The Effect of the Carbon Tax and the Emission Reduction Fund on Government Salience

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Abstract

Many developed countries have committed to targets to reduce their carbon emissions under international agreements. However, a recent 2021 study found that only one country, The Gambia, is on track to meeting its Paris targets. A key mechanism for achieving these national targets is the government. Therefore, the failure of most countries to meet their targets highlights the importance of evaluating the major policy alternatives. Australia instituted a carbon pricing scheme in 2012 that was repealed in 2014 and subsequently replaced with an emissions reduction fund in 2015. This provides a unique opportunity to study the effects of these two major alternative government policies on government salience. This study applies stakeholder theory and finds that the power and urgency of both policies was weakened by uncertainty, an often-neglected factor affecting stakeholder salience. Furthermore, we note that an evaluation of government salience must also consider firm and industry differences and the effect of positively versus negatively framed interventions.

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INTRODUCTION

Climate change is one of the most significant global concerns facing society (IPCC, 2021). The major cause of climate change is carbon emissions (IPCC, 2021). Consequently, the reduction of carbon emissions has been an important political issue worldwide (IPCC, 2021). Federal governments throughout the world have faced increasing pressure to commit to international agreements, such as the Kyoto Protocol and then the Paris Agreement, to help reduce global warming. Notably, the Paris Agreement's aim is to limit global warming to one and a half degrees (IPCC, 2018). To achieve this global goal, individual countries must nominate their own targets for emissions reduction and implement polices to achieve those goals.

Carbon emissions are predominately from firms (CDP, 2013) and so government targets can only be met through the actions of the private sector (Heuberger, 2021). The government is, however, an important stakeholder in these firms and so seeks to influence firm behaviour through policy and regulation (Henriques and Sadorsky, 1996; Prasad and Sandhya Sri, 2008). Governments around the world have taken different approaches to policy and regulation. Indeed, political parties within countries and across time, differ in their fundamental attitude to reducing emissions and so policies and regulations are often changing (Uscinski, Douglas and Lewandowsky, 2017). Policy can be broadly defined in terms of 'carrots' and 'sticks', i.e., government investment in firms' carbon reduction initiatives, or carbon taxes on emissions.

Unfortunately, global emission reductions have not been sufficient to be on track to contain global warming to one and a half degrees as many governments have failed to motivate sufficient emission reduction by firms to achieve their national targets. Indeed, a recent report by The Climate Action Tracker (2021) found that The Gambia is the only country (out of a total of 37) that is on track to meet their Paris Agreement targets. Given the critical importance of reducing carbon emissions, it is imperative to identify how firms respond to alternative policy choices.

Australia provides a unique opportunity to evaluate the two main alternative approaches to reducing carbon emissions, as there were significant shifts in climate change policies between 2012 and 2015 (Talberg et al., 2016). First, the Australian Federal Government enacted the carbon tax in November 2011 which took effect in July 2012 and involved direct and indirect financial costs for firms. This policy had the potential to significantly reduce a firm's resources depending upon the firm's level of emissions and the specifics of how the tax was to be introduced. However, following a change in government in 2014, the carbon tax was repealed. In 2015, the new government introduced the incentive-based Emission Reduction Fund (ERF) providing firms with the opportunity to access funding for emission reduction initiatives.

The impact of these changes in government policy can be evaluated through the lens of stakeholder theory (Freeman, 1984). According to Mitchell et al. (1997), when a stakeholder is considered by a firm to be salient, the firm is more likely to acknowledge and respond to its demands. Furthermore, prospect theory (Kahneman and Tversky, 1979) provides a basis for contrasting the effect on decision making of policies that focus on potential gains (e.g., the ERF) versus losses (e.g., a carbon tax). Therefore, the purpose of this paper is to evaluate and

compare the two abovementioned climate change policies to address the following research question:

> *How did policies of taxation and incentives influence the stakeholder salience of the Australian government's commitment to reducing national carbon emissions between 2012 and 2015?*

This paper provides several contributions to the stakeholder literature and the policy debate around emission reduction. First, it contributes to the stakeholder salience literature by providing additional insights into the role of the government as an important stakeholder. More specifically, unlike previous research, this paper considers each of the stakeholder salience attributes separately to understand the dynamics of the government/firm relationship. Evaluating these constructs within a specific context provides insights into their definition and application. Second, an analysis of the impact on salience of changes in Australian government policy will have relevance to governments throughout the world as they seek to achieve their commitment to national targets for carbon emissions reduction.

The remainder of this paper is structured as follows. First, the model of stakeholder salience and prospect theory is outlined. This is followed by an overview of the enactment (2011) and introduction of the Australian carbon tax (2012), its subsequent repeal (2014), and the introduction of the ERF (2014) and the associated auction's inception (2015). Significant differences between the effects of these policy choices are noted. These policy choices are evaluated through the theoretical lens of stakeholder theory with an emphasis on salience. Furthermore, given that firms were expected to make risky decisions under uncertainty, prospect theory provides a basis for understanding the effect of shifting policy from one framed as a loss, to one framed as a gain. The evaluation of stakeholder salience is followed by a discussion of the implications for government policy with recommendations for governments that are seeking to achieve their global commitments. Finally, we outline the limitations of this paper and provide suggested avenues for future research.

