for clarification. After the conclusion of each interview, research participants were asked to confirm that draft interview transcripts accurately

described their experience. Finally, more formal member checks were completed at the conclusion of the research by sharing the interpretive findings with the participants involved.

9.3. Key findings

9.3.1. Canterbury Earthquakes: Case context and tax responses

The first aim of this research was to provide a narrative of responses to natural disasters as a useful resource for future tax policy makers. Using Todd & Todd's (2011) three phase model, chapter four provided an overview of the tax responses to the Canterbury earthquakes, as illustrated in Figure 9.1.

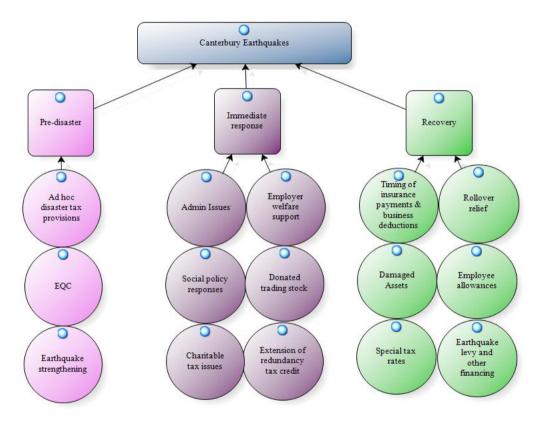


Figure 9.1 – Tax responses to the Canterbury earthquakes

9.3.2. Canterbury Earthquakes: How responses related to the existing tax system

The second aim of this research was to assess how tax responses to natural disasters relate to the strength of the existing tax system. Prior to the Canterbury earthquakes, the New Zealand tax system was described by the OECD, the Tax Working Group and other commentators, including tax policy makers interviewed for this research, as having a number of features, which were reflected in the responses made to the Canterbury earthquakes, as illustrated in Table 8.4.

9.3.3. Queensland Floods: Case context and tax responses

As with the New Zealand case study, chapter six provided an overview of the tax responses to the Queensland floods using Todd & Todd's (2011) three phase model. This overview is illustrated in Figure 9.2.

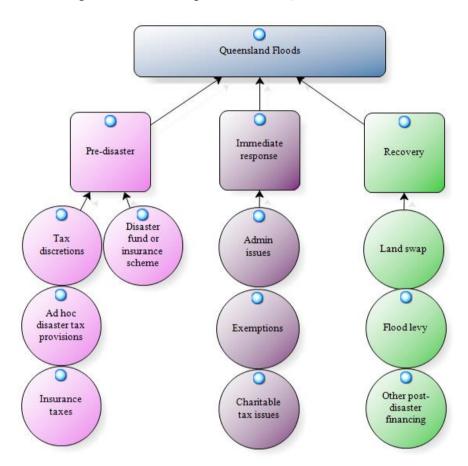


Figure 9.2 – Tax responses to the Queensland floods

9.3.4. Queensland Floods: How responses related to the existing tax system

Prior to the Queensland floods, the Australian tax system was described by the OECD, the Henry Review (Henry et al., 2010) and other commentators, including tax policy makers interviewed for this research, as having a number of weaknesses. These can be seen in Australia's tax response to the Queensland floods, summarised in Table 8.5.

9.3.5. Cross-Case Theme Analysis

Chapter eight brought together findings from the case studies on the Canterbury earthquakes and Queensland floods and conducted a cross-case theme analysis for each research question.

The analysis showed that both countries had a range of pre-existing rules for dealing with natural disasters but there were gaps and a lack of consistency, which were more pronounced in New Zealand. In particular, Australia had much more established administrative policies and procedures for dealing with natural disasters. There were also different funding approaches, with New Zealand having a national insurance scheme and Australia employing a primarily pay-as-you-go model.

The immediate response in both countries involved significant administrative effort including actions to support charitable relief. In New Zealand there were also a large number of legislative changes which reflected the comparative lack of pre-disaster tax settings.

New Zealand also made a large number of changes to support post-disaster recovery. Such changes were not required following the Queensland floods, because timing issues for revenue expenditure and the timing or taxation of capital expenditure had previously been addressed by earlier generic tax changes and Australia's comprehensive CGT. While both countries were forced to consider funding options for recovery, pressure was mitigated in New Zealand by high levels of public and private insurance, allowing the New Zealand government to rely on existing taxes and increased debt. The Australian government, which did not have a disaster fund or insurance scheme, implemented a one-year flood levy. To promote recovery, New Zealand provided optional rollover relief. Tax incentives were also implemented at an individual employee level. In contrast, no such measures were proposed or enacted in Australia, due to Australia's comprehensive CGT which already incorporates rollover relief provisions, the extensive range of Australian government disaster recovery grants which reduce pressure for tax incentives to aid recovery, and existing rules for employee accommodation.

There is an interesting contrast in the recovery responses between the Australian tax changes associated with the land swap transaction and New Zealand's rollover relief, with one aimed at reducing risk and cost from further events, while the other actively worked against risk diversification. This contrast was picked up in comments by policy makers, with New Zealand tax policy makers raising efficiency concerns about the relief. Despite these concerns, the targeted relief did proceed, with efficiency issues overruled by equity considerations and non-tax policy drivers, such as a political influence and broader government objectives with respect to rebuilding Christchurch.

Comparing the post-disaster funding responses also highlights an interesting contrast with respect to intertemporal equity. New Zealand spread the cost of responding to the Canterbury earthquakes over many generations, both through pre-funding using the EQC scheme and also electing to borrow to meet additional costs. In contrast, rather than the borrowing to fund recovery, the Australian Government implemented a one-year flood levy. While victims of the Queensland floods were excluded from the levy (with no assessment of ability to pay) taxpayers who may well be future victims of natural disasters were required to contribute.

After comparing and contrasting the tax responses to the Canterbury earthquakes and Queensland floods, the second aim of this research was to assess how tax responses to natural disasters relate to the strength of the existing tax policy system. The empirically-based patterns from the two case studies suggest that countries with stronger existing tax policy systems have tax responses to natural disasters which align more with the standard economic principles of good tax policy, even when they are less prepared for an event. However, any weaknesses will also be reflected in the tax responses made.

9.4. Directions for future research

Possible future research could involve testing the conclusions from this thesis against tax responses to recent natural disasters in other OECD countries, for example, Hurricane Katrina in 2005 in the United States, the 2011 earthquake and tsunami in Japan and the 2015 earthquake and tsunami in Chile. In particular, while differences in the scale and frequency of the natural disasters did not appear to be possible rival explanations, it is hard to draw general conclusions based on two data points. Therefore, these are both factors that could be further investigated in testing the conclusions from this thesis against responses to other natural disasters. Similarly, while some high level commentary has been made in this thesis on the contrasting views of policy makers with respect to Australia's insurance taxes and New Zealand's EQC fund, and the split between individual and business responses, these could be areas for further investigation.

Another area for exploration is a comparison of tax responses to natural disasters in developed and developing countries, as developing countries are both more susceptible to natural disasters (World Bank, 2010) and also differ in several important tax relevant respects to countries in the OECD, including income per capita, the relative size of the

agricultural sector, the typical size of businesses, the size of the formal sector labour force and the capabilities of their tax administrations (Heady, 2002).

9.5. Summary

This thesis has addressed a gap in the literature with respect to the links between tax policy and responses to natural disasters. No prior research has systematically compared international tax policy responses over the three phases of a natural disaster, based on the full range of tax policy documents and views of the policy makers involved. The research demonstrates that countries with stronger existing tax policy systems have tax responses to natural disasters which align more with the standard economic principles of good tax policy, even when they are less prepared for an event. However, any weaknesses will also be reflected in the tax responses made. Specifically, the analysis highlights the importance of pre-existing tax settings for dealing with natural disasters, in particular established administrative tax policies and procedures, and the value of pre-funding versus a pay-asyou-go model. It also emphasises the significant administrative tax effort involved in responding to a natural disaster, including actions to support charitable relief. With respect post-disaster recovery, the research shows that decisions regarding the comprehensiveness of capital taxation and availability of disaster recovery grants will influence tax responses required in terms of timing issues for revenue expenditure and the timing or taxation of capital expenditure. Finally, while countries will be required to consider funding options for recovery, pressure can be mitigated by high levels of public and private insurance, allowing governments to rely on existing taxes and increased debt rather than implement short-term disaster levies. These findings will be useful for the development of future tax policy with respect to natural disasters, meaning that such policy can be made on less shaky ground.

Appendix A: Human ethics approval, interview guide, information sheet and interview consent documents

PIPITEA HUMAN ETHICS COMMITTEE Comments on Application for Human Ethics Committee Approval

Date: 19 April 2013

Re: Good tax policy on shaky ground? An assessment of tax policy decision in response to natural disasters.

Principal Researcher: Carolyn Palmer

Supervisor (student research): Norman Gemmell and Lisa Marriott

Thank you for helping your student to complete their HEC application. The committee members have reviewed this HEC application and following are the comments for you to act upon in preparation for full approval. Based on the reviews, the committee's decision is the following:

Application approved subject to the following minor change(s). Human Ethics Approval valid until: (Date: as in application or no more than 3 years)

You may begin your data collection immediately, provided the change(s) noted below are acceptable and provided you send an updated signed application with the change(s) made to the HEC Chair within one month.

The modifications that should be made in the revised application are those suggested by the committee. If the changes are not acceptable, please provide details of your objections in the corresponding "Your response" column.

Professor Bill Atkin Chair Pipitea Human Ethics Committee

Reviewers Comments on Ethics Issues

Changes	Your response – Date 10/7/13
 Application 1. Item 2 (a) – a vuw student email address is required. 2. Item 3 (a) - should read "After ethical approval is granted". 3. Interview schedule – the word "draft" needs to be removed. 	 Email address has now been included. Statement has now been included. Removed.

 Information sheet The word "draft" needs to be removed The information sheet appears rather detailed for prospective respondents. You may be able to edit it a little. The supervisors' full contact details and email addresses need to be used rather than the school's. "This has Human Ethics Committee approval from Victoria University of Wellington" (or similar) should be used instead of the current sentence. Full contact details of the researcher should also be included. 	 1.Removed. 2. The information sheet has been edited slightly to remove duplicated information so that it now fits on one page. 3. Updated to include contact details. 4.Edited to now state: This project has Human Ethics Committee approval from Victoria University of Wellington. 5. Contact details included.
 Consent form 1. The word "draft" needs to be removed. 2. Para 2 – "their supervisors" implies that there is more than one researcher. Please amend to "her". 3. The two tick boxes at the end need to be simplified. 4. Needs to include consent for audio recording. It is noted that it will be done orally, but it may be safer to include it also on the consent form. 	 Removed. Amended. Simplified as follows: Please send me a summary of the results of this research when it is completed. Opinions from this interview may be attributed to me. Now included.
Additional Comments (not necessarily on ethical issues buproject)	ut provided in case they are useful for applicant's research
Additional Comments	Your response

1.

INTERVIEW GUIDE

Title of project: Good tax policy on shaky ground? An assessment of tax policy decisions in response to natural disasters

Introduction

- Introduce myself and describe how I am enrolled as a PhD candidate in the School of Accounting and Commercial Law at Victoria University of Wellington.
- Inform the interviewees that I am under the supervision of Professor Norman Gemmell and Dr Lisa Marriott.
- Note my role in the response to the Christchurch Earthquakes (Tax Policy Advisor to the Minister of Finance).

Purpose of the study

- Share the purpose of the study with interviewees.
 - o The aim of this research is to investigate whether the principles of good tax policy still hold when a country is faced with a large economic shock, such as a natural disaster. Do countries follow good tax policy principles when responding to a natural disaster? Is the ability to respond in line with good tax policy dependent on the strength of the existing tax policy framework and how well this is understood and accepted?
- Outline the approach to the study.
 - One of the sources of information for this comparative case study is semistructured interviews with professional individuals involved in the development of tax policy advice, such as Government Ministers, tax policy officials, representatives from professional accounting organisations and representatives from the Big 4 accounting firms.
- Confidentiality, tape recording and note taking.
 - O Ask the interviewees if you can tape record the interview. Let them know that it is important for you to capture their words and ideas, and using the tape recorder will allow you to do this. Also let them know that you may take notes while you are conducting the interview, so that you can keep track of the interview as it progresses.
 - o Inform the interviewees that they will not be identified or described in any way that would reveal their identity if permission to do so has not been given.
- Enquire whether there are any questions before starting the interview proper.

Turn on the tape recorder

- Ask the interviewees if it is ok to tape record the interview. Record their verbally stated permission.
- If the interviewees refuse permission to tape record, take notes while the interview proceeds, and immediately after the interview reconstruct as much of it as possible actual words and observations.

Interview questions

Context

- What is the background of the interviewee with respect to tax policy development?
- What was their experience of the natural disaster?
- What was their role in the development of tax policy with respect to response to the natural disaster?

The existing tax policy framework

- What is good tax policy?
- How well are the principles of good tax policy understood and accepted nationally?
- How did national tax policy rate prior to the earthquakes?
- How well is the tax policy framework understood and accepted nationally?

The response to the natural disaster

- What tax policy responses (legislative and administrative) were made in response to the natural disaster? For example:
 - o Changes to clarify the treatment of emergency support payments (both in cash and kind).
 - o Changes to relax normal tax compliance requirements.
 - o Changes to the tax treatment of donations in cash and in kind.
 - o Changes to the tax treatment of insurance receipts.
 - o Changes to allow tax deductions for destroyed property.
 - Changes to raise revenue to meet the public cost of natural disasters (such as the cost of social assistance and replacing infrastructure).
 - o Changes to encourage economic redevelopment.
- What was the policy rationale for the changes?
- Were the tax policy responses consistent with good tax policy?
- Did they move the country closer or further away from ideal tax policy?
- Was the ability to respond in line with good tax policy dependent on the strength of the existing tax policy framework?
- Was there a difference between short, medium and longer-term policy responses?

Conclusion

- Thank the interviewee for their time.
- Ask whether there are other key participants in the policy process who should potentially be interviewed.

Participant Information Sheet – Study of tax policy decisions in response to natural disasters

Researcher: Carolyn Palmer, Victoria University of Wellington

I am undertaking a PhD research project leading to a thesis. The aim of my research is to investigate whether the generally accepted principles of good tax policy are still valid when responding to a natural disaster.

The inspiration for my research project is the time I spent seconded from Inland Revenue to the Minister of Finance's office as his Tax Policy Advisor. One of the defining experiences of my secondment was the Christchurch earthquakes, with their significant impact on the New Zealand economy.

