

Behavioral Constraints to Climate Policy: Explaining Public Resistance Beyond Rational Models

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ABSTRACT

The paradox of modern environmental governance lies in the widening chasm between the recognised necessity of sustainable development and the persistent public resistance to the policies that enforce it. This paper critically looks at the reasons for public resistance to climate change policies, through a lens of behavioral economics. Taking economic models into consideration which explains the reasons for climate inaction through rational self interest models and collective action, this paper shows how these rational models are insufficient for effective policy making. By conducting a systematic review that compares classical economic models with behavioral frameworks, this paper explores how psychological factors and cognitive biases using nudge theory influences individual decision-making.

The findings of this paper suggest that individuals often resist these policies that are supposed to benefit society mainly due to their immediate and visible costs. Moreover, the behavioral biases such as present bias amplify and add on to the perception of unfairness and uncertainty, which eventually leads to lower cooperation and low public acceptance. This paper concludes by stating that implementation of behavioral frameworks into policy design through different strategies as enlisted can create an effective choice architecture and increase public support for a long term. Moreover, this paper recommends solutions to these behavioral tendencies that prevent individuals from supporting climate interventions, and these policy recommendations could potentially improve public support, making the collective goal of a sustainable environment more possible and realistic.

Introduction:

Climate change refers to a long-term shift in the temperature and weather patterns (United Nations Climate report, 2025). These shifts due to burning of fossil fuels and emissions of greenhouse gases act like a blanket wrapped around the Earth, trapping the sun's heat, causing an increase in temperature. These effects disproportionately affect vulnerable populations, which can cause societal inequalities and heavy losses. These problems are due to the negative externalities present. Extensive research shows that human activity is the major reason for climate change (Kellog & Mondiale, 1977). Climate change represents one of the best examples of a collective action problem for the modern era which involves the management of a shared resource. This is a collective action problem as individual actors have incentives to prioritize private benefits over social welfare which can lead to pollution. However, the benefits of prioritising climate change are shared globally and the individual value to it is often minimal. As a solution to these emission and climate problems, the government takes on policies such as carbon taxes and regulations.

Despite widespread awareness of these problems, public support remains weak for climate policies that propose solutions. And economic models help in understanding and evaluating individuals behavior in evaluating costs, benefits and the incentives when making decisions. Traditional economic models assume that individuals act rationally to maximize their welfare, however climate policies such as carbon taxes and regulations to emissions frequently face resistance and this opposition poses a challenge for policymakers trying to design effective climate intervention. Climate policies fail because they impose immediate and salient costs while providing delayed and uncertain benefits. This is because their benefits such as reduced global warming or less environmental damage occur gradually over long periods of time, making these benefits less visible rather than guaranteed costs. Since

Economic models provide a framework to understand these decisions made based on perceived costs and benefits. These models rely on assumptions of the rational actor where individuals are expected to evaluate decisions and maximize long-term welfare (Hofer, 2021). Human behaviour is not always driven by rationality. The gap between economic theory and human public behavior suggests that these rational agent models are insufficient to understand and predict human choices and behavior regarding their environment (Thaler & Sunstein, 2008). In efforts to reduce cognitive load, humans rely on heuristics and cognitive biases to make immediate decisions. Thus, climate change activities face a high level of public resistance. Economists argue that limited adoption of energy efficiency and resistance to climate change policies reflect cognitive constraints rather than lack of information (Gillingham & Palmer, 2014).

Hence, by implementing the psychological aspects into economics analysis, we understand why individuals resist policies that are beneficial in the long run and why individuals do not evaluate policies in a completely rational manner. As demonstrated in the book *Nudge* by Thaler and Sunstein, the structure, presentation and framing of the policy also strongly influence decision making (2008).

This systematic review explores the problem of resistance to climate change policies from the perspective of behavioural economics. It emphasizes how public resistance cannot be solely explained by rational free-riding incentives. Instead, it shows how behavioral bias amplifies the effects of the opposition by making an illusion of an increase in the perceived costs, eventually reducing the long-term benefits. Understanding these mechanisms help develop better policies that overcome the limitations of the human psyche thereby enabling economists to facilitate collective action for global wellbeing.

Theoretical Background

This section explores the various economic theories and models that provide the current framework studies in similar contexts used to explain economic behaviour of the masses.

The Tragedy of the Commons and its role in climate interventions

Climate change is a strategic problem; individual and selfish decisions on emissions and consumption interact together to produce a collective outcome. Tragedy refers to a scenario where individuals prioritize one's own benefit over social welfare, which results in socially inefficient outcomes leading to a decline in public wellbeing. This is explained by a prominent concept from game theory: tragedy of the commons. When all individuals prioritize individual rational decisions over community welfare, this scenario is called the tragedy of the commons (Hardin,2009).