THEORETICAL FRAMEWORK

Stakeholder theory was first introduced into the strategic management literature by Freeman (1984) as a means of understanding the relationship between firms and their stakeholders. Stakeholders are defined as "any group or individual who can affect or is affected by the achievement of the firm's objectives" (Freeman, 1984, p.46). Mitchell et al. (1997) expanded on stakeholder theory by defining stakeholder salience as the attributes of stakeholders' claims that determine how firms identify and prioritise their response to stakeholders. The three important attributes identified in their model are power, legitimacy and urgency (Mitchell et al., 1997). The benefit of the model is that it provides a nuanced approach to assessing the influence that a stakeholder will have on a firm's behaviour. Importantly, a stakeholder, such as the government, can increase its salience by influencing the firm's assessment of these three attributes.

Power is central to stakeholder salience (Mitchell et al., 1997; Agle et al., 1999; Driscoll and Starik, 2004; Eesley and Lanox, 2006) and is defined as a stakeholder's level of control over a firm's resources. However, a stakeholder's power will only be salient if it is exercised by the stakeholder and the risk of loss or potential gain is recognised by the firm (Van Der Laan Smith et al., 2005). Federal governments have incredible potential power over a firm's resources, but that power only materialises as policy is formed, debated, accepted, and implemented. Furthermore, Mitchell et al. (1997) emphasise that power is not a steady state, meaning stakeholders can gain and lose power over time, which is particularly true as government policy changes.

Legitimacy, as an attribute of stakeholder salience (Mitchell et al., 1997), draws heavily on legitimacy theory (Dowling and Pfeffer, 1975). Legitimacy theory operates on the notion of a 'social contract' between a firm and the society within which it operates (Dowling and Pfeffer, 1975). The social contract is defined as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed systems of norms, values, beliefs and definitions" (Suchman, 1995, p. 574). Therefore, a stakeholder's actions are considered legitimate if they meet the standards of society.

The third and final attribute of salience is urgency, which is defined as "the degree to which stakeholder claims call for immediate attention" (Mitchell et al., 1997, p. 867). A claim can be considered urgent if it satisfies two attributes, (1) time sensitivity: the need for the stakeholder to have its claims or concerns immediately addressed, and (2) criticality: the firm's belief that a stakeholder relationship or claim is critically important to the firm (e.g., where a stakeholder's claims over the assets of the firm and a loss of these assets will cause significant financial loss to the firm) (Mitchell et al., 1997).

It is important to recognise that if a stakeholder is not perceived to have the power (either the means or the will) to enforce their claims or needs, a firm may ignore them (i.e., the stakeholder would not be salient) regardless of the perceived legitimacy of their claim (Mitchell et al., 1997; Braun, 2019). Similarly, a stakeholder may have a legitimate claim, but if it is not perceived to have urgency, they will not achieve salience in the eyes of the firm (Mitchell et al., 1997). Therefore, it is important to consider these attributes separately, and in combination.

Mitchell et al. (1997) provides eight categories of stakeholder salience depending on the combination of salience attributes held by the stakeholder (Mitchell et al., 1997). Firms will differ in their assessment of these attributes and therefore the stakeholder's salience to them specifically. Furthermore, this perception can change over time due to changes in the stakeholder's claims affecting power, legitimacy, or urgency (Mitchell et al. 1997). The eight categories of stakeholder classification are shown in table 1.

As seen in Table 1, dormant, discretionary and demanding stakeholders only have one salience attribute. These three categories are collectively referred to as latent stakeholders who have a low level of salience, and for some firms, may not be considered a stakeholder at all (Mitchell et al., 1997). Latent stakeholders do not demand immediate action. These stakeholders are not currently salient but are important because of the likelihood that they will become salient if

they develop one of the other attributes (Conaty and Robbins, 2018). For example, if legitimacy for action on climate change is high, even the possibility of government regulation, with its consequent power and urgency, makes it important to monitor the actions of this latent stakeholder.

Table 1: Stakeholder Salience Classification

Stakeholder classification	Attributes	Level of salience
Dormant (latent)	Power	Low
Discretionary (latent)	Legitimacy	Low
Demanding (latent)	Urgency	Low
Dominant (expectant)	Power, legitimacy	Moderate
Dangerous (expectant)	Power, urgency	Moderate
Dependent (expectant)	Legitimacy, urgency	Moderate
Definitive	Power, urgency, legitimacy	High
Non-stakeholder	None	None

Source: Mitchell et al. (1997) p. 874.

Dominant, dangerous and dependant stakeholders possess two of the attributes and can be categorised as expectant stakeholders who have a moderate level of salience. For example, legitimacy might be high because of general community demand for government action on climate change, and the government might exercise power through taxation or funding, but uncertainty about the government's ongoing commitment to action might lesson the urgency for a firm's response.

Definitive stakeholders are those who have all three attributes and will therefore be most likely to hold the firm's attention and influence its actions (Mitchell et al., 1997). Moreover, Mitchell et al. (1997) note that a firm's perception of a stakeholder's salience can change over time and therefore a stakeholder can move between the different categories of stakeholder salience (see table 1) (Conaty and Robbins, 2018).

Decision makers within firms evaluate the government's power and urgency under conditions of uncertainty. For example, there is uncertainty regarding if and when election platforms will be turned into policies, and if and when policies will be passed by parliament. Furthermore, the firm-specific consequence of the policy, if it is passed, is often uncertain. Therefore, the assessment of power and urgency can be understood as a risk assessment. Conaty and Robbins (2018) suggest that risk is a potential factor in understanding stakeholder salience.