This assessment of tax policy responses to natural disasters will be conducted using qualitative research. The focus for the study will be tax policy changes made in response to recent natural disasters. The research will compare the New Zealand and Australian responses to their respective natural disasters (New Zealand – Christchurch earthquakes, Australia – Queensland floods). To provide additional perspectives, tax policy responses to recent natural disasters in the United States and Japan will also be discussed.

One of the sources of information for this comparative case study is semi-structured interviews with professional individuals involved in the development of tax policy advice. It is anticipated that the interviews will take approximately one hour. Permission will be sought to record the interviews and you will be provided with a draft transcript so that corrections can be made if necessary.

Information collected through the interviews will form the basis of my research project. You will be offered a choice as to whether your opinions will be attributed or not. If opinions are not to be attributed, any information from the interview will be put into a written thesis on an anonymous basis. All source material collected will be kept confidential. No one except my supervisors and I will see the interview notes or hear the recorded interviews. Should you feel the need to withdraw from the interview, or have any of the information you provided excluded from the study, then you may do so without question at any time within two weeks of the interview.

The thesis will be submitted for examination and deposited in the University Library. It is intended that one or more articles will be submitted for publication in scholarly journals. Results may also be disseminated at academic or professional conferences. Interview notes and recorded interviews will be destroyed two years after the conclusion of the research. This project has Human Ethics Committee approval from Victoria University of Wellington.

If you have any questions, please contact me [] or my supervisors, Professor Norman Gemmell []
and Dr Lisa Marriott [].	

Carolyn Palmer

WRITTEN CONSENT FORM FOR INTERVIEW PARTICIPANTS

CONSENT FORM - VICTORIA UNIVERSITY OF WELLINGTON CONSENT TO PARTICIPATION IN RESEARCH

Title of project: Good tax policy on shaky ground? An assessment of tax policy decisions in response to natural disasters

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered to my satisfaction. I understand that I may withdraw myself (or any information I have provided) from this project (within two weeks of the interview) without having to give reasons or without penalty of any sort.

I understand that any information I provide will be kept confidential to the researcher and her supervisors and the tape recording of interviews will be electronically wiped at the end of the project.

I understand that I will have an opportunity to check the transcripts of the interview before publication.

I understand that the data I provide will not be used for any other purpose or released to others without my written consent.

I agree to take part in this research.

Signed:
Name of participant (Please print clearly):
Date:
☐ I give me consent for this interview to be tape recorded.
Please send me a summary of the results of this research when it is completed.
Opinions from this interview may be attributed to me.

Note that if opinions are not to be attributed, any information from the interview will be put into a written thesis on an anonymous basis and it will not be possible for you to be identified personally.

Appendix B: Comparing Musgrave to recent tax reviews

	Revenue adequacy	Equity	Efficiency	Ease of administration and compliance	Consistency with fiscal policy
Musgrave (Musgrave & Musgrave, 1989).	Good tax policy should ensure an adequate revenue yield.	The distribution of the tax burden should be equitable.	Taxes should be efficient, with minimal impact on economic decisions.	The tax system should permit fair and non-arbitrary administration and be understandable to the taxpayer.	The tax system should facilitate the use of fiscal policy for stabilization and growth objectives.
Tax Review 2001 (2001). New Zealand.		Described as fairness. Stressed the need to understand who bears the consequences of a tax, as the economic impact will often be different from its statutory impact. Identified a number of characteristics of fairness: ability to pay, even handedness, user pays and transitional fairness.	Described as reducing economic distortions. Tax policy design should aim to reduce the costs of imposing taxes by keeping differences in effective tax rates as low as possible, and applying a similar tax treatment to closely substitutable activities.	Identified reducing administration costs (the cost of the tax authority, courts, and executive and legislative processes) and reducing compliance costs (the costs of obtaining information and advice, preparing and filing returns, making payments, and resolving disputes).	
Victoria University of Wellington Tax Working Group (2010). New Zealand.	Gave the principle a temporal dimension, taking a longer-term view of revenue adequacy.	Introduced a temporal element, including how equity compares over peoples' life-times.	Advocated for efficiency in tax policy design. Taxes should be efficient and minimise (as far as possible) impediments to economic growth. The tax system should avoid unnecessarily distorting the use of resources by causing biases toward one form of activity versus another.	The tax system should be as simple and low cost as possible for taxpayers to comply with and for the tax authority to administer. Emphasis on policy coherence and consistency for the tax system as a whole. Recognised lobbying costs associated with taxpayers seeking concessions.	Review was conducted in the early days of the GFC. Stressed the need for tax reforms to be affordable given fiscal constraints.

	Revenue adequacy	Equity	Efficiency	Ease of administration and compliance	Consistency with fiscal policy
The Henry Review (Henry et al., 2010). Australia.	Focused on the concept of revenue sustainability.	The tax system should reflect vertical equity (requiring tax burdens to be distributed progressively) and horizontal equity (people in the same economic position should bear the same tax).	Linked the principles of equity and efficiency. The tax system should raise and redistribute revenue at the least possible cost to economic efficiency.	Encouraged simplicity. The tax system should be easy to understand and simple to comply with. Emphasis on policy coherence and consistency for the tax system as a whole.	Considered the context in which the tax system operates: demographic change, changing social context, rising expectations about living standards, the shifting centre of world economic activity, globalisation, importance of national savings, and growing environmental pressures.
The Mirrlees Review (2011). United Kingdom.	Focussed on equity and did not identify either revenue adequacy or sustainability as a key tax policy design principle.	The tax system should have a process and institutional context which is seen as fair. Rather than trying to resolve every complaint, policy makers should be transparent about the objectives, arguments, evidence and consequences of proposals.	Linked the principles of equity and efficiency. Defined efficiency as minimising the negative effects of the tax system on welfare and economic efficiency.	Advocated for a tax system that people understand. Emphasis on policy coherence and consistency for the tax system as a whole.	Taxes need to be designed for the economies in which they operate. The level of economic development, types of income, growing inequality, and labour market change and technology need to be factored in when designing a tax system.

Appendix C: Phases of the disaster management cycle

	Firms and individuals	Governments
Pre-disaster:	The cost of a natural disaster can be substantially reduced if people are	Knowledge of vulnerabilities helps governments determine how much to insure and
Risk	well informed and motivated towards a culture of prevention. This	spend on mitigation (IPCC, 2012; Laframboise & Loko, 2012). As the cost of a disaster
identification	requires the collection and dissemination of information on hazards,	can be reduced if people are well informed, this information should also be made
	vulnerabilities and capacities (United Nations, 2007).	available to individuals (World Bank, 2010).
Pre-disaster:	Individuals may choose to rely on ex post assistance, as paying for	Governments can take a range of risk reduction activities: legislating for risk reduction,
Risk	prevention is costly while receiving relief from others is free (Cavallo	allocating resources to risk management, promoting community participation in risk
reduction	& Noy, 2011; Cohen & Werker, 2008; Freeman et al., 2003).	reduction, natural resource management, protecting and strengthening critical
	Alternatively, firms and individuals could respond by moving to a safer	infrastructure, promoting public-private partnerships for risk reduction activities, and
	location. Households and firms can also choose to save and accumulate	land-use planning (Laframboise & Loko, 2012; United Nations, 2007; World Bank,
	reserves to cushion loss from disasters (Phaup & Kirschner, 2010).	2010). However, politicians and policy makers face weak incentives for adopting
	Finally, agents may choose to invest to reduce damage. From a purely	preventative measures (Healy & Malhotra, 2009). Diverting resources away from current
	economic point of view, investing in risk reduction pays off (Freeman	services has a visible opportunity cost. Disasters are also considered to be "acts of God",
	et al., 2003; World Bank, 2004). However, mitigation requires	with politicians not blamed for a lack of preparation (Cavallo & Noy, 2011). In contrast,
	resources and involves an evaluation of the impacts and probabilities of	officials are held accountable and rewarded for responding quickly once a disaster occurs
	a disaster occurring (Cavallo & Noy, 2011). With respect to evaluating	(Phaup & Kirschner, 2010). Even if governments want to take action, they must finance
	risk, people differ, they do not always correctly perceive risk and they	preventative measures, trading-off between the cost of ex post responses as compared to
	may not always act in their own best interests (World Bank, 2010).	pre-disaster activities (Cohen & Werker, 2008).
Pre-disaster:	Insurance plays a significant role in coping with disasters by	Governments can transfer risk by taking out insurance (Freeman et al., 2003; Phaup &
Risk transfer	transferring risk (Freeman et al., 2003; World Bank, 2010). However,	Kirschner, 2010; World Bank, 2010). Insurance can be beneficial where premiums are
	many private households and firms are inadequately insured. This may	lower than expected losses (World Bank, 2010). Risk assessment to determine the
	be linked to a number of problems associated with insurance for large	amount of insurance and payment of premiums focuses attention on mitigation. The
	natural events, for example: uncertainty with regard to size of potential	transfer of funds also puts money beyond the reach of politicians and officials who might
	losses, moral hazard, adverse selection, highly correlated risk (Cavallo	otherwise divert funds. Disadvantages with insurance are that it leaves the government
	& Noy, 2011; Kunreuther & Pauly, 2009), and uneven protection (Freeman et al., 2003). Due to these challenges, governments may	with counterparty risk (Phaup & Kirschner, 2010) and contracts can be expensive, with prices fluctuating every time there is a major event (Cavallo & Noy, 2011). An
	choose to mandate the purchase of insurance or offer insurance directly	alternative is a catastrophe bond. However, the market for such instruments is in its
	(Phaup & Kirschner, 2010). However, mandated insurance has higher	infancy (Cavallo & Noy, 2011). Governments may also self-insure by establishing a
	administrative costs resulting in higher premiums (Phaup & Kirschner,	general fund or annual budget allocation to provide for natural disaster expenditure
	2010). Individuals also bare counterparty risk, although this may	(Freeman et al., 2003; Laframboise & Loko, 2012). These provide incentives to
	ultimately be passed back to government. Where insurance is provided	undertake mitigation activities and reassurance to potential insurers and donors (Freeman
	directly, there can be challenges with controlling costs as there may be	et al., 2003). However, fully funding disaster costs may be expensive (Cavallo & Noy,
	political pressure to lower premiums, opposition to risk-based pricing	2011) and will divert resources away from other infrastructure and social spending
	and capping coverage (Freeman et al., 2003; World Bank, 2010).	(Laframboise & Loko, 2012). An alternative is to adopt a stable, sustainable fiscal
		policy, which gives governments the ability to fund responses by increasing international
		borrowing (Phaup & Kirschner, 2010).

	Firms and individuals	Governments
Immediate	The response phase begins immediately after a disaster happens and	In determining how to respond, governments assess physical damage and the likely
response	includes both immediate relief and responses to re-establish systems	impact on economic activity (World Bank, 2010). An assessment of the effects of the
	and infrastructure (Todd & Todd, 2011). For firms and households, the	disaster is needed to guide decisions on the level of relief to provide as support is limited
	focus is fast effective relief – to help those affected to recover from the	by the government's fiscal situation (World Bank, 2010). Governments also need to
	immediate effects of the disaster by providing food, shelter and	consider how their recovery responses impact on private incentives to prepare for
	medical care (Freeman et al., 2003; Todd & Todd, 2011; Venn, 2012;	disasters, as Government relief can displace the efforts of others and increase the cost of
	World Bank, 2004).	government responses (Phaup & Kirschner, 2010). Government relief in this phase often
		takes the form of transfers in cash or in kind. Short-term measures like income support
		and wage subsidies are used to help workers who have been displaced by temporary firm
		closures and to provide support for firms to preserve jobs (Venn, 2012). Medium-term
		government responses can also include public works programmes to employ displaced
		workers and financing for firms affected by a disaster (Venn, 2012).
Post-disaster	This phase includes recovery, rehabilitation, and reconstruction	Private effects of a natural disaster translate into large long-lasting macroeconomic
	activities (Venn, 2012), and may also include developing risk reduction	impacts (Freeman et al., 2003). Disasters impact the level of GDP, leading to a
	measures to reduce future vulnerability (IPCC, 2012; World Bank,	worsening fiscal position as the tax base contracts and spending needs rise (Freeman et
	2004). Medium term responses take the first steps towards recovery by	al., 2003). They result in a weakening trade balance as the capacity to produce exports
	assessing damage to infrastructure, communities, institutions, and	falls and reconstruction needs increase imports and divert domestic products to the home
	business and planning restoration activities (Todd & Todd, 2011).	market (Laframboise & Loko, 2012). This (and foreign investors' concerns about future
	Assessing the impact of a natural disaster on individuals and firms is	earnings and tax pressures) puts downward pressure on the exchange rate (Freeman et
	likely to identify a reduction in productive capacity caused by damage	al., 2003). Inflationary pressures arise from an excess of monetary holdings in the face of
	to business assets and infrastructure, and damage to agriculture (World	reduced incomes and wealth, monetization and exchange rate depreciation (Freeman et
	Bank, 2004) and natural resources (Freeman et al., 2003). There is also	al., 2003). Natural disasters can also have a negative impact on the fiscal accounts and
	likely to be change in demand (negative for those with reduced clients	levels of public debt. Typically, tax revenues decrease as economic activity declines and
	and positive for those involved in construction or outside the affected	emergency relief and reconstruction lead to an increase in government expenditures
	areas), banking losses, increased insurance premiums, reduced	(Melecky & Raddatz, 2011). If governments borrow to fund the deficit, public debt ratios
	employment and decreased housing market activity, followed by	rise. A fall in domestic savings is also likely, leading to an increase in borrowing abroad.
	property and rental increases where the loss of dwellings outstrips the	While these economic impacts are relatively well understood, quantifying the economic
	loss of population (Parker & Steenkamp, 2012). These impacts on	impact can be difficult as it is hard to disentangle the effects of the disaster, and timely
	individuals and firms raise a number of issues for governments.	and reliable data can be hard to obtain or interpret (Parker & Steenkamp, 2012).

