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Public Acceptability of Food Policies

Implications of Instrument Type and Social Norm: Evidence from Swedish Survey Data on Sustainable Consumption

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Abstract

This paper investigates the relationship between the present social norm and acceptability for food policies targeted at reducing greenhouse gas emissions, as well as analyses the differences in acceptability between instrument types. The aim of this thesis is to contribute to the ongoing scholarly and societal discussion on legislation in the food policy sector as well as offer important insights into the burgeoning dimensions of policy design and social context perspective in policy acceptance research. This was done by studying Swedish survey data from 2023 with over 2000 observations and analysing it using different descriptive and statistical models. The results conclude that the acceptability differs amongst policy types, and the present social norm emerges as an important explanatory variable and as a strong determinant of policy acceptability. This points to the significance of policy design considerations when constructing and analysing climate mitigation policies within the food politics domain, as well as the vital inclusion of social context in estimating and evaluating the ripeness and appropriateness of policies in research as well as in policy production.

Key words: Policy Acceptability; Acceptance; Food Policy; Social Norm; Policy Design; Democratic Legitimacy; Climate Mitigation

Table of Contents

1. Introduction

The need to consolidate support and acceptance for political initiatives is vital to any democratic state. Anticipated public backlash is decisive to elected politicians, commonly complicating the implementation of adequately far-reaching policies (Stern, 2008; Matti, 2015). This compelling intersection of democratic legitimacy and effectiveness has in recent years been prevalent in the scholarly as well as the medial debate on climate politics. The need for governments to act swiftly and forcibly against climate change is clearly challenged by principles of democratic legitimacy, since climate politics entail structural changes to an unsustainable system with widespread vested interests. This is exemplified by the many recent protests against climate measures (Doce and Trompiz, 2024; The Carnegie Endowment for International Peace, 2024) as well as domestic conflicts, such as the Swedish political debate concerning the fuel distribution policy (Danielsson, 2021; Åkesson and Sjöstedt, 2022).

Given this present challenge and the synchronous global need for effective climate action, it is of paramount importance to understand and scrutinise the determinants connected with policy acceptance for climate mitigation policies. That is why this thesis sets out to explore the relationship between policy acceptability and two promising, however understudied, determinants: policy instrument type and social norm. This will be done within the domain of food politics using survey data from Sweden and analysing the data descriptively as well as utilising regression models.

Sustainable food politics as a policy area has in particular proven perilsome for governments with regard to precuring democratic legitimacy. Governmental intervention is seemingly not an agreed upon approach in this policy domain and governments have consequently been hesitant to implement policies (Wahlen et al., 2012). Policies focusing on consumption instead of production has furthermore proven comparatively more challenging with regards to public endorsement, be it albeit a potentially more fruitful avenue for emission reductions (Reisch et al., 2013). Food policy is a contentious topic in society and government engagement can easily be perceived as intrusive (Ammann et al., 2023). The global food system alone is estimated to stand for 30 % of total global GHG emissions (Li et al., 2022), affirming the need for effective

policy in the food sector if we are to mitigate the disastrous consequences of climate change and live up to the climate targets set up by the international community.

Policymakers' understanding of a policy's ripeness and anticipated compliance within the public is, as asserted above, a prerequisite for effective climate policy in democratic states. If the goals set up in the Paris Agreement are to be met, much more stringent and effective mitigation policies are needed, especially within the realm of sustainable food consumption. However, said policymakers lack a comprehensive understanding of the setting and how their design choices influence these parameters. Does the policy acceptability vary between different types of policy instruments on sustainable food consumption and does the social context in which the stakeholders to a policy operate influence this acceptability? This thesis explores these questions and ultimately concludes that the level of acceptance within the public significantly varies between information, nudge and regulation policies, and that the present social norm greatly and significantly predict policy acceptability.

1.2 Research Problem and Questions

Despite substantial research on what increases the likelihood of public policy endorsement, governments continue to struggle greatly with precuring democratic legitimacy in climate politics, especially within the food policy domain. Some promising determinants of policy acceptance remain, however, underexplored by previous research and could offer remedial insights on the issue. As pointed out by Heyen & Wicki (2024), the design and qualities of a policy, such as instrument type, most certainly influence the public acceptance but remain an understudied area that deserve further scholarly attention. The same can be said about the present social context and norms (Harring and Jagers, 2025) and this is despite compelling arguments and evidence for concepts such as social pressure influencing acceptance rates greatly (Bolsen et al., 2013; Bamberg and Rölle, 2003; Schade and Schlag, 2003). The omission of social norms in the field is likely due to the academic tradition, and perhaps misconception, of considering social norms as primarily relevant in behavioural and action research. Additionally, data suggest that social norms can make the less palatable, but more effective, policies that are in

demand more acceptable (de Groot and Schuitema, 2012), which further emphasises the need to understand the role of social norms in the context of policy acceptability.

The aim of this paper is thus to make a preliminary contribution to the burgeoning dimension of policy design in the field of policy acceptance research by exploring the relationship between instrument characteristics and policy acceptability, as well as explore and scrutinise the role of social norms in explaining and predicting public endorsement. This will be done within the domain of food politics by analysing survey data from Sweden collected in 2023 within the Mistra Food Futures research program as part of their focus on policy levers and barriers for change across the food value chain. The research questions of this thesis are as follows:

1. *Does the level of policy acceptability differ between regulation policies, nudging policies and information policies targeted at mitigating emissions from food consumption?*
2. *Does the present social norm affect the acceptability of these policies?*

The paper contributes to the ongoing academic discussion on determinants for policy acceptability by scrutinising relevant variables in need of further research. The approach of this paper also highlights a pivotal policy area and policy instrument types that merits additional scrutiny. What is more, the paper contributes to existing research by formulating hypotheses on established theories and predicted trends and examining them using novel survey data from Sweden.