According to ISO 31000, risk is the "effect of uncertainty on objectives". From this definition, risk is a measure of both the effect (i.e., the consequence) and the uncertainty (i.e., likelihood) of an event. Managers, therefore, seek to deal with uncertainties by assessing and managing risk. Enterprise risk management (ERM) is a process that involves identifying potential events

that may affect a firm, identifying how to manage the risk and planning and implementing a response (Marchetti, 2011).

Figure 1 provides a basic two-by-two risk matrix which illustrates the effect of likelihood and consequence in determining risk.

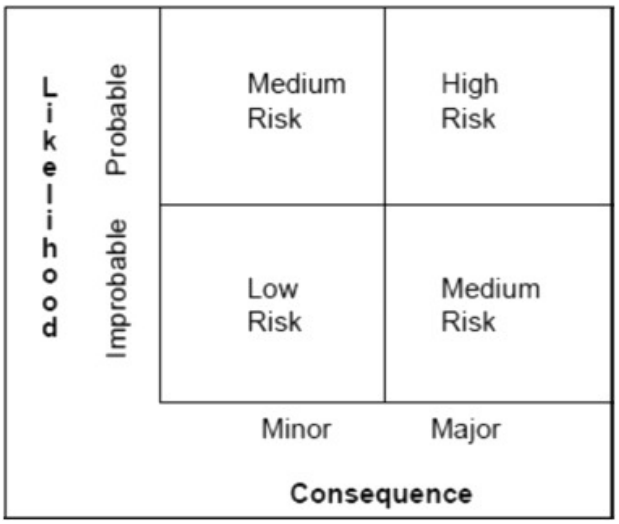

Figure 1: Basic two by two risk matrix (Standards Australia International, 2004).

It is important to note that risks can be positive (i.e., a gain), or negative (i.e., a loss). However, the term risk is often used to describe a negative consequence, while a positive outcome is usually described as an opportunity (see Figure 2). The risk-opportunity matrix, therefore, is a valuable tool for evaluating the influence of government policies of taxation (risk) and spending (opportunity) on the firm's perceptions of power and urgency.

Figure 2: Risk-opportunity matrix (Curtis and Carey, 2012, p. 15).

The risk-opportunity matrix is a tool often used at strategic and operational levels to identify, evaluate, and respond to uncertain events. For example, a likely event might not receive managerial attention if it has incidental or minor impact. In contrast, if the consequence is expected to be major or extreme even a possible event deserves managerial attention and action. The need for a managerial response is also affected by uncertainty as to the timing of the event, such as uncertainty around the timing of government intervention. As noted by Conaty and Robbins (2018, p. 4):

> "*Urgency can be driven by how management predict the outcomes of immediate or delayed action with the assessment of the 'probability' that the substance of a stakeholder's claim will occur driving the degree of perceived urgency needed*".

The risk-opportunity matrix is provided as a tool for rational decision making. However, it is widely recognised that individuals demonstrate biases when making decisions under uncertainty (Tversky and Kahneman, 1974). Prospect theory was developed by Kahneman and Tversky (1979) to describe, predict and explain how people evaluate 'prospects' when making decisions in uncertain environments. Importantly, the theory recognises that decisions are influenced by whether a prospect is framed in terms of a gain or a loss (Kahneman and Tversky (1979). Thus, it is stated that "the aggravation that one experiences in losing a sum of money appears to be greater than the pleasure associated with gaining the same amount" (Kahneman and Tversky, 1979, p. 279). Consequently, it is suggested that decision makers will more heavily weight, and react more quickly, to prevent a potential loss than to take an opportunity for potential gain (Dutton and Jackson, 1987; Fiegenbaum and Thomas, 1988; Kahneman and Tversky, 1979).

Although prospect theory focuses on the decision-making processes of individuals, many scholars have successfully applied the theory to study organisational level decision making processes (e.g., Bromiley et al., 2001, Shimizu, 2007). The theory is relevant to our analysis because government policy in Australia was initially framed as a loss (i.e., a carbon tax) but then changed to an opportunity for gain through the ERF. We expect this difference to be important in how firms perceived the salience of changes in government policy.

The following section describes the change in Australian government policy from the announcement, introduction, and repeal of a carbon tax, and then the introduction of the ERF. These profound changes in policy will then be evaluated based on how impact and likelihood affect power and urgency within the context of changing legitimacy.

The Australian Federal Government's Climate Change Policy

Carbon tax (2012-2014)

On the 27th of September 2010, the Australian Government led by Prime Minister Julia Gillard, developed a Multi-Party Climate Change Committee (MPCCC). On this day, Prime Minister

Gillard announced that the key role of the MPCCC was to identify how the Australian government could introduce a carbon tax in Australia. Just over a year later, on the 8th of November 2011, the Australian government enacted the carbon tax in the form of the Clean Energy Act 2011. The regulation took effect eight months later, on the 1st of July 2012. The aim of the tax was to achieve Australia's commitment to the Kyoto Protocol, reducing greenhouse gas emissions by five per cent below 2000 levels before 2020, and 80 per cent below 2000 levels before 2050 (Clean Energy Act, 2011). This was to be achieved by putting pressure on large emitting firms to invest in sustainable clean energy (Clean Energy Act, 2011).