Appendix D: Pre-existing natural disaster tax provisions in Australia and New Zealand

Australia	New Zealand
ATO business continuity arrangements which operate under the Commissioner's broad discretionary powers and use a standardised disaster response framework. Based on the standardised framework and an assessment of impacts, ATO staff recommend a response covering the deferment of lodgements and payments, and remission of interest and penalties for approval by the Commissioner.	 General IRD discretions to extend filing dates for income tax returns for a limited period and provide financial relief from the payment of outstanding tax. General discretion for the Governor General to extend tax time limits for a specified period per limit. However, the power does not apply to all Inland Revenue Acts and may not be delegated to the IRD. IRD discretion to remit late payment or filing penalties which arise as a result of an event or circumstance beyond the taxpayer's control. IRD discretion to remit interest where an emergency event physically prevents a taxpayer from making a tax payment.
To support cross-government arrangements, Australia has an instrument allowing the	
sharing of taxpayer information that can be signed off when a state of emergency is declared. Australia also allows for taxpayer-approved information sharing.	
The ability for businesses to vary their PAYG tax instalments.	The provisional tax rules previously allowed a taxpayer significantly affected by a self-assessed adverse event to make a late estimate of provisional tax. These provisions were repealed in 2009 as they were no longer considered necessary.
Tax exemptions for government relief.	
Tax exemptions for emergency assistance provided by employers.	
Deductions for gifts, including trading stock.	Tax deductions and credits for charitable gifts.
Concessional tax treatment for employment termination payments.	
CGT rollover relief.	Rollover relief for livestock donated in response to a self-assessed adverse event.
 Rollover relief for depreciating assets. Rollover relief for trading stock. 	• Tax deductions for buildings, aquaculture, farming and forestry improvements which are irreparably damaged and rendered useless due to a natural event.
	• Tax deductions for goods that are not used in deriving income because they are destroyed or rendered useless.
Specific tax rules for farming businesses, including the ability to obtain early release of farm management deposits and tax deductions (either immediate or amortised over ten years) for flood mitigation and soil conservation expenditure (ATO, 1982).	 Special rules to allow refunds from income equalisation scheme deposits to replace livestock disposed of or lost as a result of a self-assessed adverse event. A specific adverse event income equalisation scheme which allows farmers who experience adverse events to carry income from forced livestock sales over to the next income year.
Deferral of deductions for non-commercial operations.	
• Discretionary relief under the non-commercial loss rules and deemed dividend rules where the taxpayer's business activity has been adversely affect by floods.	

Appendix E: Canterbury earthquakes post-disaster recovery tax changes

Altering the timing/ taxation of revenue expenditure	Altering the timing of capital expenditure	Altering the capital revenue boundary
An amendment so that taxable income from insurance payments for business interruption is allocated to the later of the income year to which the replaced income relates or the income year the amount can be reasonably estimated. A change to allow a person whose incomeearning activity was interrupted by the earthquakes a tax deduction for expenditure incurred during the period of interruption when their income-earning activity resumes, as long as this is before the 2019–20 income year. A change to the controlled foreign company rules to match tax deductions for insurance claims and receipts from reinsurers so that any reimbursement from a reinsurer is taxable.	A Canterbury-specific optional timing rule that allows taxpayers to carry forward income from insurance payments and match it against the cost of repairs, at the earlier of the time these have been incurred or derived, can be reasonably estimated, or the end of the 2018/19 income year. An amendment so that when an asset is destroyed it is treated as being disposed of in the earliest income year in which the insurance proceeds can be reasonably estimated. A Canterbury-specific optional timing rule that allows the net amount of insurance payments and disposal proceeds, less the tax book value and disposal expenditure for irreparably damaged assets and assets that are uneconomic to repair, to be brought to account for tax purposes when the insurance proceeds and disposal costs have been incurred or derived, can be reasonably estimated, or at the end of the 2018/19 income year. An amendment to allow a depreciation deduction for the 2010–11 to the 2018–19 income years when access to a property was temporarily restricted as a result of the Canterbury earthquakes. A change to the thin capitalisation rules to allow Canterbury taxpayers to carry back insurance proceeds to the date an asset was impaired and treat this as an asset until the insurance is recognised for accounting purposes (up to 2018-19 income year) to avoid the denial of interest deductions.	 Extending tax losses/deductions for capital assets: Allowing a deductible loss for buildings that have to be destroyed to remediate land or to allow other buildings to be demolished as a result of damage from an event beyond the owner's control. Allowing disposal and demolition amounts to be dealt with as part of an asset disposal. Capping/excluding the taxation of capital amounts: Limiting depreciation recovery income that arises in the 2010–11 to 2018–19 income years to the amount of depreciation deductions previously claimed for repairable assets and assets that are uneconomic to repair as a result of the earthquakes. Switching off provisions that would tax income from rebuilding zoning changes, and disposals of Christchurch land by dealers/developers within 10 years in response to a red zone compensation offer or compulsory acquisition. Taxing capital amounts: Treating business interruption insurance payments for replacement property as a taxable capital contribution if they are not otherwise taxed or used to reduce the cost base of the replacement property. A generic amendment so that insurance receipts for asset repairs are taxable no matter whether they are received before or after the related repairs. Clarifying that if damaged property is disposed of before insurance proceeds are received, the proceeds are derived and taxable immediately before the disposal. Changes to correct gaps in the depreciation rules for pooled assets.

Appendix F: Summary of legislative references

New Zealand

Building Act 2004

Canterbury Earthquake (Inland Revenue Acts) Amendment Order 2012

Canterbury Earthquake (Inland Revenue Acts) Order 2011

Canterbury Earthquake (Tax Administration Act) Order (No 2) 2011

Canterbury Earthquake (Tax Administration Act) Order 2011

Canterbury Earthquake Recovery Act 2011

Civil Defence Emergency Management Act 2002

Estate and Gift Duties Act 1968

Goods and Services Tax Act 1985

Income Tax Act 2007

KiwiSaver (Significant Financial Difficulties—Canterbury Earthquake) Regulations 2011

KiwiSaver Act 2006

Local Government (Rating) Act 2002

Privacy Act 1993

Resource Management Act 1991

Tax Administration (Emergency Event - Canterbury Earthquake) Amendment Order (No 2) 2011

Tax Administration Act 1994

Taxation (Canterbury Earthquake Measures) Act 2011

Australia

Fringe Benefits Tax Assessment Act 1986

Income Tax Assessment Act 1997

Social Security Legislation Amendment (Disaster Recovery Allowance) Act 2013

Tax and Superannuation Laws Amendment (2014 Measures No. 2) Act 2014

Tax Laws Amendment (2011 Measures No. 1) Act 2011

Tax Laws Amendment (2011 Measures No.1) Bill 2011

References

- 2009 Victorian Bushfires Royal Commission. (2009). The fire services levy and insurance discussion paper. Melbourne. Retrieved from http://pandora.nla.gov.au/pan/96781/20100923-0223/www.royalcommission.vic.gov.au/Discussion-Paper.html
- 2009 Victorian Bushfires Royal Commission. (2010). *Final report*. Melbourne. Retrieved from http://www.royalcommission.vic.gov.au/finaldocuments/summary/PF/VBRC_Summary_PF.pdf
- 2025 Taskforce. (2009). *Answering the \$64,000 question: Closing the income gap with Australia by 2025*. Wellington. Retrieved from http://www.treasury.govt.nz/downloads/pdfs/2025tf-1streport-nov09.pdf
- ABC News. (2011a). Government facing uphill battle on flood levy. Retrieved from http://www.abc.net.au/news/2011-02-10/government-facing-uphill-battle-on-flood-levy/1937930
- ABC News. (2011b, January 18). Flood costs tipped to top \$30b. *ABC News*. Retrieved from http://www.abc.net.au/news/2011-01-18/flood-costs-tipped-to-top-30b/1909700
- AMI Insurance. (2016). Q&As about premium changes. Retrieved from https://www.ami.co.nz/about/faq-premiums
- Anderson, B., & Sheppard, J. (2009). Fiscal futures, institutional budget reforms, and their effects: What Can Be Learned? *OECD Journal on Budgeting*, 2009(3), 7–117. Retrieved from https://www1.oecd.org/gov/budgeting/46051529.pdf
- Archel, P., Husillos, J., & Spence, C. (2011). The institutionalisation of unaccountability: Loading the dice of corporate social responsibility discourse. *Accounting, Organizations and Society*, *36*(6), 327–343.
- Arklay, T. (2012). Queensland's State Disaster Management Group: An all agency response to an unprecedented natural disaster. *The Australian Journal of Emergency Management*, 27(3), 9–19.
- Armstrong, D., Gosling, A., Weinman, J., & Marteau, T. (1997). The place of inter-rater reliability in qualitative research: an empirical study. *Sociology*, *31*(3), 597–606.
- ATO. (1982). Taxation Ruling No. IT 351. ATO. Retrieved from http://law.ato.gov.au/atolaw/view.htm?rank=find&criteria=OR~PAC/19360027/75D~m akesref~exact:::OR~PAC/19360027/75D(?~makesref~exact&target=E EA&style=java&sdocid=ITR/IT351/NAT/ATO/00001&recStart=1&PiT=99991231235 958&lookupdocument=RPC/19360027%
- ATO. (2011a). ATO response to the 2011 natural disasters. Canberra: ATO.

- ATO. (2011b). FBT minutes. ATO. Retrieved from https://www.ato.gov.au/law/view/document?src=hs&pit=99991231235958&arc=false&s tart=71&pageSize=10&total=79&num=2&docid=rtf/ntlg20100217&dc=false&tm=phra se-basic-NTLG FBT Sub-committee minutes#_Toc291752393
- ATO. (2012a). Assistance payments. ATO. Retrieved from https://www.ato.gov.au/Individuals/Dealing-with-disasters/Assistance-payments/
- ATO. (2012b). Business Continuity Management (BCM) Community Disaster Response Framework, ATO.
- ATO. (2013a). Abnormal receipts. Retrieved from https://www.ato.gov.au/Forms/Information-for-primary-producers-2013/?page=7
- ATO. (2013b). ATO Community Disaster Framework supporting information. ATO.
- ATO. (2014). Taxation statistics 2011-12. ATO.
- ATO. (2016). Capital gains tax. ATO. Retrieved from https://www.ato.gov.au/general/capital-gains-tax/
- Attorney-General's Department. National Disaster Relief and Recovery Arrangements Agreement (2012). Australia. Retrieved from https://www.disasterassist.gov.au/Documents/Natural-Disaster-Relief-and-Recovery-Arrangements/NDRRA-Determination-2012-v-2.pdf
- Auerbach, A., & Hassett, K. (1999). *A new measure of horizontal equity* (No. 7035). Retrieved from http://www.nber.org/papers/w7035
- Auerbach, A. J., & Gale, W. G. (2009). *The economic crisis and the fiscal crisis: 2009 and beyond*. Retrieved from https://www.brookings.edu/wp-content/uploads/2016/06/0219 fiscal future gale.pdf
- Australian National Audit Office. (2008). The Australian Taxation Office's administration of business continuity management.
- Australian Treasury. (2008). *Architecture of Australia's tax and transfer system*. Canberra. Retrieved from http://taxreview.treasury.gov.au/content/Paper.aspx?doc=html/publications/papers/report/prelims.htm
- Australian Treasury. (2010). Annual regulatory plan. Canberra: Australian Treasury. Retrieved from http://www.treasury.gov.au/~/media/Treasury/About Treasury/Our Department/Annual Regulatory Plan/Downloads/past_changes_2010.ashx
- Australian Treasury. (2011a). *A definition of charity*. Canberra. Retrieved from http://www.treasury.gov.au/~/media/Treasury/Consultations and Reviews/Consultations/2011/A Definition of Charity/Key Documents/PDF/definition_v6.ashx

- Australian Treasury. (2011b). Capital gains tax relief for taxpayers affected by natural disasters. Canberra. Retrieved from http://www.treasury.gov.au/ConsultationsandReviews/Consultations/2011/Capital-gains-tax-relief-for-taxpayers-affected-by-natural-disasters
- Australian Treasury. (2011c). Exposure draft: Farm management deposits amendments. Canberra: Australian Treasury.
- Australian Treasury. (2011d). Flood assistance: Making business assistance grants tax exempt. Canberra: Australian Treasury.
- Australian Treasury. (2011e). Summary of Commonwealth assistance and estimates variations for Queensland floods. Canberra: Australian Treasury.
- Australian Treasury. (2011f). Tax Laws Amendment (2011 Measures No.1) Bill 2011 explanatory memorandum. Australia. Retrieved from http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22legislat ion%2Fbillhome%2Fr4519%22
- Australian Treasury. (2011g). Tax treatment of Queensland flood business assistance grants. Canberra: Australian Treasury. Retrieved from http://www.treasury.gov.au/Access-to-Information/DisclosureLog/2011/Impacts-of-the-Queensland-floods
- Australian Treasury. (2012a). Economic roundup issue 3. Retrieved from http://www.treasury.gov.au/PublicationsAndMedia/Publications/2012/Economic-Roundup-Issue-3/Report/Treasury8217s-Wellbeing-Framework
- Australian Treasury. (2012b). Minor amendments to the capital gains tax law. Canberra.
- Australian Treasury. (2012c). *Terrorism Insurance Act Review: 2012*. Canberra. Retrieved from http://www.treasury.gov.au/~/media/Treasury/Publications and Media/Publications/2012/Terrorism Insurance Act Review 2012/downloads/Terrorism_Insurance_Act_Review_2012.ashx
- Australian Treasury. (2012d). The Treasury annual regulatory plan 2011-12-13. Canberra.
- Australian Treasury. (2013). *Charities (Consequential Amendments and Transitional Provisions) Bill 2013 explanatory material*. Canberra. Retrieved from http://www.treasury.gov.au/~/media/Treasury/Consultations and Reviews/Consultations/2013/A statutory definition of charity/Key Documents/PDF/EM_Charities_Bill_and_Consequentials_2013.ashx
- Baldwin, R., Plunkett, L. M., & Herring, R. B. (1990). Dealing with the tax consequences of a natural disaster. *Journal of Accountancy*, 170(2), 50.
- Ball, C., & Creedy, J. (2013). *Tax policy with uncertain future costs: Some simple models* (No. 13/07). Wellington. Retrieved from http://www.treasury.govt.nz/publications/research-policy/wp/2013/13-07/twp13-07.pdf