This model is based on the assumption that individuals are rational maximizers who seek to maximize their private benefits while ignoring the social costs borne. It assumes that resources are non-excludable and rivalrous, making it difficult to prevent access, however one's use can effect a depletion for the society as a whole. Additionally, the model assumes that individuals do not communicate or coordinate while consuming shared resources. Under these assumptions, the model demonstrates how individual rational decisions can lead to inefficient outcomes.

The atmosphere functions as public good or a common pool resource, which is non-excludable but rivalrous, which creates incentives for individuals to act in their own self interest to get maximum utility out of things they don't have to account for. Rational individuals have an incentive to free-ride on the climate mitigation efforts of others, as they reap the same

environmental benefits without incurring the associated costs like others. This problem reduces the individual's willingness to contribute to climate policies, because the private costs are immediate and visible, while the benefits are to be shared and distant. As a result of all these rational individual decisions, they become a negative collective outcome.

This is the scenario of the "free rider's" problem, which eventually leads to socially inefficient outcomes where a sustainable desirable output becomes very difficult. In the context of climate change, economic activities such as transportation, production and other activities accumulate to contribute to global warming such as rising temperatures and extreme weather, while the individuals gain private benefits through these activities. This shows how the marginal private costs and benefits overpower the marginal social costs and benefits. This creates a negative externality which eventually depletes shared resources. These finite resources are exhausted and overexploited as a result of individual self-interest, ultimately harming the collective welfare (Hardin, 2009). Additionally, when the resources are non-excludable, individuals tend to maximize private benefits from the shared resources while everyone bears the consequences, which is known as a moral hazard. Hardin emphasizes that these collective problems cannot be solved through voluntary restraint, but often through policy interventions, institutional arrangements and regulatory mechanisms. Within the problem of climate change, these include carbon pricing, emission regulations or agreements for coordination. The model clearly shows how prioritizing private benefits can lead to overuse of shared resources, giving an understanding of why free-riding occurs. This model effectively predicts the outcomes of overexploitation, making it widely applicable for various climate related and economic contexts. Moreover it justifies the requirement for government intervention, providing a foundation and reasoning for policies like carbon taxes and emission controls.

Despite this model's strengths, the Tragedy of the Commons has several limitations. One of the key assumptions of this model is individuals acting completely on their own self-interest. However this isn't true most of the time, as different factors such as social norms, trust, cooperation and framing often influence human behavior. Additionally, this model overlooks the decisions taken by government and institutions to reduce the exploitation of resources. Moreover, the assumption of no communication and coordination is highly unrealistic, because when it comes in the context of global negotiations and agreements, both these elements work together to produce a favourable outcome. The simplicity of this model makes it difficult to make viable solutions to complex problems like climate change as there are multiple variables needed to be taken into consideration along with multiple actors with diverse incentives and constraints. Therefore the model does provide a framework for understanding collective action problems, however isn't sufficient to explain the public resistance to climate interventions.

Elinor Ostrom challenges the inevitable nature of Tragedy of the Commons by showing the capability of individuals to cooperate under certain conditions. Ostrom argues that when the regulations are clear, with monitoring mechanisms and social norms that promote trust within the individuals, the people are more likely to contribute to the management of the shared resources.

Ostrom's model assumes that individuals are capable of cooperation and collective action with the right institutional frameworks and rules, as they can influence behavior. Social norms are believed to play an important role in sustaining cooperation. It is also assumed that individuals that consume resources can organize these by themselves under the right conditions. With Ostrom's frameworks, the effects of social norms on individuals' decision making is evident, with policymakers able to make better decisions that align with reality, by taking different factors that affect one's choice.

Ostrom's framework demonstrates that public support can be increased if policies are supported by credible institutions along with strong social norms. When individuals trust and expect others to comply and policies are fairly enforced, the public are more likely to support climate interventions. This highlights how social norms play a key role in overcoming collective action problems.

This model becomes a more realistic alternative for purely economic models as it focuses and takes on a more practical approach while considering human behaviour and its effects by social norms. It emphasizes the role of institutions, trust and governance in shaping support for these policies, and this model is more reliable as it is supported by empirical evidence from successful management systems. Furthermore, this framework provides practical policy insights for improving cooperation.