The introduction of the carbon tax then required liable firms to pay for emissions permits, known as Australian Carbon Credit Units (ACCUs), for a fixed charge of $23 per unit in the first year, and $24.15 per unit in the second year (Clean Energy Act, 2011). At the end of each financial year, liable firms were required to surrender one unit per tonne of carbon emissions produced. If a firm did not surrender sufficient carbon units, they would be required to pay a unit shortfall charge. This charge was calculated as 130 per cent of the fixed charge per tonne of emissions for the relevant financial year (as noted above), multiplied by the shortfall in the number of units that the firm had surrendered (Clean Energy Act, 2011).

Given Australia's heavy reliance on carbon-intensive industries[4], the Australian government established economic support mechanisms to ameliorate the potential loss the carbon tax would have on firms in certain industries, and thereby offset any impacts the carbon tax would have on the national economy. The Clean Energy Act (2011) included the Jobs Competitiveness Program and the Coal-fired Generation Assistance program. The Jobs Competitiveness Program was designed to provide free ACCUs to non-electricity sector firms operating in the global market who would therefore be less able to recoup the cost of the carbon tax from their customers. The program included 48 trade-exposed activities that involved the production, manufacturing or refining of materials such as ammonia, aluminium, zinc, and petroleum. The Coal-fired Generation Assistance program was designed to provide free ACCUs to high emissions-intensive coal-fired generators. The free ACCUs acquired from either mechanism could be used to cover a firm's carbon tax liability, traded on the open carbon market, or sold to the Clean Energy Regulator through a buy-back option.

Significant economic support mechanisms were also introduced to facilitate firms' transitions to the new costs of the carbon tax. The focus of this analysis, however, will be on the effect of the carbon tax.

Repeal of the carbon tax (2014)

As soon as the carbon tax was announced, and particularly during the 2013 federal election campaign, the opposition party led by Tony Abbott, focussed on the threat of losses. He argued that the carbon tax would "act as a wrecking ball across the economy" (cited in White, 2014).

[4] Carbon-intensive industries are those such as coal-fired electricity and coal mining, and the manufacturing of steel, aluminium, zinc, and cement. More information about carbon-intensive industry use in Australia can be found in Garnaut, 2008).

He claimed that power bills would increase by as much as 30 per cent, that there would be general price rises, and that thousands of jobs would be lost in the coal, steel, aluminium, cement, and motor industries. He ran his campaign on the basis that "the carbon tax was a 'bad tax based on a lie'" ("Abbott unfazed by latest Newspoll", 2012). In the 2013 election campaign, Abbott promised to repeal the carbon tax (Griffiths, 2014).

On 7 September 2013, the Australian public voted, and Tony Abbott became the Prime Minister. Despite calls in October 2013 from the independent Climate Change Authority to increase Australia's target from five percent to as much as 25 per cent below 2000 levels before 2020 (Climate Change Authority, 2013), the Abbott government stated "[w]e have made one commitment and one commitment only, which is to reduce our emissions by five per cent" (cited in Arup, 2013). Shortly after being elected, as promised, the Liberal party repealed the carbon tax on the 17th of July 2014, backdated to the 1st of July 2014 (The Clean Energy Legislation (Carbon Tax Repeal) Act, 2014).

The Direct Action Plan (DAP) and the Emission Reduction Fund (ERF) (2015)

The Australian government's DAP included the $2.55 billion (over five years) ERF (The Department of Climate Change, Energy, the Environment and Water, 2014) which continues as Australia's main mechanism to reduce carbon emissions. The ERF is aimed at providing firms with an incentive to reduce their carbon emissions by adopting new technologies and practices (The Department of Climate Change, Energy, the Environment and Water, 2014). Rather than pressuring firms to reduce their emissions by coercive legislation, firms voluntarily engage in projects which they believe will reduce emissions by a verified estimated amount (Clarke et al., 2015). While the carbon tax focussed on reducing energy consumption, the ERF also allows for firms to reduce emissions through other means, such as capturing methane in agricultural settings (Clean Energy Regulator, 2015a).

To benefit from the ERF, firms firstly develop and submit a project proposal to reduce emissions, in return for the opportunity to receive one ACCU for every one tonne of carbon emissions reduction (Carbon Credits (Carbon Farming Initiative) Act, 2011). Once a project is accepted, firms then participate in a reverse auction where they place an anonymous bid for the amount for which they will sell their ACCUs to the government. The government sets an undisclosed benchmark price meaning that all bids above the benchmark will not be accepted and only those with the lowest bids will win the opportunity to receive the ACCUs (Clarke et al., 2015). At the conclusion of the project, firms report on their project, transfer the required number of ACCUs that represent the amount of carbon reduction achieved, and receive payment from the government at the price agreed upon at the auction (Clean Energy Regulator, 2015a). The first of these auctions took place in April 2015 (Clean Energy Regulator, 2015b).

The following table provides a summary of the key changes in the Australian federal government's climate change policy between 2010 and 2015.

Table 2: Timeline of key events related to the carbon tax and the ERF

Date	Details of Event
27th September 2010	Julia Gillard announced the development of the MPCCC and the carbon tax.
8th November 2011	Enactment of the carbon tax took place under the Clean Energy Act (2011).
1st July 2012	The carbon tax became operational under the Clean Energy Act (2011).
7th September 2013	Tony Abbott became Prime Minister.
22nd October 2013	Abbott closed the Clean Energy Act (2011) funding programs.
17th July 2014	The carbon tax was repealed.
1st July 2014	The ERF commenced.
15th and 16th April 2015	The first ERF auction took place.