- Barker, G., & Tooth, R. (2008). *Insurance law and economics: An analysis of the demand for house and contents insurance in Australia* (No. 1). Sydney. Retrieved from https://law.anu.edu.au/sites/all/files/allfiles/insurance_demand_homecontents_fina.pdf
- Barradale, M. J. (2010). Impact of public policy uncertainty on renewable energy investment: Wind power and the production tax credit. *Energy Policy*, *38*(12), 7698–7709.
- Belton-Brown, G. (2012). Revolution or evolution? The response of the law to earthquakes in New Zealand 1848 1948. *Canterbury Law Review*, 18, 213 231. Retrieved from http://www.nzlii.org/nz/journals/CanterLawRw/2012/11.pdf
- Bennett, P. (2011). Christchurch keeps working. Wellington: www.beehive.govt.nz. Retrieved from https://www.beehive.govt.nz/release/christchurch-keeps-working
- Bergman, M. S. (2003). Tax reforms and tax compliance: The divergent paths of Chile and Argentina. *Journal of Latin American Studies*, 35(3), 593–624.
- Beuermann, C., & Santarius, T. (2006). Ecological tax reform in Germany: Handling two hot potatoes at the same time. *Energy Policy*, *34*(8), 917–929.
- Biggs, R. (2012). Paying for disaster recovery: Australia's NDRRA and the United States' NFIP. *Australian Journal of Emergency Management*, 27(2), 26–30.
- Bird, R. M., & Zolt, E. M. (2003). Introduction to tax policy design and development. In *Practical Issues of Tax Policy in Developing Countries, World Bank*. World Bank. Retrieved from http://www1.worldbank.org/publicsector/LearningProgram/tax.htm
- Bitter, M. E., Copeland, R. W., & Dascher, P. E. (2006). Natural disasters and tax issues for business victims. *Strategic Finance*, 87(7), 17.
- Blanchard, O. (2009). Macroeconomics (5th ed.). Pearson Education Inc.
- Bollard, A., & Hannah, M. (2012). A tale of two crises. Christchurch, New Zealand: Reserve Bank of New Zealand. Retrieved from http://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Speeches/2012/4658917.pdf
- Bondfield, B. (2006). Submission to the Independent Pricing and Regulatory Tribunal of New South Wales Regulation Review. Sydney, Australia: www.ipart.nsw.gov.au. Retrieved from http://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/submission__section_9_regulation_review_-_brett_bondfield_-_website_document.pdf
- Bradley, G. P. (2011). *Inquiry into the Income Tax Rates Amendment (Temporary Flood Reconstruction Levy) Bill 2011; and the Tax Laws Amendment (Temporary Flood Reconstruction Levy) Bill 2011*. Canberra: parlinfo.aph.gov.au. Retrieved from http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=COMMITTEES;id=c ommittees/commrep/13628/0004;query=Id:"committees/commrep/13628/0000"

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research* in *Psychology*, 3(2), 77–101.
- Brookie, R. (2012). *Governing the recovery from the Canterbury earthquakes 2010-11: The debate over institutional design* (No. 12/01). Wellington. Retrieved from http://igps.victoria.ac.nz/publications/files/27b07e4270b.pdf
- Brownlee, G. (2011). Latest Christchurch land information released. Wellington: www.beehive.govt.nz. Retrieved from https://www.beehive.govt.nz/release/latest-christchurch-land-information-released
- Building Act 2004 (2004). New Zealand. Retrieved from http://legislation.govt.nz/act/public/2004/0072/latest/DLM306036.html
- Bündnis Entwicklung Hilft, & United Nations University. (2016). *World Risk Report 2016*. Retrieved from http://weltrisikobericht.de/wp-content/uploads/2016/08/WorldRiskReport2016.pdf
- Burch, M. (2013). Tax policy and chaos: War, disaster, and the role of the tax system. In *Asia-Pacific Disaster Management* (pp. 267–277). Springer Berlin Heidelberg.
- Burgess, F. (2011). Shaky capital revenue distinctions. In *The 2011 Tax Conference*. Auckland: New Zealand Institute of Chartered Accountants.
- Cairns, L. (2015, November 30). Christchurch City Council to sell City Care. *Stuff.co.nz*. Christchurch, New Zealand. Retrieved from http://www.stuff.co.nz/business/74549060/Christchurch-City-Council-to-sell-City-Care
- Cameron, L., Chapple, B., Davis, N., Kousis, A., & Lewis, G. (2007). *New Zealand financial markets, saving and investment* (No. 07/01). Wellington. Retrieved from http://www.treasury.govt.nz/publications/research-policy/ppp/2007/07-01/tpp07-01.pdf
- Canterbury Earthquake (Inland Revenue Acts) Amendment Order 2012 (2012). New Zealand. Retrieved from http://legislation.govt.nz/regulation/public/2012/0035/latest/DLM4335225.html
- Canterbury Earthquake (Inland Revenue Acts) Order 2011 (2011). New Zealand. Retrieved from http://legislation.govt.nz/regulation/public/2011/0080/latest/DLM3619001.html
- Canterbury Earthquake (Tax Administration Act) Order (No 2) 2011 (2011). New Zealand. Retrieved from http://www.legislation.govt.nz/regulation/public/2011/0375/latest/DLM4046001.html
- Canterbury Earthquake (Tax Administration Act) Order 2011 (2011). New Zealand. Retrieved from http://www.legislation.govt.nz/regulation/public/2011/0027/latest/whole.html
- Canterbury Earthquake Recovery Act 2011 (2011). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/2011/0012/latest/DLM3653522.html

- Canterbury quake report. (2010). Chartered Accountants Journal, October, 4.
- Caplan, B. (2002). How does war shock the economy? *Journal of International Money and Finance*, 21(2), 145–162.
- Cappella, R. (2012). *The political economy of war finance*. University of Pennsylvania. Retrieved from http://repository.upenn.edu/cgi/viewcontent.cgi?article=2985&context=edissertations
- Carr, R., & Quinn, T. (2006). Hurricane Katrina tax relief. The CPA Journal, (March), 6-9.
- Cavallo, E., & Noy, I. (2011). Natural disasters and the economy A survey. *International Review of Environmental and Resource Economics*, 5, 63–102.
- CERA. (2012). Earthquake Recovery Update Issue 9. Christchurch, New Zealand:
 Canterbury Earthquake Recovery Authority. Retrieved from
 http://cera.govt.nz/sites/default/files/common/earthquake-recovery-update-issue-9-17-april-2012.pdf
- Christchurch Women's Refuge. (2010). How disasters impact on family violence. *The Advocate*, *Summer 201*(4). Retrieved from http://www.avivafamilies.org.nz/resources/file/2010_4_womens_refuge_summer_dec_1 0_lr.pdf
- Christensen, J. (2012). Bringing the bureaucrats back in: neo-liberal tax reform in New Zealand. *Journal of Public Policy*, 32(2), 141–168.
- Chua, W. F. (1986). Radical developments in accounting thought. *The Accounting Review*, *LXI*(4), 601–632.
- Civil Defence Emergency Management Act 2002 (2002). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/2002/0033/25.0/DLM149789.html
- Cohen, C., & Werker, E. (2008). *The political economy of "natural" disasters* (No. 08-040). Boston. Retrieved from http://www.hbs.edu/faculty/Publication Files/08-040.pdf
- Commonwealth of Australia. (2011). Queensland floods (November 2010 February 2011). Retrieved from https://www.disasterassist.gov.au/Pages/disasters/previous-disasters/Queensland/Queensland-floods-November-2010-to-February-2011.aspx
- Commonwealth of Australia. (2014a). Natural Disaster Relief and Recovery Arrangements. Retrieved from http://www.disasterassist.gov.au/NDRRADetermination/Pages/default.aspx
- Commonwealth of Australia. (2014b). Temporary budget repair levy. Retrieved from http://budget.gov.au/2014-15/content/overview/html/overview_06.htm
- Connolly, S., & Munro, A. (1999). Economics of the public sector. Prentice Hall Europe.

- Cooper, D. J., & Morgan, W. (2013). Meeting the evolving corporate reporting needs of government and society: Arguments for a deliberative approach to accounting rule making. *Accounting and Business Research*, 43(4), 418–441.
- Creedy, J. (2010). Reflections on "A Tax System for New Zealand's Future." *Agenda*, 17(1), 63–73.
- Creedy, J. (2011). Reflections on Tax by Design. Fiscal Studies, 32(3), 361–373.
- Creedy, J., Enright, J., Gemmell, N., & McNabb, N. (2008). *Equity and efficiency measures of tax-transfer systems: Some evidence for New Zealand* (No. 08/04). Wellington. Retrieved from http://www.treasury.govt.nz/publications/research-policy/wp/2008/08-04
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing amoung five approaches* (3rd ed.). Sage Publications, Inc.
- Crotty, M. (1998). The foundations of social research: Meaning and perspective in the research process. Sage.
- Dahlhamer, J. M., & Tierney, K. J. (1996). Winners and losers: Predicting business disaster recovery outcomes following the Northridge earthquake (No. 243). Newark. Retrieved from http://udspace.udel.edu/bitstream/handle/19716/651/PP243.pdf?sequence..
- Davies, T. (2011). Ask Uncle Tom. Chartered Accountants Journal, June, 23–24.
- Deloitte. (2013). Building our nation's resilience to natural disasters. Canberra.
- Deloitte. (2014). *Building an open platform for natural disaster resilience decisions*. Sydney. Retrieved from http://australianbusinessroundtable.com.au/white-paper/research-report
- Dempsey, S. (2011). Who loses, who pays? *In the Black*, 81(9), 26–27.
- Department of Finance and Deregulation. (2012). Review of the insurance arrangements of state and territory governments under the Natural Disaster Relief and Recovery Arrangements Determination 2011. Canberra. Retrieved from http://www.finance.gov.au/publications/review-natural-disaster-relief-recovery-arrangements/
- Department of Treasury and Finance. (2009). *Green paper Fire services and the non-insured*. Melbourne. Retrieved from http://www.vfbv.com.au/documents/documents/discussionPapers/2009 Fire Services Green Paper.pdf
- Deroubaix, J. F., & Lévéque, F. (2006). The rise and fall of French ecological tax reform: Social acceptability versus political feasibility in the energy tax implementation process. *Energy Policy*, *34*(8), 940–949.
- Dirkis, M., & Bondfield, B. (2005). At the extremes of a "good tax policy process": A case study contrasting the role accorded to consultation in tax policy development in

- Australia and New Zealand. New Zealand Journal of Taxation Law and Policy, 11, 250–276. Retrieved from
- http://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/submission__section_9_regulation_review_-_brett_bondfield_-_website_document.pdf
- Doherty, E. (2011). *Economic effects of the Canterbury earthquakes*. Wellington. Retrieved from http://www.parliament.nz/resource/ennz/00PlibCIP051/ccd96733060e8e3a1769b3a4ef3017e3de45df83
- DPMC. (2011). *New Zealand's national security system*. Wellington. Retrieved from http://www.dpmc.govt.nz/sites/all/files/publications/national-security-system.pdf
- Dresner, S., Dunne, L., Clinch, P., & Beuermann, C. (2006). Social and political responses to ecological tax reform in Europe: an introduction to the special issue. *Energy Policy*, *34*(8), 895–904.
- Dresner, S., Jackson, T., & Gilbert, N. (2006). History and social responses to environmental tax reform in the United Kingdom. *Energy Policy*, *34*(8), 930–939.
- Dunne, P. (2011). Parliament passes tax bill. Wellington: IRD. Retrieved from http://taxpolicy.ird.govt.nz/news/2011-08-18-parliament-passes-tax-bill
- Dykstra, J. (2011a). E for effort: The EQC report card (part 1). Retrieved April 10, 2016, from http://sciblogs.co.nz/shaken-not-stirred/2011/08/30/e-for-effort-the-eqc-report-card-part-1/
- Dykstra, J. (2011b). E for effort: The EQC report card (part 2). Retrieved April 10, 2016, from http://sciblogs.co.nz/shaken-not-stirred/2011/08/30/e-for-effort-the-eqc-report-card-part-2/
- Earthquake Commission. (2015a). EQC insurance. Retrieved from http://www.eqc.govt.nz/what-we-do/eqc-insurance
- Earthquake Commission. (2015b). Managing the natural disaster fund. Retrieved from http://www.eqc.govt.nz/about-eqc/our-role/ndf
- Economic Governance Support Unit (EGOV). (2014). *State-of-play in implementing macroeconomic adjustment programmes in the euro area*. Brussels. Retrieved from http://www.europarl.europa.eu/document/activities/cont/201402/20140219ATT79589/2 0140219ATT79589EN.pdf
- Eiby, G. A. (1975). A history of anti-seismic measures in New Zealand. *Bulletin of the New Zealand Society for Earthquake Engineering*, 8(4), 255–259. Retrieved from http://www.nzsee.org.nz/db/Bulletin/Archive/08(4)0255.pdf
- Emergency New South Wales. (2015). NSW moves to a fairer system for funding fire and emergency services. Retrieved from https://www.emergency.nsw.gov.au/media-releases/2015/nsw-moves-to-a-fairer-system-for-funding-fire-and-emergency-services.html

- English, B. (2011a). Earthquake, Christchurch -Measures to meet fiscal cost. Wellington: New Zealand Parliament. Retrieved from https://www.parliament.nz/en/pb/hansard-debates/rhr/document/49HansD_20110309/volume-670-week-67-wednesday-9-march-2011
- English, B. (2011b). Financial commitment to rebuild Canterbury. Wellington: www.beehive.govt.nz. Retrieved from https://www.beehive.govt.nz/release/financial-commitment-rebuild-canterbury
- English, B., & Ryall, T. (2013). An extra \$1.5b allocated from Future Fund. Wellington: www.beehive.govt.nz. Retrieved from https://www.beehive.govt.nz/release/extra-15b-allocated-future-fund
- Estate and Gift Duties Act 1968 (1968). New Zealand.
- Farmer, I. (2011a). Natural disasters take their toll on business sector. *International Tax Review*, 22(2), 34.
- Farmer, I. (2011b). Natural disasters take their toll on business sector. *International Tax Review*, 22(2), 34–34.
- Feltham, C. (2011). *Insurance and reinsurance issues after the Canterbury earthquakes*. Wellington. Retrieved from http://www.parliament.nz/resource/en-nz/00PlibCIP161/e9e4aba0e5a8b0eccf517d16183735b2f3c871a5
- Fischer-Smith, R. (2013). The earthquake support subsidy for Christchurch's small and medium enterprises: Perspectives from business owners. *Small Enterprise Research*, 20(1), 40–54. Retrieved from http://www.resorgs.org.nz/images/stories/pdfs/journal/ess-fischer-smith.pdf
- Fleming, C. M., Manning, M., & Smith, C. (2015). Evaluating betterment projects. http://doi.org/10.1111/disa.12148
- Frances, J. (2004). *Institutions, firms and economic growth* (No. 04/19). Wellington. Retrieved from http://www.treasury.govt.nz/publications/research-policy/wp/2004/04-19
- Freeman, P. K., Michael, K., & Muthukumara, M. (2003). *Dealing with increased risk of natural disasters: Challenges and options* (No. WP/03/197). Washington D.C. Retrieved from http://www.imf.org/external/pubs/ft/wp/2003/wp03197.pdf
- Fringe Benefits Tax Assessment Act 1986. Australia. Retrieved from https://www.legislation.gov.au/Details/C2014C00048
- Frost, P. (2013). *Flood relief and recovery*. Melbourne. Retrieved from http://www.audit.vic.gov.au/reports_and_publications/latest_reports/2012-13/20132606-flood-relief.aspx