However, as the model is based on local commons problem, it becomes difficult to scale it to a global commons problem. The model proposes a strong institutional framework, which may be impractical as it may not exist. As the model's construction is a result of a local problem, it fails to see that coordination across countries is far more complex than small community management. These remain as limitations to this model.

The suckers effect plays a crucial role in support for climate policies, by further reducing cooperation in climate action. The suckers effect refers to a situation when individuals are not willing to contribute to a public good, if they believe that others are free riding. As a result of this, individuals avoid to be "suckers", which refers to bearing the costs without benefiting. This demonstrates that individuals' willingness to support climate policies not only depend on the costs but also on their own expectations of other individuals. Cooperation in climate policies is constrained by the perception of fairness.

The sucker's effects are based on a few basic assumptions which include individuals evaluating decisions based on fairness and relative contributions rather than only outcomes. It also assumes that decisions are made based on others' expected behavior. Therefore, there is an uncertainty about cooperation and enforcement, making individuals cooperative on conditions such as other's cooperation.

In climate change, this shows that public resistance to climate policies is driven by individual incentives and behavioral barriers, as well as the lack of credible institutions and the perception of lack of commitment towards climate policies. Behavioral biases interact with weak institutions to increase non-cooperation. When individuals do not trust that others will comply, or that policies will be fairly enforced, cooperation breaks down, as seen in the sucker effect. Therefore, effective climate policies must not only address individual incentives, but also behavioral barriers and institutional credibility and foster societal norms that support collective action. This phenomenon transforms the climate policy challenge from a simple resource management problem to a trust and expectancy problem.

Additionally, the sucker's effect explains public resistance beyond just pure self interest, incorporating fairness and trust as it takes into account the expectations about others and the sense of justice. This lets policymakers have a better output as they take in more than one variable into consideration which is a more realistic approach.

Despite its advantage in implementing policy design, this theory assumes that individuals are highly sensitive to other's behavior, which can vary according to the context and situation. It is also difficult to measure the perception of fairness and expectations which creates a drawback for this theory in policy design.

Policies that fail to receive widespread participation can face public resistance as a result of the suckers effect. Interaction between free riders and suckers can lead to unsustainable outcomes, where any perception of non-cooperation can lead to withdrawal from a collective action (Williams et al., 2013). For example, if many drivers adopt electrical vehicles, but others continue to use fuel vehicles, this can lead to a significant reduction in public support for climate policies even when policies are for societal wellbeing. Therefore, understanding public resistance requires the analysis of rational incentives, as well as behavioral responses to perceptions of fairness. This transforms the climate policy from a public good problem to a trust and expectation problem.

Together, all of these theories provide a theoretical foundation for having a clear understanding of why policies face resistance despite the long term societal benefits. While the Tragedy of the commons explains it through rational self interest and free riding-incentives, Ostrom shows how

trust, social norms and institutions too play a role that can encourage cooperation. Additionally, the suckers effect extends this by taking perception of fairness and expectations of others behaviors that decides an individuals willingness to contribute. Altogether, these theories suggest that climate policies cannot only be understood by rational economic incentives, which shows the clear need of incorporation of the behavioral aspect.

Methodology

This paper takes on a systematic review methodology to analyse and discuss economic models that explain responses to climate change policies. The objective of this approach is to use the existing theoretical and empirical research literature to identify limitations in these models, to include the human science aspect for a more practical outcome, to evaluate how behavioral insights can improve policy design. To fulfil this objective, this review does not limit itself to a particular time period, instead this review deliberately include the classical models used for decision making and contemporary studies to come up with a more viable solution, from traditional rational-agent models to modern behavioral frameworks, which can let policymakers identify the limitations posed by classical models, which brings the need for an improved policy approach. The papers used to vary from foundational works to recent study in behavioral and environmental economics. The sources of these papers are mainly from academic bases such as google scholar. Secondary sources were used as data for a comprehensive understanding along with policy recommendations, as solutions to certain problems. The logic behind the policy recommendations are derived from empirical findings in behavioral economics based on theoretical insights from established economic models that agree with recent study in individuals decision making due to various factors. Also references from prior policy recommendations and case based studies in this field are used to come up with these solutions as a result of specific cognitive biases. These methods have been used as this provides a structured comparison between economic models and clearly helps identify how incorporating behavioral insights can reduce the limitations of traditional economics policies in terms of their support.

Search Strategy:

This research was mainly conducted using secondary data obtained from credible sources such as Google scholar and peer reviewed journals that are linked to behavioral economics, climate change and environmental policies. Both the classical and contemporary academic studies were taken to have a clear comparison between the traditional rational agent models and the modern behavioral frameworks to examine and come up with viable solutions to inaccuracies. Sources were chosen based on their relevance to the research question, contribution to understanding the behavioral frameworks of the resistance faced by environmental policies and their credibility.