FINDINGS AND DISCUSSION

This paper focuses on changes in Australia's climate change policy between 2010 and 2015, which was a period marked by significant shifts in the government's approach to encouraging emissions reduction. The risks and opportunities for firms of the carbon tax and the ERF will be evaluated in terms of salience (i.e., power and urgency) within the national context of public opinion (i.e., legitimacy). This paper also draws on prospect theory to consider the effect of government policy framed as a loss (a carbon tax) or as a gain (ERF).

The Salience of the Carbon Tax

Power of the carbon tax

Recall that the salience attribute, power, is described as a firm's perception of the stakeholder's ability and intention to influence the firm's resources. Prior to the enactment of the carbon tax, there was significant political uncertainty surrounding the government's policy. As the likelihood of a carbon tax increased, and then became certain, the financial risk for firms increased accordingly. The other factor determining a firm's assessment of risk is the financial impact, which was also uncertain, even after the initial announcement of the carbon tax. This was because it depended upon the price that would be set, for which firms would be liable, and the extent of government support.

Once the carbon tax was announced, according to the Clean Energy Act (2011), liable firms were those that emitted more than 25,000 tonnes of carbon. During the 2012-13 financial year, 188[5] Australian firms met this criterion as identified in the Liable Entities Public Information Database (LEPID) released by the Clean Energy Regulator (2015). These firms surrendered a total of 284.5 million ACCUs worth a total value of $6.54 billion (approximately 0.417% of Australia's 2012 gross domestic product (GDP)). During the 2013-14 financial year, 201 Australian firms emitted more than 25,000 tonnes of carbon and were consequently required to surrender a total of 286.9 million ACCUs, worth a total value of $6.9 billion (approximately 0.437% of Australia's 2013 GDP).

[5] Related firms were grouped together where identifiable. Entities included in the LEPID but who were not liable to pay the carbon tax because they did not exceed 25,000 tonnes of carbon emissions were excluded.

The total value of these ACCUs is a measure of the overall power exerted by the federal government on the liable firms, and therefore one dimension of their salience as a stakeholder. The salience to individual firms differed according to their emissions, and this cost can be considered relative to their total cost of operations. It can be seen, however, that for liable firms the introduction of the carbon tax increased the government's coercive power in the form of a loss of resources as firms paid for their ACCUs. However, as previously mentioned, various support mechanisms were available to firms to reduce the impact of the carbon tax.

Table 3: Liable firms, total carbon emissions and total carbon tax liability

	No. of firms exceeding 25,000 tonnes of carbon emissions	Total number of carbon emissions for all liable firms	Total liability
2012-13	188	284,503,422	$6,543,578,706
2013-14	201	286,994,878	$6,930,926,304

Source: Liable Entities Public Information Database (LEPID) (2015)

For example, the Jobs Competitiveness Program provided 57 liable firms from the non-electrical sector with 104.2 million ($2.39 billion) free ACCUs in 2012-13, and 97.8 million ($2.36 billion) free ACCUs in 2013-14 (Clean Energy Regulator, 2015c). Importantly, 55 of these firms received free ACCUs that exceeded the value of their total emissions in 2012-13, and 34 firms received free ACCUs that exceeded the value of their total emissions in 2013-14. These surplus free ACCUs could be sold to other firms, thereby representing a financial opportunity for firms that reduced their emissions below the predetermined industry average (Grudnoff, 2011). This is also a source of power, albeit framed as a gain rather than a loss which, according to prospect theory, reduces its impact on decision makers (Kahneman and Tversky, 1979).

The remaining 21 firms who received free ACCUs from the Jobs Competitiveness Program in 2013-14 received enough ACCUs to cover more than 50 per cent of their carbon tax liability under this program alone. Again, this reduced the loss for these firms, and they could further reduce this loss by reducing their emissions further.

Table 4: Support provided from the Jobs Competitiveness Program

	No. of liable firms to receive free ACCUs	No. of free ACCUs issued	Total value of free ACCUs
2012-13	57	104,203,895	$2,296,689,585
2013-14	55	97,834,540	$2,362,704,141

Source: Clean Energy Regulator, 2015c)

The power of the government's policy to influence the salience to individual firms depends on the firm's perception of impact and likelihood. Consider the following example which illustrates the uncertainty regarding the likely financial impact. In 2012-13 Teys Australia Meat Group emitted 40,090 tonnes of carbon and received 3,126 ACCUs under the Jobs and

Competitiveness Program (Clean Energy Regulator, 2015c). They also received payments of $227,000 and $2,820,000 from the Clean Technology and Food Program (Australian Institute of Food Safety, 2013). In contrast, Yolarno Pty Ltd emitted 29,968 of carbon in 2012-13 and did not receive any free ACCUs or funding. Both firms operate in the animal rending industry.

The perceived power of the government will also depend on a firm's carbon tax liability as a percentage of its total sales revenue. For example, Macquarie Generation (largest carbon emitter for 2012-13 with 2,037,010 emissions) incurred a carbon tax liability that equated to 42.66 per cent of its total sales revenue for the 2012-13 financial year. In contrast, Boral Ltd (one of Australia's largest suppliers of building and construction materials with 1,766,152 tonnes of emissions) incurred a carbon tax liability that equated to 0.77% of their total sales revenue for the 2012-13 financial year.