- Furler, M. (2013, October 31). MP blasts new \$90 fire levy as new tax for Queensland. Sunshine Coast Daily. Retrieved from http://www.sunshinecoastdaily.com.au/news/mp-blasts-new-90-fire-levy-new-tax-queensland/2069355/
- Gardner, R. (2006). Disasters and energy concerns bring tax changes. *Journal of Financial Planning*, (February), 42–61.
- Gill, J., & Bogacki, T. (2013). Data preservation. *Chartered Accountants Journal, February*, 28–49.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory*. Chicago, IL: Aldine.
- Goods and Services Tax Act 1985 (1985). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/1985/0141/latest/DLM81035.html
- Grossman, H. I., & Han, T. (1991). *A theory of war finance* (No. w3799). Retrieved from http://ssrn.com/abstract=226932.
- Hahn, E. J., Toumey, C. P., Rayens, M. K., & McCoy, C. A. (1999). Kentucky legislators' views on tobacco policy. *American Journal of Preventive Medicine*, 16(2), 81–88.
- Hansen, S. (1983). The politics of taxation: Revenue without representation. Retrieved May 27, 2013, from http://www.getcited.org/pub/102283579
- Hare, J., Bull, D., Brown, B., Brunsdon, D., Jury, R., King, A., McCahon, I., Millar, P., Smith, P., & Stannard, M. (2012). Canterbury earthquake sequence: Detailed engineering evaluation of commercial buildings. In *15th World Conference on Earthquake Engineering*. Lisbon. Retrieved from http://www.iitk.ac.in/nicee/wcee/article/WCEE2012_3820.pdf
- Hasseldine, J., & Li, Z. (1999). More tax evasion research required in new millennium. *Crime, Law and Social Change*, *31*(2), 91–104.
- Hatton, T., Seville, E., & Vargo, J. (2012). *Improving the resilience of SMEs: policy and practice in New Zealand* (No. 2012/012). Christchurch, New Zealand. Retrieved from http://www.resorgs.org.nz/images/stories/pdfs/apec sme resilience policy final report.pdf
- Hayman, K. (2011, March 11). Christchurch earthquake: Major power cable cut. *The Press*. Christchurch, New Zealand. Retrieved from http://www.stuff.co.nz/national/christchurch-earthquake/4757378/Christchurch-earthquake-Major-power-cable-cut
- Heady, C. (1993). Optimal taxation as a guide to tax policy: a survey. *Fiscal Studies*, 14(1), 14–41.
- Heady, C. (2002). Tax policy in developing countries: What can be learned from OECD experience? In *Taxing perspectives: A democratic approach to public finance in*

- developing countries. OECD. Retrieved from http://www2.ids.ac.uk/futurestate/pdfs/heady.pdf
- Healy, A., & Malhotra, N. (2009). Myopic voters and natural disaster policy. *The American Political Science Review*, 103(3), 387–406.
- Heather, B. (2012). Council "failed to grasp the magnitude of task." *The Press*. Christchurch, New Zealand. Retrieved from http://www.stuff.co.nz/the-press/news/christchurchearthquake-2011/6206847/Council-failed-to-grasp-the-magnitude-of-task
- Heferen, R., Mitchell, N., & Amalo, I. (2013). Tax policy formulation in Australia. *Economic Roundup*, (2), 1–14. Retrieved from http://www.treasury.gov.au/PublicationsAndMedia/Publications/2013/Economic-Roundup-Issue-2/Economic-Roundup/Tax-policy-formulation-in-Australia
- Henry, D., Harmer, J., Piggott, J., Ridout, H., & Smith, G. (2010). *Australia's future tax system*. Canberra: Australian Treasury. Retrieved from https://taxreview.treasury.gov.au/content/Content.aspx?doc=html/pubs_reports.htm
- Hessing, D. J., Kinsey, K. A., Elffers, H., & Weigel, R. H. (1988). Tax evasion research: Measurement strategies and theoretical models. In *Handbook of economic psychology* (pp. 516–537). Netherlands: Springer.
- Hetherington, D. (2013). Per Capita Tax Survey 2012: Public attitudes towards taxation and government expenditure. Per Capita. Retrieved from http://percapita.org.au/wp-content/uploads/2014/03/2012TaxSurvey.pdf
- Howes, M., Grant-Smith, D., Reis, K., Bosomworth, K., Tangney, P., Heazle, M., McEvoy, D., & Burton, P. (2013). Rethinking disaster risk management and climate change adaption. Brisbane. Retrieved from https://www.nccarf.edu.au/sites/default/files/attached_files_publications/Howes_2013_Rethinking_disaster_risk_management.pdf
- Hurst, D. (2011, January 11). Three-quarters of Queensland a disaster zone. *Brisbane Times*. Brisbane. Retrieved from http://www.brisbanetimes.com.au/environment/weather/threequarters-of-queensland-a-disaster-zone-20110111-19mf8.html
- Income Tax Act 2007 (2007). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/2007/0097/latest/DLM1512301.html
- Income Tax Assessment Act 1997. Australia. Retrieved from http://www.austlii.edu.au/au/legis/cth/consol_act/itaa1997240/
- Ingham, J. M., Biggs, D. T., & Moon, L. M. (2011). How did unreinforced masonry buildings perform in the February 2011 Christchurch earthquake? *Structural Engineer*, 89(6), 14–18. Retrieved from http://acicny.org/Resources/Documents/David_Biggs_article.pdf

- Institute of Chartered Accountants Australia. (2011). Proposals paper Capital gains tax relief for taxpayers affected by natural disasters. Institute of Chartered Accountants Australia.
- Institute of Chartered Accountants Australia. (2012). Pre-budget submission for 2012-13. *Charter*, (March), 52–53.
- Institute of Chartered Accountants Australia. (2014). Protection measure for annouced but un-enacted tax amendments. Institute of Chartered Accountants Australia.
- IPCC. (2012). Managing the risks of extreme events and disasters to advance climate change adaption. Cambridge University Press, Cambridge, UK, and New York, NY, USA.
- IRD. (2005). Taxation (Venture Capital and Miscellaneous Provisions) Act 2004. Taxation (Annual Rates of Income Tax Act 2004–05) Act 2004. *Tax Information Bulletin*, 17(1), 36–87. Retrieved from http://www.ird.govt.nz/resources/0/e/0ec003f0-aa9e-409c-a7c2-83b40ba7f8b2/tib-vol17-no1.pdf
- IRD. (2009). Part II: New legislation. Taxation (International Taxation, Life Insurance, and Remedial Matters) Act 2009. *Tax Information Bulletin*, 21(8), 1–169. Retrieved from http://www.ird.govt.nz/resources/6/6/6638ab9f-b011-4f81-abb1-0511f004bc0b/tib-vol21-no8.pdf
- IRD. (2010). Canterbury Earthquake Order In Council (PAD2010/223). Wellington.
- IRD. (2011a). Ad Hoc Cabinet Committee on Canterbury Earthquake Recovery 26 September 2 Canterbury earthquake Orders in Council (PAD BN2011/122). Wellington.
- IRD. (2011b). Cabinet paper Taxation (Canterbury Earthquake Measures) Bill Further refinements and approval for introduction (PAD2011/80). Wellington.
- IRD. (2011c). Canterbury earthquake amendment (thin capitalisation) (PAD2011/204). Wellington.
- IRD. (2011d). Canterbury earthquake and "other payments" category in working for families income definition (PAD2011/49). Wellington.
- IRD. (2011e). Canterbury earthquake policy issues (PAD2011/032). Wellington.
- IRD. (2011f). Canterbury earthquake policy issues update (PAD2011/047). Wellington.
- IRD. (2011g). Canterbury earthquake: Relaxing time limits for tax. Wellington: IRD.
- IRD. (2011h). Canterbury earthquake: Tax treatment of certain payments to employees. Wellington.
- IRD. (2011i). Child support issues following the Canterbury earthquake Impact on custodial parents (PAD2011/45). Wellington.

- IRD. (2011j). Child support issues following the Canterbury earthquake (PAD2011/33). Wellington.
- IRD. (2011k). Christchurch earthquake Charities related tax issues (PAD BN2011/20). Wellington.
- IRD. (2011). Christchurch earthquake appeal Redirecting donation tax credits to the appeal (IRD2011/024). Wellington.
- IRD. (2011m). Earthquake outstanding tax matters (PAD BN2011/90). Wellington.
- IRD. (2011n). Extension of the PAYE exemption for payments to employees following the Canterbury earthquake (PAD2011/233). Wellington.
- IRD. (2011o). Fact sheet Earthquake depreciation issues. Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2011-other-earthquake-depreciation-issues-fact-sheet/overview
- IRD. (2011p). Fact sheet Extensions of time to meet your obligations. Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2011-other-earthquake-fact-sheets/extensions-time-meet-your-obligations
- IRD. (2011q). Fact sheet Tax relief for donated trading stock. Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2011-other-earthquake-fact-sheets/tax-relief-donated-trading-stock
- IRD. (2011r). Fact sheet Welfare contributions by employers. Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2011-other-earthquake-fact-sheets/welfare-contributions-employers
- IRD. (2011s). Inland Revenue and MSD co-located contact centre proposal for Christchurch (IRD2011/134). Wellington.
- IRD. (2011t). Inland Revenue Christchurch earthquake response update. Wellington.
- IRD. (2011u). Orders in Council. *Tax Information Bulletin*, 23(10), 13–14. Retrieved from https://www.ird.govt.nz/resources/e/1/e10eada8-9bd5-4798-8a93-27a19950e83b/tib-vol23-no10.pdf
- IRD. (2011v). Paper for Cabinet Legislative Committee SOP for Taxation (Tax Administration and Remedial Matters) Bill: Approval for Release (PAD2011/139). Wellington.
- IRD. (2011w). Red and black Christchurch bonds proposal (PAD BN2011/40). Wellington.
- IRD. (2011x). Regulatory impact statement Canterbury earthquake: Extensions of time for meeting tax obligations. Wellington. Retrieved from https://taxpolicy.ird.govt.nz/publications/2011-ris-ceira-order/canterbury-earthquakeextensions-time-meeting-tax-obligations

- IRD. (2011y). Regulatory impact statement: Relief of interest on overdue tax (foreign workers here for the earthquakes). Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2011-ris-sop-263-tarm-bill/overview
- IRD. (2011z). Regulatory impact statement: Tax relief for depreciation clawback Canterbury earthquake. Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2011-ris-sop-254-tarm-bill/overview
- IRD. (2011aa). Regulatory impact statement: Tax relief for donated goods Christchurch earthquake. Wellington. Retrieved from https://taxpolicy.ird.govt.nz/publications/2011-ris-cem-bill/overview
- IRD. (2011ab). Regulatory impact statement: Tax relief for welfare payments by employers Christchurch earthquake. Wellington. Retrieved from https://taxpolicy.ird.govt.nz/publications/2011-ris-cem-bill/overview
- IRD. (2011ac). Renewal of two Orders in Council relating to the Canterbury earthquake and its aftershocks (PAD2011/224). Wellington.
- IRD. (2011ad). *Taxation (Canterbury Earthquake Measures) Act 2011*. Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2011-sr-earthquake-bill/overview
- IRD. (2011ae). Taxation (Tax Administration and Remedial Matters) Act 2011. *Taxation Information Bulletin*, 23(8), 17–100. Retrieved from http://www.ird.govt.nz/resources/3/7/37eb2fe0-445c-4254-9183-68d92627e25a/tib-vol23-no8.pdf
- IRD. (2011af). Taxation of non-resident loss adjusters (Canterbury earthquake) (PAD BN2011/89). Wellington.
- IRD. (2011ag). Vote Revenue: Approval to establish an appropriation (IRD2011/046). Wellington.
- IRD. (2012a). Cabinet papers on tax-related matters to be discussed by Cabinet Committee for Canterbury Earthquake Recovery on 11 June 2012 (PAD BN2012/057). Wellington.
- IRD. (2012b). Cabinet papers: Canterbury earthquake amendments (PAD2012/115). Wellington.
- IRD. (2012c). Canterbury earthquake: amendments to the Income Tax Act 2007 (PAD2012/105). Wellington.
- IRD. (2012d). Canterbury earthquake: Expiry of three Orders-in-Council affecting the Commissioner of Inland Revenue. Wellington.
- IRD. (2012e). Canterbury earthquake: Renewal of Order-in-Council allowing the extension of time limits (PAD2012/25). Wellington.