Discussion

Behavioral explanation for the lack of support (and discussions)

Behavioral economics challenges the assumption that individuals act consistently to get maximum benefit in an unbiased manner. Instead, people rely on how information is presented to them (Thaler & Sunstein, 2008). These behavioral tendencies affect how individuals interpret climate policies and can generate resistance even when policies are economically efficient.

Gowdy (2008) argues that climate policies that ignore implementation of behavioral concepts are ineffective and humans don't act according to prices of the goods and incentives in a mechanical way. Rather, they depend on psychological biases, values, habits and their environment.

This section gives a detailed analysis on different biases' effects on people's decisions, and hence seeing how this can be implemented in policy design to increase public support.

Present Bias

One important behavior factor in public attitude toward climate interventions is the short sightedness towards the long-term benefits. Traditional economic models assume that individuals evaluate long-term costs and benefits rationally. However due to present bias, individuals act irrationally due to the salient immediate costs. Present bias occurs when consumers focus on short term economic costs while undervaluing the long-term benefits. This is a result of individuals prioritizing individual private benefits such as immediate consumption over future collective gain, for societal welfare. This behavioral tendency is closely related to the economic concepts of hyperbolic discounting where humans tend to discount the future outcomes, leading the consumers to value the present moment significantly more than the future, but time preferences are no longer consistent due to individuals discounting much more (Laibson,1997).

Climate policies often involve immediate and visible costs and future uncertain benefits as climate change policies are framed emphasizing the need to save for the future or affecting a distant geographic region, they are often psychologically distant. As a result, individuals may resist immediate costs or changes even if the long-term benefits are greater. This can be understood through the example of carbon taxes, as they are perceived to be a short term financial burden on households rather than a benefit such as avoided climate damages, improved environmental quality which are gradually realized over time. As these benefits are not immediate, they appear abstract, which consumers might not value while evaluating climate policies.

Bias towards the present also reflects consumers' difficulty with delayed gratification. This suggests that consumers tend to prefer immediate smaller rewards over larger ones, even when waiting would generate a long-term collective reward. This can be understood by the concept of psychological distance from the Construal Level Theory, which suggests that events that are distant in time and space are perceived to be abstract and less important. So, in the context of climate change, as the climate risks like rising temperatures are psychologically distant, they are perceived to be less important. However, carbon taxes tend to directly affect the expenses which makes them immediate. Hence, individuals place greater psychological weight on the immediate financial burden than the distant environmental benefit, which explains why the gains are discounted aggressively, and why the resistance towards these policies becomes stronger.

In economic terms, this behavior depicts the divergence between the marginal private incentive(benefit) over the marginal social benefit(welfare). Consumers evaluate decisions based on their personal private costs over the social cost borne by the society as a whole in the future. As a result, the present bias can cause a major impact on the collective action problem associated with climate change which can further reduce the public support for the policies that can potentially increase the long-term social welfare gains.

To address this, climate policies must be designed to shift benefits into the present and the benefits more visible and tangible. The first approach is to emphasize immediate benefits, such as improved air quality, public health outcomes, and better environmental conditions. By explicitly highlighting the near-term benefits, policy makers can counter the tendency to discount future gains, making climate policies more appealing. Making these outcomes explicit and visible increases the chances of individuals valuing and accepting the policy. The effectiveness and support for climate policies does not only depend on the magnitude of impact, but also on the temporal alignment with individual preferences. Climate change is perceived to be distant, reducing the weight of decision making in the present. Hence, the second approach is to incorporate benefits, such as visible financial returns like dividends or rebates alongside environment related taxes such as carbon. Ensuring benefits in the short term rather than abstract long-term assurances can help policymakers align these policies to the individual's preferred timings. This can not only create a separate mental account, but also reduce the psychological gap between the timings of when costs incurred and the benefits are received or realized.

In addition, an effective strategy would be reducing the upfront costs through subsidies for firms who use renewable sources of energy or use sustainable methods of production. Financial incentives such as subsidies can be given for renewable energy adoption or other sustainable practices that can potentially decrease the barrier for behavioral change. The reduction in these upfront costs can shift the consumer's burden from the present, making long-term investments look attractive to consumers who might prioritize immediate affordability.

Incorporation of present bias in policy design suggests that aligning the timing and visibility can significantly improve public support. Policies that provide immediate or short term rebates along with their climate interventions are more likely to overcome the behavioral resistance usually faced by climate policies.