In summary, placing a price on carbon emissions through the introduction of the carbon tax significantly increased the power of the government to influence a firm's resources. For liable firms, any emission would affect a firm's financial resources. However, the provision of free ACCUs decreased the financial loss for most firms and reframed a loss to a potential gain for those firms that received more ACCUs than required. This distinction between a gain and a loss is important. As noted by prospect theory, decision makers will do more to avoid a loss than they will to achieve an equivalent gain. Therefore, providing firms with free ACCUs decreased the power of the carbon tax, even though the impact on firm resources was the same.

Urgency of the carbon tax

Recall that urgency is defined as "the degree to which stakeholder claims call for immediate attention" and comprises of two attributes: "time sensitivity- the degree to which managerial delay in attending to the claim or relationship is unacceptable to the stakeholder, and (2) criticality- the importance of the claim or the relationship to the stakeholder" (Mitchell et al. 1997, p. 867). The following sections consider the time sensitivity of the emission reductions and the factors influencing firms' belief's about whether the carbon tax would impose critical claims upon their resources.

From the government's point of view (as the stakeholder), the time sensitivity of the carbon tax was influenced by their international commitments to reducing Australia's carbon emissions. Prior to the introduction of the carbon tax in 2010, the government committed to reduce Australia's emissions by five per cent below 2000 levels before 2020 (Clean Energy Regulator, 2020). However, despite this national commitment, it was uncertain what the government's policy would be to achieve this target. Therefore, a firm's assessment of the government's urgency for action can be considered to be an assessment of risk. Specifically, an assessment of the uncertainty surrounding the government's policy, the likelihood of the introduction of the carbon tax, and the estimated specific impact on the resources of their firm.

Carbon taxes existed in many other countries prior to 2010, however the introduction of a carbon tax in Australia was very controversial (Rourke, 2012). As the policy was formulated, announced, and introduced, the likelihood of economic loss from a carbon tax increased from unlikely to certain. It then became uncertain again as its repeal became part of the opposition party's policy platform. This uncertainty is observed in One Steel Ltd response to the 2011 CDP survey[6]:

> "*The financial impact of the Australian carbon price (carbon tax/carbon trading scheme being proposed (as at May 2011). There is significant uncertainty in regard to whether any proposed legislation will be proposed ultimately and pass through parliament, and the Opposition has stated it would repeal such legislation if it came to power*".

The political controversy surrounding the carbon tax during its short life also created uncertainty as to the likely impact on individual firms. Initial estimates of the cost of ACCUs ranged between $20 and $30 per tonne based on the Garnaut review (Garnaut, 2011). When the carbon tax took effect on 8 November 2011, all liable firms were notified, and the associated requirements were disclosed. This meant that these firms had approximately seven and a half months' notice of the actual cost that would be imposed on each tonne of their carbon emissions.

The length of time from the announcement of the carbon tax to its enactment was approximately fourteen months. During this time, firms had the opportunity to invest in initiatives that would help to reduce their carbon emissions. It is important to note, however, that there can be a significant lead time required to identify, implement, and see the benefits from emission reduction initiatives (Sprengel and Busch, 2011). An extreme example is the large transaction costs involved in transitioning away from coal-fired electricity generation due to asset specificity (Williamson, 1987). Even where more timely initiatives might be introduced, the sense that urgent action was required depended upon an assessment by firms of the likelihood that a carbon tax would be introduced and continue as government policy, and whether, and to what extent, the firms would be liable.

In summary, the urgency of the carbon tax was reduced by uncertainty around government policy and its application. The government had stated that Australia needed to act quickly in its fight to reduce climate change and adhere to their international commitments. The government relied on firms to achieve the necessary reductions, but the introduction and implementation of the carbon tax involved great uncertainty in its timing and impact on individual firms. Factors such as political debate about its introduction, application, and continuance, contributed to that uncertainty. Applying a standard risk model allows us to see that reducing the likelihood of the carbon tax reduced the perceived risk to firms, and thereby the perceived time criticality for emission reduction initiatives.

[6] The CDP gathers climate related data from firms on an annual basis (Andrew et al., 2012).

Legitimacy of the carbon tax

Recall that legitimacy is the extent to which an action is consistent with the social norms and values of society (Mitchell et al., 1997) which is generally granted by the majority of the population (Beetham, 1991). Therefore, the legitimacy of the carbon tax may be identified by considering public opinion about climate change in general, and the carbon tax in particular, at the time of its introduction.

Climate change has been an important public issue for many years (Mia, Rana and Ferdous, 2021). Public opinion has been divided and over the relatively short life of the carbon tax, attitudes about climate change, the need for government action, and the most appropriate form of government intervention, have been changing.

A survey by the Climate Institute (2012) found that 52 per cent of Australians wanted to find a solution to combat climate change. However, only 28 per cent believed that the carbon tax was the answer. These results were driven by common beliefs that the carbon tax was going to cause an increase in fuel prices (50 per cent), groceries (40 per cent), and interest rates (20 per cent).