- IRD. (2012f). Canterbury earthquake-related measures in the Taxation (Annual Rates, Returns Filing, and Remedial Matters) Act 2012. Wellington. Retrieved from https://taxpolicy.ird.govt.nz/sites/default/files/2012-sr-earthquake-measures.pdf
- IRD. (2012g). Canterbury earthquakes expiry of three Orders in Council (PAD2012/177). Wellington.
- IRD. (2012h). Christchurch earthquake appeal Redirecting donation tax credits to the appeal for 2012 (IRD2012/026). Wellington.
- IRD. (2012i). Exploring the impact of adverse events on SME tax compliance behaviour: A longitudinal study. Findings from year 1. Wellington.
- IRD. (2012j). Insurance income of CFCs (Christchurch earthquake) (PAD BN2012/32). Wellington.
- IRD. (2012k). *IS 12/03 Income Tax Deductibility of Repairs and Maintenance Expenditure General Principles*. Wellington. Retrieved from https://www.ird.govt.nz/resources/1/5/15bcf6004bd345a9a70ee703e7885840/is1203.pdf
- IRD. (2012l). New legislation. *Tax Information Bulletin*, 24(10), 18–83. Retrieved from https://www.ird.govt.nz/resources/1/6/16b6d8ba-05c5-4ff8-a516-9fa0d7015741/tib-vol24-no10.pdf
- IRD. (2012m). Regulatory impact statement: Various tax issues arising in the context of the Canterbury earthquakes. Wellington. Retrieved from https://taxpolicy.ird.govt.nz/sites/default/files/2012-ris-sop-98-arrfrm-bill-1.pdf
- IRD. (2012n). Response to Grant Thornton on the Christchurch earthquakes and the use-of-money interest relief provisions (PAD2012/28). Wellington.
- IRD. (2012o). *Reviewing the tax treatment of employee allowances and other expenditure payments*. Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2012-ip-employee-allowances/chapter-1
- IRD. (2012p). Update on tax policy issues relating to the Canterbury earthquake (PAD BN2012/40). Wellington.
- IRD. (2013a). Exploring the impact of adverse events on SME tax compliance behaviour: A longitudinal study on Inland Revenue's response to, and learnings from, the Christchurch earthquakes. Findings from Year 2. Wellington.
- IRD. (2013b). Regulatory impact statement: Further Canterbury earthquake tax measures. Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2013-ris-sop-257-arfsrm-bill/overview
- IRD. (2013c). *Taxation (Annual Rates, Employee Allowances, and Remedial Matters) Bill; Commentary on the Bill.* Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2013-commentary-arearm/overview

- IRD. (2014a). Exploring the impact of adverse events on SME tax compliance behaviour: A longitudinal study. Year 3 Qualitative and quantitative findings. Wellington.
- IRD. (2014b). Taxation (Annual Rates, Foreign Superannuation, and Remedial Matters) Act 2014. *Taxation Information Bulletin*, 26(4), 9–61. Retrieved from http://www.ird.govt.nz/resources/a/e/aee2f96e-f5c6-4b1f-ae75-e951c8bae62e/tib-vol26-no4.pdf
- IRD. (2014c). The impact of the Canterbury earthquakes on small and medium enterprises. Adverse events longitudinal study Administrative data analyses. Wellington.
- IRD. (2015). *Taxation (Annual Rates for 2015–16, Research and Development, and Remedial Matters) Bill. Commentary on the Bill.* Wellington. Retrieved from http://taxpolicy.ird.govt.nz/sites/default/files/2015-commentary-arrdrm.pdf
- IRD. (2016a). Gift duty basic information. Retrieved from http://www.ird.govt.nz/duties-levies/gift-duty/giftduty-index.html
- IRD. (2016b). How we develop tax policy. Retrieved from http://taxpolicy.ird.govt.nz/how-we-develop-tax-policy
- IRD, & New Zealand Treasury. (2016). *Making tax simpler Better business tax: An officials' issues paper*. Wellington: IRD. Retrieved from http://taxpolicy.ird.govt.nz/sites/default/files/2016-ip-mts-better-business-tax.pdf
- Johnston, E. (2011, March 5). IAG warns against national disaster insurance scheme. *Sydney Morning Herald*. Sydney, Australia. Retrieved from http://www.smh.com.au/business/iag-warns-against-national-disaster-insurance-scheme-20110304-1bi69.html
- Kasa, S. (2000). Policy networks as barriers to green tax reform: The case of CO2-taxes in Norway. *Environmental Politics*, *9*(4), 104–122.
- Kashiwagi, M. (2011). *Japan: How should funds be raised for rebuilding after the disaster* (No. 4). Tokyo. Retrieved from http://www.canonigs.org/en/column/macroeconomics/20110929 1068.html
- Kay, J. A. (1990). Tax policy: A survey. *The Economic Journal*, 100(399), 18–75.
- Keating, M. (2010). Problems flowing from the nil depreciation of buildings. *New Zealand Journal of Taxation Law and Policy*, *16*(3), 307–324.
- Kerstein, F. A. (2006). An overview of "post-disaster fraud." St. Thomas Law Review, 18(3), 791.
- Kirby, T., Leake, J., & Granger, K. (2011). Recovering from disasters. *Chartered Accountants Journal, December*, 40–42.

- KiwiSaver (Significant Financial Difficulties—Canterbury Earthquake) Regulations 2011 (2011). New Zealand. Retrieved from http://www.legislation.govt.nz/regulation/public/2011/0101/latest/whole.html
- KiwiSaver Act 2006 (2006). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/2006/0040/135.0/DLM378372.html
- Kozuka, S. (2012a). Insurance law issues due to the great east Japan earthquake 2011 (part one). *Journal of Japanese Law*, 17(33), 3–12.
- Kozuka, S. (2012b). Insurance law issues due to the great east Japan earthquake 2011 (part two). *Journal of Japanese Law*, 17(34), 87–94.
- KPMG. (2011a). National flood assistance programs. KPMG Australia.
- KPMG. (2011b). Special Reconstruction Zone Act and amendments to the Special Tax Law for the March 11 earthquake. *KPMG Japan Tax Newsletter*, *December*, 1–5.
- KPMG. (2011c). Special Tax Law for the great east Japan earthquake. *KPMG Japan Tax Newsletter*, *April*, 1–10.
- Kunreuther, H., & Pauly, M. (2009). Insuring against catastrophes. In F. X. Diebold, N. J. Doherty, & R. J. Herring (Eds.), *The Known, the Unknown and the Unknowable in Financial Risk Management*. Princeton, New Jersey, United States: Princeton University Press.
- Laframboise, N., & Loko, B. (2012). *Natural disasters: Mitigating impact, managing risks* (No. WP/12/245). Washington D.C. Retrieved from http://www.imf.org/external/pubs/cat/longres.aspx?sk=40044.0
- Latham, C., McCourt, P., & Larkin, C. (2010). Natural disasters in Australia: Issues of funding and insurance. In *Institute of Actuaries of Australia 17th General Insurance Seminar*. Gold Coast: The Institute of Actuaries of Australia. Retrieved from http://www.actuaries.asn.au/library/events/GIS/2010/NaturalDisastersInAustralia-Paper.pdf
- LeBlanc, P., Matthews, S., & Mellbye, K. (2013). *The tax policy landscape five years after the crisis* (No. 17). Paris. Retrieved from http://www.oecd-ilibrary.org/taxation/the-tax-policy-landscape-five-years-after-the-crisis_5k40l4dxk0hk-en
- Lewis, M. W., & Kelemen, M. L. (2002). Multiparadigm inquiry: Exploring organizational pluralism and paradox. *Human Relations*, 55(2), 251–275.
- Lim, D., Slemrod, J., & Wilking, E. (2013). Expert and public attitudes towards tax policy: 2013, 1994, and 1934. *National Tax Journal*, 66(4), 775–805.
- Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. Beverly Hills, CA: Sage.

- Local Government (Rating) Act 2002 (2002). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/2002/0006/latest/DLM131394.html
- Local Government New Zealand. (2015). Local government funding review. Wellington: National Council of Local Government New Zealand. Retrieved from http://www.lgnz.co.nz/assets/Uploads/Our-work/Local-Government-Funding-Review.pdf
- Lockyer Valley Regional Council. (2011). 2010 2011 annual report. www.lockyervalley.qld.gov.au. Retrieved from http://www.lockyervalley.qld.gov.au/our-council/publications/annual-reports/Documents/Annual Report 2010-2011.pdf
- Macbeth, I., Partington, I., Hutchinson, G., & Moore, J. (2017). A seismic shift in design. *Water New Zealand*. Local Government New Zealand. Retrieved from http://www.localgovernmentmag.co.nz/category/technical-briefings/
- MacKenzie, D. (2011, October 1). Cheh has case for special tax status. *Business South*, p. 4. Christchurch, New Zealand.
- Mahon, V., & Mahon, J. (2012). Re NDIR final report & Government response. Retrieved from http://www.treasury.gov.au/~/media/Treasury/Consultations and Reviews/Consultations/2011/Reforming Flood Insurance A Proposal to Improve Availability and Transparency/Submissions/PDF/Vince and Judy McMahon.ashx
- Manley, J. F. (1968). Congressional staff and public policy-making: The joint committee on internal revenue taxation. *The Journal of Politics*, *30*(04), 1046–1067.
- Manning, B. (2014, May 15). Budget 2014: Additional \$50 million for earthquake recovery. *New Zealand Herald*. Auckland. Retrieved from http://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11255396
- Maples, A. J. (2012a). A super massive "black hole"? The tax treatment of seismic strengthening costs. *Journal of the Australian Tax Teachers Association*, 7(1), 123–152.
- Maples, A. J. (2012b). The divergence of terra firma and aedificium edificium: The convergence of the Income Tax Act 2007 and case law? In 24th Australasian Tax Teachers Association Conference (ATTA), 16-18 Jan 2012. Sydney, Australia.
- Maples, A. J., & Sawyer, A. (2015). Natural disasters and tax: Issues from the Canterbury earthquakes. In J. Finn & E. Toomey (Eds.), *Legal Responses to Natural Disasters* (pp. 165–192). Wellington: Thomson Reuters.
- Marriott, L. (2008). *The politics of retirement savings taxation: A trans-Tasman comparison*. Victoria University of Wellington. Retrieved from http://researcharchive.vuw.ac.nz/handle/10063/368
- Maykut, P., & Morehouse, R. (1994). *Beginning qualitative research: A philosophic and practical guide*. London: RoutledgeFalmer.

- McGowan, J., & Tiernan, A. (2014). Natural disaster funding arrangements. Brisbane: School of Government and International Relations.
- McKibbin, W. (2011). *Inquiry into the Income Tax Rates Amendment (Temporary Flood Reconstruction Levy) Bill 2011; and the Tax Laws Amendment (Temporary Flood Reconstruction Levy) Bill 2011.* Canberra: parlinfo.aph.gov.au. Retrieved from http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id:"committees/commrep/13628/0000"
- McLean, D. (2003). *The prickly pair: making nationalism in Australia and New Zealand*. University of Otago Press.
- McLure Jr, C. E., & Zodrow, G. R. (1994). The study and practice of income tax policy. *Modern Public Finance*, 186.
- McSaveney, E. (2006). Floods 2004 floods. Retrieved from http://www.teara.govt.nz/en/floods/page-5
- Melecky, M., & Raddatz, C. (2011). How do governments respond after catastrophes? Natural-disaster shocks and the fiscal stance. (No. 5564). Washington D.C. Retrieved from http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/02/07/0001583 49_20110207134355/Rendered/PDF/WPS5564.pdf
- Mendelson, D., & Carter, R. (2012). Catastrophic loss and the law: A comparison between 2009 Victorian black Saturday fires and 2011 Queensland floods and Cyclone Yasi. *University of Tasmania Law Review*, *31*(2), 32. Retrieved from http://www.austlii.edu.au/au/journals/UTasLawRw/2012/11.html
- Messere, K., de Kam, F., & Heady, C. (2003). *Tax policy: Theory and practice in OECD countries*. Oxford University Press on Demand.
- Miley, F., & Read, A. (2013). After the quake: The complex dance of local government, national government and accounting. *Accounting History*, 18(4), 447–471.
- Mills, A. J., Durepos, G., & Wiebe, E. (2010). *Encyclopedia of case study research*. Thousand Oaks, CA: SAGE Publications Ltd. http://doi.org/10.4135/9781412957397
- Ministry of Civil Defence and Emergency Management. (2005). *New Zealand's response to the 1994 Yokohama strategy and plan of action for a safer world: National information report.* Retrieved from https://www.unisdr.org/2005/wcdr/preparatory-process/national-reports/New-Zealand-report.pdf
- Mirrlees, J. (Ed.). (2011). Tax by design: The Mirrlees review. Oxford University Press.
- Molesworth, M. (2011). Capital gains tax relief for taxpayers affected by natural disasters. Brisbane: BDO (QLD) Pty Limited.

- Morgan, G. (1988). Accounting as reality construction: Towards a new epistemology for accounting practice. *Accounting, Organizations and Society*, *13*(5), 477–485.
- Mrakovcic, M. (2011). *Inquiry into the Income Tax Rates Amendment (Temporary Flood Reconstruction Levy) Bill 2011; and the Tax Laws Amendment (Temporary Flood Reconstruction Levy) Bill 2011*. Canberra: parlinfo.aph.gov.au. Retrieved from http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=COMMITTEES;id=c ommittees%2Fcommrep%2F13628%2F0004;query=Id%3A%22committees%2Fcommrep%2F13628%2F0000%22
- MSD. (2011a). Christchurch earthquake support package. Retrieved from https://www.msd.govt.nz/about-msd-and-our-work/newsroom/media-releases/2011/millions-for-christchurch-quake-employment-support.html
- MSD. (2011b). Government extends employment support package for Christchurch. Retrieved from https://www.msd.govt.nz/about-msd-and-our-work/newsroom/media-releases/2011/government-extends-employment-support-package-for-christchurch.html
- Musgrave, R. (1959). *The theory of public finance: A study in public economy*. London and New York: McGraw-Hill.
- Musgrave, R., & Musgrave, P. (1989). *Public finance in theory and practice* (5th ed.). International Edition: McGraw-Hill Book Company.
- Nagasaka, T. (2008). New problems in the study of disaster prevention based on disaster risk governance. *Quarterly Review*, 27(April), 77–92.
- Nash, J., & Rakete, R. (2011). Transfer pricing 2011 Inland Revenue update. In *New Zealand Institute of Chartered Accountants 2011 Tax Conference*. Auckland: New Zealand Institute of Chartered Accountants.
- National Infrastructure Unit. (2011). *National infrastructure plan 2011*. Wellington. Retrieved from http://www.infrastructure.govt.nz/plan/2011
- Natural Disaster Insurance Review Panel. (2011). *Natural disaster insurance review inquiry into flood insurance and related matters*. Canberra. Retrieved from http://www.ndir.gov.au/content/report/downloads/NDIR_final.pdf
- New Zealand Treasury. (2007). *Company tax rate change: Questions and answers*. Wellington. Retrieved from http://www.treasury.govt.nz/budget/2007/btr/pdfs/b07-btr-comp-qa.pdf
- New Zealand Treasury. (2011a). Aide memoire: 22 February 2011 aftershock: Welfare package. Wellington.
- New Zealand Treasury. (2011b). Aide memoire: "Give a day" scheme for Christchurch earthquake appeal. Wellington.