Framing Bias

Most climate policies are framed as losses or immediate costs, without considering the effects of framing to an individual's decision making. This suggests that individuals do not evaluate policies solely based on costs and benefits, but heavily based on how it is framed (Thaler and Sunstein, 2008). Framing bias refers to a bias where individuals take a decision on the basis of how the choices or information are presented to them, rather than underlying on the facts themselves. In behavioral economics, this challenges the idea of choices being independent, showing that the choices made are highly sensitive and dependent on the presentation and the wording. Framing can be used as a tool for significant changes in the consumers decisions, as they nudge the consumers. This is because framing effects are exacerbated by the human tendency occasionally to be somewhat mindless, passive decision makers. Therefore, climate policies must be framed to highlight benefits and make costs less salient visibly and psychologically in order to gain more public support. Hence, the design and the mode of communication must be carefully considered to maximize public acceptance.

For a policy recommendation, the first approach would be to address this bias by emphasizing the positive outcomes rather than the immediate costs. Instead of framing these policies to be a financial burden, economists and policymakers should frame them to highlight the long-term benefits such as improved air quality and environmental preservation, to reduce the resistance associated with perceived immediate losses.

Another approach to framing includes the salience of taxes and prices, where the changes in price of a commodity that impacts climate change are explicitly shown to consumers. Raj Chetty, Adam Loony and Kory Kroft demonstrate how consumer behavior can be affected by the visibility of an additional charge on the unsustainable product, and actually incorporate those taxes in their purchasing decision. Applying the same insight to environmental policy, would mean the unsustainable products contributing to environmental costs should be more explicit. For example, in the case of retail pricing strategies, both the base price and the final price can be explicitly stated, through which consumers become more aware and increase the salience of the environmental costs causing a shift in toward the sustainable alternatives.

To ensure successful strategic framing, the government must use taxation and subsidies to ensure that sustainable products are more accessible to the market. Products produced through

unsustainable methods that cause negative externalities can be subject to higher environmental taxes, which increases the price. Explicitly showing this increase in price through framing bias can act as a signal to consumers. In contrast, the firms producing goods using sustainable methods should receive subsidies and tax incentives that allow them to be easily accessible at a low price and to be environmentally friendly. Explicit depiction of the lowered cost can act as an incentive for the consumers to consume the good and show it is a sustainable product. These policies could significantly help the market to lower their environmental costs while encouraging and adopting sustainable technologies.

Luxury good taxation provides an example of strategic framing and policy design. Luxury goods are often heavily taxed, as they are based on consumer choice rather than necessity. Necessity goods are taxed at a lower rate since they must be readily available. Using a similar framework, sustainable products and practices could be positioned as a societal need rather than a consumer preference. By framing sustainability as a need for economic and environmental stability, policy makers can attempt to reshape consumer attitudes and increase public support for climate intervention.

Overall, the strategic incorporation of framing bias into policy design can increase public acceptance of climate interventions. This can be achieved ensuring clear communication of environmental costs, emphasizing on the long term benefits to

(Have some arguments too)

Mental Accounting

Individuals tend to create a separate mental account for climate change policies, and as a result of policies such as carbon taxes, they tend to provoke a negative or a loss within their accounts leading to a lower support for climate intervention. Mental accounting refers to the fact that people create mental budgets to organize their resource use and to create linkages between specific acts of consumption and specific payments (Hahnel et al., 2020). This concept is very important in understanding how people respond or react to environmental policies such as carbon taxes. This is because the policy can be accepted and rejected depending on how it is mentally categorized. When carbon taxes increase, the cost of everyday goods rises, causing a reduction in the household disposable income of the people. This can cause a negative reaction since they are associated with essential consumption categories. It is understood that opposition to carbon taxes arises from perceived budget impact, but not from net welfare effects.

Moreover, the resistance towards carbon taxes significantly reduces when these taxes are clearly earmarked (Hahnel et al., 2020). The views by the consumers will change once the tax revenues are recycled into environmental investments or returned to households as dividends. In this

scenario, consumers will see the taxes not as a financial loss, but as a contribution for a collective environmental welfare. Thaler and Sunstein's discussion of choice architecture highlight how structuring and labeling these could influence the behavior (2008). This illustrates how policy design and framing can influence the mental accounting process to increase public support.