The Climate Institute found that support for the carbon tax improved only slightly between 2012 and 2013, even though the economic impact was less than had been feared. The Climate Institute (2013) stated that:

> *"[o]nce the carbon laws were in operation, the impact on prices across the economy was minimal. This revealed that predictions of economic destruction and price shocks were hyperbolic and inaccurate. Interestingly, even the official forecasts overstated the real impact".*

In 2013, 99 per cent of Australian firms agreed that Australia should reduce their carbon emissions, however, only 29 per cent supported the use of the carbon tax to do so (Climate Institute, 2013). This impact on legitimacy is also evident in firms' responses to the 2013 CDP Survey. For example:

> *"A carbon price will increase the cost of energy, fuel and locally supplied goods. This will affect the budgets of Australian Households and our customers. Compensation to middle and low income families has been budgeted, but the pricing may still affect spending" (Woolworths Ltd).*

This analysis suggests that the Coalition's strong 'fear' campaign significantly reduced the legitimacy of the carbon tax in the eyes of the Australian firms and voting public. Thus, it can be inferred that the Australian carbon tax lacked legitimacy during its introduction.

In summary, power and urgency was observed at various levels depending on the firm and industry, but legitimacy was not observed for the majority of firms and the public. Therefore,

in using Mitchell's et al. (1997) model (shown in table 2) to evaluate the salience of the carbon tax, the government can be classified as a Dangerous (expectant) stakeholder with a moderate level of salience.

The Australian Government's Repeal of the Carbon Tax and its Effect on Salience

The Australian Government's salience decreased with the repeal of the carbon tax in 2014. Its power decreased as firms no longer paid for ACCUs and no longer received free ACCUs they could sell if not required to meet their own emissions. However, in assessing the risk of future government policy, there was still some likelihood of future government action that would impact the firms' resources.

The repeal of the carbon tax was consistent with its lack of legitimacy. This is because, as previously mentioned, the majority of Australian firms and voting public still did not believe the carbon tax was a suitable action (The Climate Institute, 2013). However, public opinion about the need to take some action to address climate change was increasing, which contributed to the risk of some form of future government action, but urgency significantly decreased with the repeal of the carbon tax. The immediate threat of loss, or potential for gain, was eliminated and the effects of future government policy were uncertain.

Therefore, using Mitchell's et al. (1997) model to evaluate the salience of the government at the time of the repeal of the carbon tax, the government can be categorised as a Discretionary (latent) stakeholder with a low level of salience.

The Salience of the ERF

Power of the ERF

In 2014, the newly appointed Australian government enacted its policy for achieving the national emission reduction targets. The ERF is a voluntary incentive-based policy designed to provide an opportunity for all firms to increase their resources by reducing their carbon emissions through emission reduction or sequestration. At the time of the ERF's introduction, the perceived level of power increased as any individual or firm had the opportunity to propose emission reduction initiatives in return for ACCUs. However, in assessing the opportunity for firms to benefit from the ERF, and therefore the government's power as a stakeholder, firms would consider the likelihood of having a viable project that meets the ERF registration requirements and the dollar value of their ACCUs at auction (volume and price of the ACCUs less costs).

Prior to the first ERF auction in April 2015, previous research found that there was significant uncertainty about the likelihood of having a successful auction bid, and therefore the value of emissions reduction initiatives. For example, Kumarasiri and Subramaniam (2017), in collaboration with the Carbon Market Institute, interviewed 68 Australian firms from carbon intensive industries prior to the introduction of the ERF. They found that 34 per cent of firms did not plan to participate in the ERF and 58 per cent planned to wait to see how the ERF

operated before considering participation. The main reason for lack of interest was that the process was perceived to be long, expensive, and time-consuming and there was no guarantee that a bid will be successful at auction (Kumarasiri and Subramaniam, 2017). In other words, the bureaucratic processes created uncertainty for some individuals or firms prior to the first auction, particularly given the requirement to develop and invest in a project prior to knowing how much abatement would be achieved and the value of the ACCUs. This uncertainty reduced the power, and therefore the salience, of the government's ERF at this time.

Once auctions began to take place, firms and individuals were better able to anticipate the price of ACCUs and the types of projects that were most likely to be successful. Therefore, firms would then be able to reassess the government's level of power. Previous research indicates that some firms who had attempted to participate in the ERF found the process difficult to understand, expensive, or found the registration process to be complicated (Kumarasiri et al., 2018). Moreover, the agriculture and land industries have been found to have greater ability to participate in the fund than those from the high emitting industries such the energy industry who are exempt from the ERF (Kumarasiri et al., 2018).

In summary, the power of the ERF was impacted by uncertainty and firm industry. For firms with viable initiatives, the opportunity from the ERF became more certain, and so the power of the government as a stakeholder increased. However, the government's power diminished for firms that assessed the potential likelihood of success to be low, or firms without cost-effective initiatives to achieve the necessary carbon reductions.

Urgency of the ERF

Prior to the introduction of the ERF and during his time as the Opposition Leader, Tony Abbott had been labelled as a climate denialist (Bolt, 2009) due to various statements he made. For example, he stated "whether carbon dioxide is quite the environmental villain that some people make it out to be is not yet proven" (cited in Bolt, 2009) and that the science on climate change is "absolute crap" (cited in Grattan, 2009).

Once Tony Abbott won the 2013 election and repealed the carbon tax, the Australian government announced their plans to pledge $2.55 billion to fund the ERF to meet Australia's existing commitment of a five per cent reduction in carbon emissions compared to 2000 levels by 2020. However, Prime Minister Abbott stated that if this funding did not lead to Australia meeting their target, he would not allocate any more funds (Taylor, 2014).