- New Zealand Treasury. (2011c). *Budget economic and fiscal update 2011*. Wellington. Retrieved from http://www.treasury.govt.nz/budget/forecasts/befu2011/026.htm
- New Zealand Treasury. (2011d). *Monthly economic indicators. February 2011*. Wellington. Retrieved from http://www.treasury.govt.nz/economy/mei/archive/pdfs/mei-feb11.pdf
- New Zealand Treasury. (2011e). Natural disaster tax relief. Wellington.
- New Zealand Treasury. (2011f). *Pre-election economic and fiscal update 2011*. Wellington. Retrieved from http://www.treasury.govt.nz/downloads/pdfs/prefu11-pt2of10.pdf
- New Zealand Treasury. (2011g). Temporary revenue raising measures. Wellington.
- New Zealand Treasury. (2012a). *Canterbury earthquake recovery fund 2010/11 actual expenditure*. Wellington.
- New Zealand Treasury. (2012b). *Canterbury earthquake recovery fund update Additional information (T2012/785)*. Wellington.
- New Zealand Treasury. (2014). *Investment statement: Managing the Crown's balance sheet*. Wellington. Retrieved from http://www.treasury.govt.nz/government/investmentstatements/2014
- New Zealand Treasury. (2015a). Budget 2015 allocation of the future investment fund. Retrieved from http://www.treasury.govt.nz/budget/2015/execsumm/14.htm
- New Zealand Treasury. (2015b). New Zealand's future natural disaster insurance scheme: Proposed changes to the EQC Act 1993. Wellington: New Zealand Treasury. Retrieved from http://www.treasury.govt.nz/publications/reviews-consultation/eqc/pdfs/eqc-rev-discussion-doc.pdf
- New Zealand Treasury. (2015c). Review of the Earthquake Commission Act. Retrieved from http://www.treasury.govt.nz/publications/reviews-consultation/eqc
- New Zealand Treasury. (2016). Government 2016 revenue strategy. Retrieved from http://www.treasury.govt.nz/government/revenue/strategy
- New Zealand Treasury, & IRD. (2010). *Non-resident loss adjusters (earthquake)* (PAD2010/227 T2010/1729). Wellington.
- New Zealand Treasury, & IRD. (2011a). Cabinet paper Rollover relief on depreciation clawback (T2011/627 PAD2011/72). Wellington.
- New Zealand Treasury, & IRD. (2011b). Cabinet paper on earthquake tax matters (T2011/487 PAD2011/60). Wellington.
- New Zealand Treasury, & IRD. (2011c). *Canterbury earthquake Sundry tax issues* (T2011/747 PAD2011/82). Wellington.

- New Zealand Treasury, & IRD. (2011d). *Canterbury earthquake and its February aftershock Welfare contributions made by employers (T2011/586 PAD2011/68)*. Wellington.
- New Zealand Treasury, & IRD. (2011e). Canterbury earthquake issues: Rollover relief and ten-year tainting rules (T2011/1718 PAD2011/196). Wellington.
- New Zealand Treasury, & IRD. (2011f). *Canterbury earthquake: Technical depreciation issues (T2011/428 PAD2011/56)*. Wellington.
- New Zealand Treasury, & IRD. (2011g). *Canterbury earthquake: Welfare contributions by employers (T2011/431 PAD2011/57)*. Wellington.
- New Zealand Treasury, & IRD. (2011h). *Christchurch earthquake Redundancy tax credits* (*PAD BN2011/23*). Wellington.
- New Zealand Treasury, & IRD. (2011i). *Consutlation on further earthquake related issues* (T2011/2162 PAD2011/230). Wellington.
- New Zealand Treasury, & IRD. (2011j). *Employer welfare contributions (T2011/352 PAD2011/39)*. Wellington.
- New Zealand Treasury, & IRD. (2011k). Foreign loss adjusters Canterbury earthquake (Cabinet paper) (T2011/1529 PAD2011/158). Wellington.
- New Zealand Treasury, & IRD. (2011). Funding the earthquake recovery: Levies and other potential funding options (T2011/334 PAD2011/036). Wellington.
- New Zealand Treasury, & IRD. (2011m). Rollover relief for depreciation clawback arising from the Canterbury earthquake and its aftershocks (T2011/569 PAD2011/66). Wellington.
- New Zealand Treasury, & IRD. (2011n). *Tax concessions as part of a Canterbury economic zone (T2011/389 PAD2011/50)*. Wellington.
- New Zealand Treasury, & IRD. (2011o). *Taxation of foreign loss adjusters (Christchurch earthquake)* (T2011/408 PAD2011/48). Wellington.
- New Zealand Treasury, & IRD. (2012). *GST on reinsurance: Canterbury earthquakes* (T2012/244 PAD2012/27). Wellington.
- New Zealand Treasury, & IRD. (2013). *Taxation (Annual Rates, Foreign Superannuation, and Remedial Matters) Bill; Officials' report to the Finance and Expenditure Committee on submissions on the Bill.* Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2013-or-arfsrm/overview
- New Zealand Treasury, & IRD. (2014). *Taxation (Annual Rates, Employee Allowances, and Remedial Matters) Bill; Officials' report to the Finance and Expenditure Committee on submissions on the Bill.* Wellington. Retrieved from http://taxpolicy.ird.govt.nz/publications/2014-or-arearm/overview

- Newman, A. (2012a). Business interruption insurance. *Chartered Accountants Journal*, *February*, 16–17.
- Newman, A. (2012b). The lease challenge. Chartered Accountants Journal, February, 14–15.
- Noble, M. (2011). Insurance wisdom. Chartered Accountants Journal, August, 34–35.
- NZPA. (2011a, January 19). Fight for Kiwi access to Queensland flood relief. *Stuff.co.nz*. Retrieved from http://www.stuff.co.nz/world/australia/4558611/Fight-for-Kiwi-access-to-Queensland-flood-relief
- NZPA. (2011b, February 24). Lyttelton port to open on Saturday. *The New Zealand Herald*. Auckland. Retrieved from http://m.nzherald.co.nz/nz/news/article.cfm?c id=1&objectid=10708508
- OECD. (1998). Electronic commerce: Taxation framework conditions. Paris.
- OECD. (2000). OECD economic surveys: New Zealand. Paris.
- OECD. (2008). Tax and economic growth. Paris.
- OECD. (2010). OECD economic surveys: Australia. Paris.
- OECD. (2011). OECD economic surveys: New Zealand 2011. Paris.
- OECD. (2012). *Income inequality and growth: The role of taxes and transfers* (No. 9). Retrieved from https://www.oecd.org/tax/public-finance/49417295.pdf
- Office of State Revenue. (2011a). 2011 announcements. Brisbane: Office of State Revenue.
- Office of State Revenue. (2011b). Help for clients affected by the recent floods. Brisbane: Office of State Revenue.
- Officials' Committee for Domestic and External Security Coordination. (2007). *National hazardscape report*. Wellington. Retrieved from http://www.civildefence.govt.nz/assets/Uploads/publications/national-hazardscape-report-sept-2007-complete.pdf
- Okada, T., Haynes, K., Bird, D., Honert, R. van den, & King, D. (2014). Recovery and resettlement following the 2011 flash flooding in the Lockyer Valley. *International Journal of Disaster Risk Reduction*, 8(June), 20–31.
- Okazaki, K. (2010). *Incentives for safer buildings Lessons from Japan*. Retrieved from http://www.preventionweb.net/english/hyogo/gar/2011/en/bgdocs/Okazaki_2010.pdf
- Omura, T., & Forster, J. (2011). Government policy change as a response to major disaster events. In M. Hume & B. Todhunter (Eds.), *Proceedings of the Building Business Communities: Justice, Performance and Change Creating a Sustainable Scholarly*

- Community Colloquia (pp. 100–107). Brisbane: University of Southern Qld, Queensland, Australia. Retrieved from https://eprints.usq.edu.au/20116/
- Parker, D. J. (2011). *Inquiry into the Income Tax Rates Amendment (Temporary Flood Reconstruction Levy) Bill 2011; and the Tax Laws Amendment (Temporary Flood Reconstruction Levy) Bill 2011*. Canberra: parlinfo.aph.gov.au. Retrieved from http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=COMMITTEES;id=c ommittees%2Fcommrep%2F13628%2F0004;query=Id%3A%22committees%2Fcommrep%2F13628%2F0000%22
- Parker, M., & Steenkamp, D. (2012). The economic impact of the Canterbury earthquakes. *Reserve Bank of New Zealand Bulletin*, 75(3), 13–25.
- Pawson, E. (2011). Environmental hazards and natural disasters. *New Zealand Geographer*, 67, 143–147. http://doi.org/10.1111/j.1745-7939.2011.01207.x
- Peetz, D. (1998). *Unions in a contrary world: The future of the Australian trade union movement.* Cambridge University Press.
- Perry, B. (2010). *Household incomes in New Zealand: Trends in indicators of inequality and hardship 1982 to 2009*. Wellington. Retrieved from https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/monitoring/household-incomes/household-incomes-1982-2009.html
- Phaup, M., & Kirschner, C. (2010). Budgeting for disasters: Focusing on the good times. *OECD Journal on Budgeting*, 2010/1, 1–24. Retrieved from http://www.oecd.org/gov/budgeting/48168599.pdf
- Popp, A. (2006). The effects of natural disasters on long run growth. *Major Themes in Economics*, 1, 61–81.
- Poppelwell, E., Sun, H., & Bickers, P. (2015). Building trust through leadership: A longitudinal study on Inland Revenue's response to, and learnings from, the Canterbury earthquakes -Years 1 and 2. *eJournal of Tax Research*, *13*(1), 303 –337.
- PricewaterhouseCoopers Australia. (2011a). Natural disasters take their toll on business sector Implications and issues for affected organisations. *Tax Talk*, *February*(129), 3–4.
- PricewaterhouseCoopers Australia. (2011b). Tax implications and issues for affected organisations. PricewaterhouseCoopers Australia.
- PricewaterhouseCoopers New Zealand. (2012). Repairs & maintenance The Commissioner's view of the capital/revenue distinction. *Tax Tips*, (4), 1–4.
- PricewaterhouseCoopers, & World Bank. (2012). *Paying taxes 2013*. London. Retrieved from http://www.pwc.com/gx/en/paying-taxes/assets/pwc-paying-taxes-2013-full-report.pdf

- Privacy Act 1993 (1993). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/1993/0028/latest/DLM296639.html
- Productivity Commission. (2014). *Natural disaster funding arrangements issues paper*. Retrieved from http://www.pc.gov.au/inquiries/completed/disaster-funding#report
- Productivity Commission. (2015). *Natural disaster funding arrangements*. Retrieved from http://www.pc.gov.au/inquiries/completed/disaster-funding/report
- Queensland Floods Commission of Inquiry. (2012). *Final report*. Retrieved from www.floodcommission.qld.gov.au
- Queensland Reconstruction Authority. (2011). Factsheet 1: Rebuilding Grantham together. Brisbane: Queensland Government.
- Rabino, S. (1980). Tax incentive to exports: Some implications for policy makers. *Journal of International Business Studies*, 11(1), 74–84.
- Radford, J., Addison, R., & Ahmed, H. (2013). Staying alive! SME survival after Christchurch earthquakes. In *26th Annual SEAANZ Conference Proceedings*. *11-12 July 2013*. Sydney: Small Enterprise Association of Australia and New Zealand. Retrieved from http://www.seaanz.org/sites/seaanz/documents/2013SEAANZConference/SEAANZ-2013-Radford-Addison-Ahmed.pdf
- Radio New Zealand. (2011a, February 28). Businesses adapt to get going again. *Radio New Zealand*. Retrieved from http://www.radionz.co.nz/news/canterbury-earthquake/69559/businesses-adapt-to-get-going-again
- Radio New Zealand. (2011b, March 2). Working for families may be cut, confirms Key. *Radio New Zealand*. Wellington. Retrieved from http://www.radionz.co.nz/news/political/69684/working-for-families-may-be-cut,-confirms-key
- Ray, N. (2011). Inquiry into the Income Tax Rates Amendment (Temporary Flood Reconstruction Levy) Bill 2011; and the Tax Laws Amendment (Temporary Flood Reconstruction Levy) Bill 2011. Canberra: parlinfo.aph.gov.au. Retrieved from http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=COMMITTEES;id=c ommittees%2Fcommrep%2F13628%2F0004;query=Id%3A%22committees%2Fcommrep%2F13628%2F0000%22
- Recover Canterbury. (2012). \$5 million milestone reached by Canterbury Business Recovery Trust. Retrieved from http://www.rebuildchristchurch.co.nz/blog/2012/6/5-million-milestone-reached-by-canterbury-business-recovery-trust
- Resource Management Act 1991 (1991). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/1991/0069/latest/DLM230272.html

- Review of Business Taxation. (1998). *An international perspective: Discussion paper*. Canberra. Retrieved from http://www.rbt.treasury.gov.au/publications/paper2/index.htm
- Richards, L., & Morse, J. (2013). *Readme first for a user's guide to qualitative methods* (3rd ed.). London, England: Sage Publications, Inc.
- Richardson, J. A. (2006). Katrina/Rita: The ultimate test for tax policy? *National Tax Journal, LIX No.3*, 551–560.
- Rotimi, J. O. B. (2010). An examination of improvements required to legislative provisions for post disaster reconstruction in New Zealand. University of Canterbury. Retrieved from http://aut.researchgateway.ac.nz/bitstream/handle/10292/5798/Thesis_fulltext Library Copy1.pdf?sequence=1&isAllowed=y
- Runyan, R. C. (2006). Small business in the face of crisis: Identifying barriers to recovery from a natural disaster. *Journal of Contingencies & Crisis Management*, 14(1), 12–26.
- Sage, E. (2012). Christchurch's assets could be next on Govt chopping block. Retrieved from https://blog.greens.org.nz/2012/02/10/christchurch% E2% 80% 99s-assets-could-be-next-on-govt-chopping-block/
- Sawada, Y., & Shimizutani, S. (2008). How do people cope with natural disasters? Evidence from the great Hanshin-Awaji (Kobe) earthquake in 1995. *Journal of Money, Credit and Banking*, 40(2-3), 463–488.
- Sawyer, A. (2013). Reviewing tax policy development in New Zealand: Lessons from a delicate balance of "law and politics." *Australian Tax Forum*, 28, 401–425.
- Schick, A. (2012). Lessons from the crisis. *OECD Journal on Budgeting*, 12(3), 1–29.
- Seismic Tax Coalition. (2014). Proposed tax law change to recognise the costs of seismic strengthening work. Wellington.
- Senate Economics Legislation Committee. (2011). Tax Laws Amendment (Temporary Flood and Cyclone Reconstruction Levy) Bill 2011 Income Tax Rates and Amendment (Temporary Flood and Cyclone Reconstruction Levy) Bill 2011. Canberra. Retrieved from
 - http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Comple ted_inquiries/2010-
 - 13/floodlevybill2011/report/~/media/wopapub/senate/committee/economics_ctte/comple ted_inquiries/2010-13/flood_levy_bill_2011/report/report.ashx
- Sherlock, M. F., Lunder, E. K., Liu, E. C., & Klein, H. S. (2010). *Tax issues and the Gulf of Mexico oil spill: Legal analysis of payments and tax relief policy options*. Washington D.C. Retrieved from http://www.fas.org/sgp/crs/misc/R41323.pdf
- Shorten, B. (2013). Government to increase affordability of insurance. Retrieved from http://billshorten.com.au/government_to_increase_affordability_ofinsurance