- ***Double dividend Hypothesis***

This Double dividend hypothesis supports the concept of mental accounting by showing how redistribution of carbon taxes can increase the support from the public for these policies. The double dividend hypothesis suggests that environmental interventions such as carbon taxes can produce two separate benefits simultaneously. With relation to the context of climate change, the first benefit/dividend is the improvement in environmental conditions due to lower emissions and pollution. The second gain refers to recycling of tax revenues back into the economy via rebates, and cutting taxes as investments in renewable energy which is discussed as a policy recommendation below, for mental accounting (Fullerton & Metcalf, 1997).

This makes the consumers see the direct benefit and fair redistribution, instead of direct costs, which could potentially reduce the psychological resistance, as it increases the perceived fairness making people more willing to cooperate.

Implementation of a revenue neutral carbon tax along with climate dividends is a practical solution to approach public resistance where the collected taxes would be redistributed back through rebates and reductions in taxes. Clearly labelling the advantages as climate dividends can help policy makers reduce the perception of carbon taxes solely being financial losses. Incorporating this would address the behavioral resistance by increasing perceived fairness and reducing the psychological losses, making the benefits more visible and immediate to the people.

Research in mental accounting mechanisms shows that individuals evaluate decisions related to energy mechanisms or climate related policies with specific mental accounts associated with household budgets, such as daily expenditures (Hahnel et al., 2020). As environmental policies such as carbon taxes directly reduce disposal income, they can trigger negative reactions. This can be potentially solved by revenue earmarking. Earmarking is a budgeting practice by which all or a portion of tax revenues is dedicated to a particular sector or program chosen in advance, rather than subjected to the typical budget procedure of revenue-pooling (Mus et al., 2023). When individuals perceive the environmental taxes to be reinvested into sustainable environmental programs, infrastructure development or returned as rebates to households, the policy will be evaluated differently in mental accounts. This shows how allocating tax revenues to visible areas can increase perceived fairness and acceptance.

For example, carbon tax revenues could be redistributed in the form of dividends or rebates. By clearly and explicitly stating these returns as “climate dividends” or “rebates”, policymakers can create a separate mental account associated with benefits from environmental interventions, rather than just an increase in taxes. The addition and implementation of this mental account can replace the perception of climate policies from an increase in the cost of living to a collective investment by all citizens based on their income for environmental protection. Moreover, earmarking tax revenues for visible environmental projects such as expansion of renewable energy, can increase the reliability and trust for the public and for policy acceptance.

Incorporating mental accounting into policy design shows how transparency and labeling of climate revenues play an important role in public attitude towards climate interventions. It allows policymakers to alter losses as contributions by altering behavioral responses without any change in the economic structure. By explicitly stating where the carbon tax revenues are spent and its dividends to the people can influence people’s decision making, which eventually increases the support for the climate mitigation measures.

Status Quo

Status Quo refers to the tendency of humans to prefer existing conditions over change or to have inertia; the unwillingness to change from the standard choice. Most decisions have a status quo alternative, requiring doing nothing or maintaining one’s current or previous decision (Samuelson & Zeckhauser, 1988). Climate policies often require behavioral adjustments or a willing change in actions, such as a change in transportation methods. These can be relatively small changes, but individuals may resist them as they disrupt their daily routines and lifestyles. As a result, any policy or climate intervention that requires active behavioral changes can encounter resistance simply because they break the inertia which causes unease in the consumers.

This need not necessarily be opposition towards the climate policies, it could be passive inertia. In the case of climate policy, people will continue to stick to their current decisions despite negative outcomes, and climate interventions resulting in public resistance due to the change in inertia, which require behavioral adjustments. Adopting sustainable behaviors often can require the individuals to have a change in routine and habits which can create discomfort and uncertainty. This resistance is further reinforced or supported by the uncertainty, as individuals prefer existing conditions over reforms with uncertain outcomes, even when they are expected to have improved welfare(Ciccone, 2001).

Empirical evidence shows the role of this bias in climate related policies, especially in areas related to carbon mitigation and transport. Results indicate that resistance to these policies are

not only driven by the costs but also the preferences for the existing systems and habits (Lang et al., 2021).

Johnson and Goldstein show how default setting significantly influences behavior. For example, opt-out systems, where individuals are automatically enrolled in these programs unless they actively choose otherwise, drive up participation rates compared to opt-in systems. Automatic enrollment in renewable electricity programs or a default setting in transportation that can prioritize low-emission options can increase the participation in climate interventions and can subtly change the consumer choice while retaining the consumer choices (2003). Since individuals are highly sensitive towards their choices, implementing this policy design can improve rates of active decision making.