Shortly after the commencement of the ERF in October 2014, Abbott stated that "coal is good for humanity, coal is good for prosperity, coal is an essential part of our economic future, here in Australia, and right around the world" (cited in Milman, 2014). These comments came despite the worldwide People's Climate marches in 2014 calling for action on climate change and 97 per cent of the world's scientists warning of global warming, with greenhouse gases caused by the burning of fossil fuels being the main cause (Keane, 2015).

Moreover, in a speech prior to attending the G20 leaders' summit, Prime Minister Abbott attempted to keep climate change talks off the agenda. He stated "I'm not focusing on what

might happen in 16 years' time, I'm focusing on what we're doing now... we are talking about the real. We are not talking about what might hypothetically happen 15, 20, 25, 30 years down the track" (Abbott, 2015). In addition, Prime Minister Abbott's chief business adviser, Maurice Newman, stated that climate change was a hoax developed by the United Nations in order to create a new world order (Newman, 2015).

The above comments illustrate that climate change was not a top priority for the Australian Government at this time. Therefore, they indicate that reducing carbon emissions was not a time sensitive issue, nor was it critical for firms to urgently respond to the Australian Government's demands.

Legitimacy of the ERF

The legitimacy of the Australian Government's ERF could be considered low. Although, at the time of its introduction, 52 per cent of the Australian voting public believed that global warming was a serious and pressing problem that should be addressed (The Climate Institute, 2013), the Climate Institute (2014) found that 62 per cent of Australians believed that the government should not use taxpayer's money to fund the ERF. Indeed, although the majority of the Australian public did not agree with the carbon tax upon its introduction, they preferred to keep it, rather than replace it with the ERF.

The introduction of environmental regulation causes an increase in firm, public and stakeholder awareness (Bryant et al., 2020). This suggests that the introduction of the carbon tax caused the public and stakeholders to be more aware of climate change concerns, but that they were still unaware of how the two alternative approaches operate. Once the public began to recognise that the carbon tax involved funds flowing from firms to the public, while the ERF involved funds flowing from the public to firms, the legitimacy of the government's ERF decreased.

In summary, variations in power were observed depending on firm and industry. However, there was no urgency or legitimacy for the majority of firms and the public. Therefore, in using Mitchell's et al. (1997) model to evaluate the salience of the ERF, the Australian Federal Government can be categorised as a Dormant (latent) stakeholder with low salience.

Table 5 summarises the above evaluation of the Australian Federal Government's salience across 2012 to 2015:

Table 5: Evaluation of the Australian Federal Government's Salience

	2012 Carbon Tax	2014 Repeal of Carbon Tax	2015 Emission Reduction Fund
Power	Power observed as firms were liable to pay for the carbon tax or be fined for non-compliance (loss). A lower level of power observed for firms that received support (gain); free ACCUs and funding reduced impact.	Removal of power due to the removal of the carbon tax.	Power observed for firms with viable initiatives with an opportunity to increase resources but uncertainty about the value of ACCUs. Lower level of power for firms that were unsure about whether they had viable initiatives as well as uncertainty about the value of ACCUs.
Urgency	Urgency observed. The Australian Government identified the need to address climate change.	Urgency not observed. Political statements and policy inaction indicated a lack of concern by the government.	Urgency not observed. Government commitment to targets remained uncertain and action by firms was voluntary.
Legitimacy	Legitimacy not observed. The majority of Australian firms and the public did not consider climate change as an important issue and opposed the carbon tax.	Legitimacy observed. The majority of the public did not want the carbon tax as demonstrated in surveys and at the polls.	Legitimacy not observed. The majority of the public and firms called for more government action to reduce carbon emissions but did not believe the ERF was the answer.
Stakeholder Salience Classification	Dangerous (expectant) with a moderate level of salience.	Discretionary (latent) with a low level of salience.	Dormant (latent) with a low level of salience.

CONCLUSION AND RECOMMENDATIONS

Government policy is necessary to achieve a reduction in carbon emissions and reduce the impact of climate change. Despite many countries committing to targets under the Paris Agreement, only one country (i.e., The Gambia) is on track to meet their target. This paper explored the salience of Australia's carbon tax and ERF to help understand why most countries are not achieving their targets. Vacillating and uncertain government policy affected the risk and opportunity for firms, thereby decreasing the salience of the government. Moving from a negatively framed carbon tax to a positively framed ERF also weakened the government's salience, particularly for certain firms and industries. This leads to the following suggestions for government policy and further research.

Firstly, governments should seek to provide greater certainty and continuity in climate change policy. This is because regulatory uncertainty surrounding the likelihood and impact of a policy choice appears to be a significant moderating factor in determining the level of stakeholder power and urgency. Uncertainty has not yet been considered in the stakeholder salience model (Mitchell et al.,1997). Future research that considers the impact of stakeholder uncertainty on salience is warranted.

Second, prospect theory suggests that framing government policy as a loss (i.e., a carbon tax) will be more powerful than framing it as a gain (i.e., an ERF). Further research is necessary to determine how firms actually perceived the changing government policies, and how these

changes in policy affects a firm's carbon strategy response. Such analysis needs to recognise how government policies affect industries and firms differently.

Finally, although Australia provides a unique opportunity to compare the effects of these contrasting policy approaches over a very short period of time, further cross-country comparisons would be a useful way to evaluate the ultimate effectiveness of alternative approaches used by governments to motivate individual firms to achieve their share of national carbon emission reduction targets.

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