- Sinodinos, A. (2013). Integrity restored to Australia's taxation system. *Http://axs.ministers.treasury.gov.au*. Canberra: http://axs.ministers.treasury.gov.au. Retrieved from (http://axs.ministers.treasury.gov.au/media-release/008-2013/)
- Skoufias, E. (2003). Economic crises and natural disasters: Coping strategies and policy implications. *World Development*, *31*(7), 1087–1102.
- Slemrod. (1999). Tax policy in the real world. (J. Slemrod, Ed.). Cambridge University Press.
- Slemrod, J. (1995). Professional opinions about tax policy: 1994 and 1934. *National Tax Journal*, 48(1), 121–147.
- Slemrod, J. (2009). Complexity in the Australian tax and transfer system. In Melbourne Institute of Applied Economic and Social Research (Ed.), *Melbourne Institute Australia's Future Tax and Transfer Policy Conference* (pp. 257–270). Melbourne: Univiersity of Melbourne. Retrieved from http://taxreview.treasury.gov.au/content/Content.aspx?doc=html/conference_report.htm
- Small, V. (2012, February 11). EQC keen to ease pain. *The Press*. Christchurch, New Zealand. Retrieved from http://www.stuff.co.nz/the-press/news/christchurch-earthquake-2011/6401210/EQC-keen-to-ease-pain
- Smart, J. (2012). The role of post-disaster institutions in recovery and resilience: A comparative study of three recent disasters Victorian Bushfires (2009), Queensland floods (2010-11), and Canterbury earthquakes (2010-12) (No. 12/02). Wellington. Retrieved from http://igps.victoria.ac.nz/publications/files/b93c13c28a4.pdf
- Smith, A. (1904). *An inquiry into the nature and causes of the wealth of nations*. (E. Cannan, Ed.) (5th ed.). London: Library of Economics and Liberty. Retrieved from http://www.econlib.org/library/Smith/smWN22.html
- Smith, A. (2015). The Australian non-commercial loss rules: Are similar rules warranted in the New Zealand Income Tax Act? *New Zealand Journal of Taxation Law and Policy*, 21(2), 239–259.
- Smith, G. (2010). Australian tax reforms: Past and future. In I. Claus, N. Gemmell, M. Harding, & D. White (Eds.), *Tax Reform in Open Economies: International and Country Perspectives.* (pp. 265–288). Edward Elgar Publishing Limited.
- Social Security Legislation Amendment (Disaster Recovery Allowance) Act 2013 (2013). Australia. Retrieved from http://www.austlii.edu.au/au/legis/cth/num_act/sslaraa2013645/
- Spilker, B. C., Worsham Jr, R. G., & Prawitt, D. F. (1999). Tax professionals' interpretations of ambiguity in compliance and planning decision contexts. *Journal of the American Taxation Association*, 21(2), 75–89.
- Spittal, M. J., McClure, J., Siegert, R. J., & Walkey, F. H. (2008). Preparation survival activities and mitigation activities. *Environment and Behavior*, 40(6), 798–817.

- State Disaster Management Group. (2010). Extraordinary meeting minutes 10 am Friday 24 December 2010. Retrieved from http://www.floodcommission.qld.gov.au/__data/assets/file/0012/11442/Smith-Ken-1-February-2012-KJS-02.pdf
- State Services Commission. (2012). Christchurch innovations Recover Canterbury case study. Retrieved from http://www.ssc.govt.nz/ci-recover-canterbury
- Steinmo, S. (2003). The evolution of policy ideas: Tax policy in the 20th century. *The British Journal of Politics and International Relations*, *5*(2), 206–236. http://doi.org/10.1111/1467-856X.00104
- Stephens, R. (1993). Radical tax reform in New Zealand. Fiscal Studies, 14(3), 45–63.
- Stern, N. (1984). Optimum taxation and tax policy (imposition optimale et politique fiscale)(tributación óptima y política fiscal). *Staff Papers-International Monetary Fund*. Retrieved from http://www.jstor.org/stable/10.2307/3866796
- Steven, L. (1992). The Earthquake & War Damage Commission A look forward (and a look back). *Bulletin of the New Zealand Society for Earthquake Engineering*, 25(1), 52–55.
- Stevenson, J. R., Kachali, H., Whitman, Z., Seville, E., Vargo, J., & Wilson, T. (2011). Preliminary observations of the impacts the 22 February Christchurch earthquake on organisations and the economy: A report from the field (22 February 22 March 2011). Bulletin of the New Zealand Society for Earthquake Engineering, 44(2), 65–76. Retrieved from http://resorgs.org.nz/images/stories/pdfs/econimpacts_22feb_christchurchearthquake june 2011 nzsee.pdf
- Stewart, M. (2008). Consultation in business tax reform: Towards an effective policy network. In G. S. Cooper (Ed.), *Executing an Income Tax* (Conference). Sydney: Australian Tax Research Foundation.
- Stigson, P., Dotzauer, E., & Yan, J. (2009). Improving policy making through government Industry policy learning: The case of a novel Swedish policy framework. *Applied Energy*, 86(4), 399–406.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedure and techniques*. Newbury Park, CA: Sage.
- Suganuma, K. (2006). Recent trends in earthquake disaster management in Japan. *Quarterly Review*, 19(April), 91–105.
- Tassey, G. (2007). Tax incentives for innovation: Time to restructure the R&E tax credit. *The Journal of Technology Transfer*, 32(6), 605–615.
- Tax Administration (Emergency Event Canterbury Earthquake) Amendment Order (No 2) 2011 (2011). New Zealand. Retrieved from http://legislation.govt.nz/regulation/public/2011/0376/11.0/DLM4046117.html

- Tax Administration (Emergency Event Canterbury Earthquake) Amendment Order 2011 (2011). New Zealand. Retrieved from http://www.legislation.govt.nz/regulation/public/2011/0029/11.0/DLM3568601.html
- Tax Administration (Emergency Event Canterbury Earthquake) Order 2010 (2010). New Zealand. Retrieved from http://www.legislation.govt.nz/regulation/public/2010/0307/latest/DLM3225407.html
- Tax Administration Act 1994 (1994). New Zealand. Retrieved from http://www.legislation.govt.nz/act/public/1994/0166/latest/DLM348343.html
- Tax and Superannuation Laws Amendment (2014 Measures No. 2) Act 2014 (2014). Australia. Retrieved from https://www.legislation.gov.au/Details/C2014A00068
- Tax Laws Amendment (2011 Measures No. 1) Act 2011 (2011). Australia. Retrieved from https://www.legislation.gov.au/Details/C2011A00031
- Tax Laws Amendment (2011 Measures No.1) Bill 2011 (2011). Australia. Retrieved from http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id:"legislation/bill home/r4519"
- Tax Review 2001. (2001). *Issues Paper Tax Review 2001*. Wellington. Retrieved from http://www.treasury.govt.nz/publications/reviews-consultation/taxreview2001/taxreview2001-report.pdf
- Tax uncertainties remain. (2011). Chartered Accountants Journal, April, 8.
- Tax Working Group. (2010). *A tax system for New Zealand's future*. Wellington, New Zealand. Retrieved from http://www.victoria.ac.nz/sacl/cagtr/pdf/tax-report-website.pdf
- Taxation (Canterbury Earthquake Measures) Act 2011 (2011). New Zealand. Retrieved from http://legislation.govt.nz/act/public/2011/0024/latest/whole.html
- Taylor, M. (2013). Is it a levy, or is it a tax, or is it both? *Revenue Law Journal*, 22(1), 1–11. Retrieved from http://epublications.bond.edu.au/rlj/vol22/iss1/7
- Taylor, S. T., & Bogdan, R. (1984). *Introduction to qualitative research methods: The search for meanings* (2nd ed.). New York: Wiley.
- The Australian. (2013, May 1). Australia's previous levies. *The Australian*. Sydney. Retrieved from http://www.theaustralian.com.au/news/australias-levies/story-e6frg6n6-1226633051626?nk=d6450745c26bdd4c3b6a3b1f23fccef7
- Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237–246.
- Tiefenbach, T., & Kohlbacher, F. (2015). *Disasters, donations, and tax law changes: Disentangling effects on subjective well-being by exploiting a natural experiment* (No. 15/1). Tokyo. Retrieved from https://www.dijtokyo.org/publication/disasters-donations-

- and-tax-law-changes-disentangling-effects-on-subjective-well-being-by-exploiting-a-natural-experiment/
- Todd, D., & Todd, H. (2011). *Natural disaster response lessons from evaluations of the World Bank and others*. Washington, DC. Retrieved from http://ieg.worldbankgroup.org/Data/reports/eval_brief_nat_disaster_response.pdf
- Tolan, P. E. J. (2010a). Questioning tax expenditures for economic recovery. *Tax Notes*, 127(1), 67.
- Tolan, P. E. J. (2010b). Stimulus measures: The need for accountability and transparency. *Tax Notes*, *127*(1), 167.
- Tompkins, E. L., Penning-Rowsell, E., Parker, D., Platt, S., Priest, S., So, E., & Spence, R. (2012). *Institutions and disaster outcomes: Successes, weaknesses and significant research needs*. London. Retrieved from https://www.gov.uk/government/publications/disaster-outcomes-role-of-institutions
- United Nations. (2007). *Hyogo framework for action 2005-2015: Building the resilience of nations and communities to disasters*. Geneva. Retrieved from http://www.unisdr.org/files/1037_hyogoframeworkforactionenglish.pdf
- United States Government Accountability Office. (2007). *Tax compliance: Some Hurricanes Katrina and Rita disaster assistance recipients have unpaid federal taxes*. Washington D.C. Retrieved from https://archive.org/details/242070-tax-compliance-some-hurricanes-katrina-and-rita
- Venn, D. (2012). Helping displaced workers back into jobs after a natural disaster: Recent experiences in OECD countries (No. 142). Paris. Retrieved from http://search.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DELSA/ELS A/WD/SEM(2012)13&docLanguage=En
- Vosslamber, R. (2012). Disasters and taxation: The slow development of policy. In 24th Australasian Tax Teachers Association Conference (ATTA), 16-18 Jan 2012. Sydney, Australia.
- Wakefield, S. (2014, May). The Canterbury rebuild. *Budget 2014 Rock Star Economy*, 9–10. Retrieved from http://www2.deloitte.com/content/dam/Deloitte/nz/Documents/budget/deloitte-budget-2014.pdf
- Wales, C. J., & Wales, C. P. (2012). Structures, processes and governance in tax policy-making: An initial report. Oxford University Centre for Business Taxation.
- Wang, C. (2012). Analysing the impact of natural disasters on the New Zealand economy: Lessons from the international literature. Auckland University of Technology. Retrieved from http://aut.researchgateway.ac.nz/handle/10292/4514

- Watanabe, S. (2008). Natural disasters and taxation. *Financial Review*, 91(11), 41–59. Retrieved from http://www.mof.go.jp/english/pri/publication/financial_review/fr91e.htm#watanabe
- Watanabe, S. (2013). Disaster risk and the tax systems An approach from law and economics. *Japan Tax Law Review*, 41(June), 96 113.
- Webb, G., Tierney, J., & Dahlhamer, J. (1999). *Businesses and disasters: Empirical patterns and unanswered questions* (No. 281). Newark. Retrieved from http://udspace.udel.edu/bitstream/handle/19716/1600/PP 281 for D-Space.pdf?sequence=1
- Whitman, Z. R., Wilson, T. M., Seville, E., Vargo, J., Stevenson, J. R., Kachali, H., & Cole, J. (2013). Rural organizational impacts, mitigation strategies, and resilience to the 2010 Darfield earthquake, New Zealand. *Journal of the International Society for the Prevention and Mitigation of Natural Hazards*, 69(3), 1849–1875.
- Willcock, M. (2011). *Inquiry into the Income Tax Rates Amendment (Temporary Flood Reconstruction Levy) Bill 2011; and the Tax Laws Amendment (Temporary Flood Reconstruction Levy) Bill 2011*. Canberra: parlinfo.aph.gov.au. Retrieved from http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=COMMITTEES;id=c ommittees%2Fcommrep%2F13628%2F0004;query=Id%3A%22committees%2Fcommrep%2F13628%2F0000%22
- Wilson, J. (2005). Nation and government From colony to nation. Retrieved from http://www.teara.govt.nz/en/nation-and-government/page-2
- Wood, A. (2012, March 30). February quake "third most expensive." *Stuff.co.nz*. Retrieved from http://www.stuff.co.nz/business/rebuilding-christchurch/6663626/February-quake-third-most-expensive
- Wood, N. (2010). After the 'quake: the legislative response. *NZ Lawyer Magazine*, *October*, (146), 18–19.
- World Bank. (2004). *World development report (WDR) 2000/2001: Attacking poverty*. Washington D.C. Retrieved from http://documents.worldbank.org/curated/en/2000/09/17408018/world-development-report-20002001-attacking-poverty
- World Bank. (2010). *Natural hazards, unnatural disasters. The economics of effective prevention.* Washington. Retrieved from https://www.gfdrr.org/sites/gfdrr/files/publication/NHUD-Report_Full.pdf
- World Economic Forum. (2010). *The global competitiveness report 2010–2011*. Geneva. Retrieved from http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2010-11.pdf
- Wright, M. (2016, February 16). Five years on, the red zone is green. *Stuff.co.nz*. Retrieved from http://www.stuff.co.nz/national/77041509/Five-years-on-the-red-zone-is-green

- Yanow, D. (2014). Thinking interpretively: Philosophical presuppositions and the human sciences. In P. Schwartz-Shea & D. Yanow (Eds.), *Interpretation and Method: Empirical Research Methods and the Interpretive Turn* (2nd ed.). New York: ME Sharpe.
- Yin, R. K. (2009). Case study research: Design and methods (4th ed.). Sage Publications, Inc.
- Yin, R. K. (2012). Applications of case study research (3rd ed.). Sage Publications, Inc.
- Zeirishi-Hojin PricewaterhouseCoopers. (2011a). Recovering from the Tohoku disaster Managing related tax issues. *Japan Tax Update*, *April*(63), 1–6.
- Zeirishi-Hojin PricewaterhouseCoopers. (2011b). Special tax measures for Tohoku earthquake restoration. *Japan Tax Update*, *November*(67), 1–4.
- Zeirishi-Hojin PricewaterhouseCoopers. (2011c). Tax legislation update for 2011 & 2012 tax reform (part 1). *Japan Tax Update*, *December*(68), 1–7.
- Zeirishi-Hojin PricewaterhouseCoopers. (2011d). Tohoku earthquake and special tax legislation. *Japan Tax Update*, *May*(64), 1–5.
- Zeirishi-Hojin PricewaterhouseCoopers. (2011e). Tohoku earthquake and tax implications. *Japan Tax Update*, *April*(62), 1–4.