By shifting from the default opt-in to the default being opt out, policymakers can help individuals reduce the effort to make a sustainable choice, which aligns the individual behavior with environmental goals. This approach uses the status quo bias effectively to increase the policy effectiveness and acceptance without restricting the individual's choice. This bias shifts the policy from a problem of choice, to a problem of design (Thaler and Sunstein, 2008).

Social Proof

Social proof refers to one way that individuals determine appropriate behavior for themselves: to examine the behavior of others there (Cialdini et al., 1999). Within climate policy frameworks, individuals do not evaluate policies independently or alone, rather their support is mostly swayed by perceptions of how others behave to these policies.

Behavioral study shows that individuals are strongly influenced by descriptive social norms that are based on what others are doing rather than pure economic incentive (Cialdini et al., 1999). When individuals perceive other individuals not supporting climate policies or are willing to incur social costs, they themselves are less likely to support these interventions. This leads to low-support equilibrium where no one is willing to support the policy creating an equilibrium of non-cooperation.

This behavioral concept introduces coordination. When individuals are willing to support these policies, if they expect others to free ride, they may withhold their support. As a result, individual rational decisions, based on expectation, can eventually lead to a collective inefficient outcome. For example, households adjusting their energy consumptions when informed about their neighbours behavior (Allcott, 2011).

Similar to policy recommendation of the framing bias, increasing the visibility and the salience of the policy can increase the public acceptance and support for these policies. By active

signaling through large scale participation, and by setting that as the new norm through public commitments, policymakers can shift the people from low cooperation to high cooperation, by the use of social proof, thus increasing the support for climate interventions.

Loss aversion

One of the primary behavioral reasons for resistance against climate policy is loss aversion, which is a concept central to Prospect Theory. Loss aversion is a very influential concept in behavioral economics, which suggests that the pain of losing something is psychologically more powerful or impactful than the pleasure of gaining the same. In the context of climate change, climate policies could have been framed in terms of an immediate loss, such as carbon taxes leading to higher fuel prices. Since these are immediate and very visible costs, they trigger a strong psychological resistance towards these policies.

This resistance is closely connected to the status quo bias, which is the result of the loss aversion through the endowment effect, where individuals place a high value on what they possess, are accustomed to and are psychologically attached to. Due to this attachment, giving up these behaviors is perceived to be a personal loss. At the same time, the benefits of climate policies are framed to avoid future damages rather than a gain or a benefit for the whole. Since these gains are uncertain and they require complete cooperation, they carry less psychological weight. The imbalance of the psychological weight between the perceived losses and distant gains can create a public resistance to climate interventions. Higher fuel taxes, for example, presented as immediate costs rather than long term gains, which provoked a strong negative reaction regardless of policy benefits. This imbalance between the immediate perceived loss and delayed benefits contributes to the public resistance towards climate policies.

Conclusion:

Climate change isn't only an environmental and economic problem, it also becomes a behavioral problem. Traditional economic models explain why individuals prioritize private benefits over collective welfare, however these models fail to explain the widespread public resistance towards climate policies, which is why this paper incorporates behavioral biases to demonstrate the significant influence of how individuals perceive and respond to climate interventions.

This paper analyses and shows that the resistance toward environmental actions are not by opposition toward the goals itself, rather it is due to how these policies are psychologically interpreted. The policies are intended to create environmental benefits and collective welfare, however the way it is framed subtly makes it to be presented as immediate and visible costs, making the benefits more distant, and the perception of fairness weak, which further reduces

cooperation and public support. As a result, policies that are economically successful might fail socially due to the absence of interpretation of behavioral tendencies of individuals.

Incorporating behavioral economics into policy design allows policymakers to create an effective choice architecture. This is done by implementing solutions to various biases that affect consumers' choice of opting in support for climate action. Using various tools such as climate dividends, strategic framing, default options and others mentioned in the paper, can reduce the psychological resistance which creates incentive to change consumers' choice that aligns with long term environmental goals.

Additionally, behavioral approaches can increase the trust, perceived fairness and the institutional credibility, which increases the possibility of solving climate action problems. Policies that provide immediate benefits along with transparency and socially visible outcomes can potentially shift climate action from being perceived to be an individual's sacrifice to a contribution to shared collective investment. Hence, incorporating behavioral insights into policymaking can provide a more realistic and comprehensive method to increase the public support and improve effectiveness of climate interventions.

In conclusion, creating successful climate policies with reduction in public resistance, requires more than rational incentives alone. By combining traditional economic theory and behavioral economics with a game theoretic approach, policymakers can design climate interventions that are not just economically efficient, but also socially sustainable and publicly acceptable.

References

“The Tragedy of the Commons*.” *Journal of Natural Resources Policy Research*, vol. 1, no. 3, July 2009, pp. 243–53. <https://doi.org/10.1080/19390450903037302>.

“Nudge: Improving Decisions About Health, Wealth, and Happiness.” *Choice Reviews Online*, vol. 46, no. 02, Oct. 2008, pp. 46–0977. <https://doi.org/10.5860/choice.46-0977>.

Gowdy, John M. “Behavioral Economics and Climate Change Policy.” *Journal of Economic Behavior & Organization*, vol. 68, no. 3–4, July 2008, pp. 632–44. <https://doi.org/10.1016/j.jebo.2008.06.011>.

Gillingham, Kenneth, and Karen Palmer. “Bridging the Energy Efficiency Gap: Policy Insights From Economic Theory and Empirical Evidence.” *Review of Environmental Economics and Policy*, vol. 8, no. 1, Jan. 2014, pp. 18–38. <https://doi.org/10.1093/reep/ret021>.

Abell, Dana L. “The Journal of Environmental Education.” *Environmental Education*, vol. 2, no. 4, July 1971, pp. 1–2. <https://doi.org/10.1080/00139254.1971.10801578>.

Hahnel, Ulf J. J., et al. "Mental Accounting Mechanisms in Energy Decision-making and Behaviour." *Nature Energy*, vol. 5, no. 12, Oct. 2020, pp. 952–58. <https://doi.org/10.1038/s41560-020-00704-6>.

Kellog, W. W., & Mondiale, O. M. (1977). Effects of human activities on global climate. *Infoscience (Ecole Polytechnique Fédérale De Lausanne)*. <http://infoscience.epfl.ch/record/1925>

Laibson, D. "Golden Eggs and Hyperbolic Discounting." *The Quarterly Journal of Economics*, vol. 112, no. 2, May 1997, pp. 443–78. <https://doi.org/10.1162/003355397555253>.

Mus, Mathilde, et al. "Designing an Acceptable and Fair Carbon Tax: The Role of Mental Accounting." *PLOS Climate*, vol. 2, no. 10, Oct. 2023, p. e0000227. <https://doi.org/10.1371/journal.pclm.0000227>.

Ostrom, Elinor. "Governing the Commons." *Cambridge University Press eBooks*, 1990, <https://doi.org/10.1017/cbo9780511807763>.

Samuelson, William, and Richard Zeckhauser. "Status Quo Bias in Decision Making." *Journal of Risk and Uncertainty*, vol. 1, no. 1, Mar. 1988, pp. 7–59. <https://doi.org/10.1007/bf00055564>.

Ciccone, Antonio. "Resistance to Reform: Reconsidering the Role of Individual-Specific Uncertainty." *SSRN Electronic Journal*, Jan. 2001, <https://doi.org/10.2139/ssrn.273424>.

Lang, Corey, et al. "Status Quo Bias and Public Policy: Evidence in the Context of Carbon Mitigation." *Environmental Research Letters*, vol. 16, no. 5, Mar. 2021, p. 054076. <https://doi.org/10.1088/1748-9326/abeb0>.

Williams, Zachary C., et al. "Coupled Economic-coastline Modeling With Suckers and Free Riders." *Journal of Geophysical Research Earth Surface*, vol. 118, no. 2, Apr. 2013, pp. 887–99. <https://doi.org/10.1002/jgrf.20066>.

Cialdini, Robert B., et al. "Compliance With a Request in Two Cultures: The Differential Influence of Social Proof and Commitment/Consistency on Collectivists and Individualists." *Personality and Social Psychology Bulletin*, vol. 25, no. 10, Oct. 1999, pp. 1242–53. <https://doi.org/10.1177/0146167299258006>.

Allcott, Hunt. "Social Norms and Energy Conservation." *Journal of Public Economics*, vol. 95, no. 9–10, Apr. 2011, pp. 1082–95. <https://doi.org/10.1016/j.jpubeco.2011.03.003>.

United Nations. (n.d.). *What is climate change? | United Nations*. <https://www.un.org/en/climatechange/what-is-climate-change>

Hoefler, Richard. "Theory in Social Policy Research: Rationality and Its Discontents." *Journal of Policy Practice and Research*, vol. 2, no. 4, Nov. 2021, pp. 233–37. <https://doi.org/10.1007/s42972-021-00045-y>.

Fullerton, Don, and Gilbert Metcalf. "Environmental Taxes and the Double-Dividend Hypothesis: Did You Really Expect Something for Nothing?" *National Bureau of Economic Research*, Sept. 1997, <https://doi.org/10.3386/w6199>.