The societal relevance of this paper is manyfold. If policymakers worldwide are to sufficiently address issues connected with climate change, more climate policy is needed, and the democratic legitimacy of such policies is of paramount importance. This is due to public acceptance playing a pivotal role in the effectiveness of climate politics as such, since the threat of public backlash is a valid concern for policymakers in democratic societies (Matti, 2015; Stern, 2008). A more holistic understanding of the concept of policy acceptability regarding climate mitigation policies is thus needed by policymakers, legislators as well as society at large.

2. Previous Literature

In this section I will go on to summarise previous research done in the field of policy acceptability. I start with a broad introduction to the research field on attitudes and move towards a review of established determinants for policy acceptability. I conclude this section by examining relevant research on policy-specific determinants and social norms.

2.1 The Research Field

The study of policy acceptability is well-established, however perhaps convoluted due to general ambiguity in the use of diverse definitions and terminology. Policy acceptability, acceptance or support have been used interchangeably by scholars, as pointed out by Kyselá et al. (2019), when examining the attitudes of people towards a given policy or set of policies. In this thesis I have opted for the term policy acceptability when analysing my results (the reasoning and specifics concerning this terminology will be explained under the section labelled "The Concept of Policy Acceptability"), however, the literature review presented below is based on a broad assessment of the present research spanning academic fields, which is why a diverging taxonomy occur.

Many scholars have had an interest in exploring how the attitudes of individuals within the realm of politics manifest themselves and what factors explain or predict them. This academic interest largely stems from the emerging consensus on democracy being the preferred form of government. The values and opinions of the people are central to any democratic state and consequently it becomes paramount for the people in power to understand these attitudes in order to win elections.

A democratic state, however, should not only be understood as a political playing field where the players try to align themselves with the views and opinions of the people, but also as a body with the responsibility of governing in the people's interest (Dahl, 1971). Much of what democratic governments do is to legislate and pass public policies targeted at solving societal issues. Often, this means stimulating and fostering behavioural changes in the population

(Grelle and Hofmann, 2023). The responsibility of ensuring sustainable governance means passing necessary and adequate policies to deal with issues that threaten societal prosperity, e.g. climate change.

With the establishment of the concept of sustainable development, and in turn the internationally recognised governmental responsibility to achieve it, in the 1980s with the release of the Brundtland report, research on how pro-environmental attitudes manifest themselves emerged more clearly. Preliminary, Inglehart's theory on post-materialistic values from the late 1970s played a dominating role. Contending, in short, economic stability to be the main determinant due to pro-environmental value-focus only occurring after materialistic needs had been fulfilled (Inglehart, 1977). The scholarly understanding of how people perceive and align themselves with environmental issues developed and became more complex with the approach of the millennia. Elinor Ostrom's research was among the most prominent at the time and turned a focal point towards the social context and governance structures in explaining individuals' attitudes towards endeavours targeted at resolving collective action issues (Ostrom, 1998).

As the governmental responsibility to mitigate climate change and its consequences became successively more sedimented in the international and scholarly debate, with the adoption of global commitments such as the Rio Declaration on Environment and Development in 1992 and the production of the Kyoto Protocol in 1997, implementation was severely lacking. This was one of the main discourses during the Johannesburg Summit in 2002 which shifted the global discourse on sustainable development and climate politics to a more executive focus. This in turn further crystalised the interest to scrutinise and evaluate concrete mitigation measures more clearly.

The vital importance of public endorsement and support of said measures in democratic societies meant that a strand of evaluative research emerged that looked to explain and assess how and why people accept and support measures targeted at resolving issues affiliated with climate politics, such as climate change mitigation policies. In the past 20 years, a lot of research has been accomplished, and many different potential determinants have been explored.

Bergquist et al. (2022) try to synthesise and categorise the determinants that have been explored by analysing the findings from 51 articles and 89 datasets that look at the public opinion of carbon taxes and laws. They end up with 4 categories, namely:

1. policy-specific beliefs
2. climate change evaluations
3. psychological factors
4. demographic factors

Policy design falls under the first category, and I will more thoroughly present this literature under the next section. The same goes for social norms which would fall under psychological factors.

In the second category, we find general environmental attitudes such as climate change concern. Climate change concern has conclusively been shown to have a positive effect on public policy support for climate mitigation policies. This is for example clearly demonstrated in the survey study from Sweden by Eliasson and Jonsson (2011) where they explore the opinions on congestion charges. They conclude that perceived effectiveness of the policy and environmental concern to be the two most important determinants as to why people in Stockholm support a reintroduction of the charges. Similar findings are presented in the paper by DeBono et al. (2012) where they look at the Maltese context and general attitudes towards climate change mitigation policies. The level of concern regarding the consequences of climate change, such as increased health risks and reduced standard of living, was shown to be a strong predictor of policy support.

As for psychological factors, ideology and trust are important determinants for policy acceptance. Left-wing and green parties often advocate for more progressive and extensive policies on climate change mitigation (Rihoux and Rüdig, 2006; Neumayer, 2004). Furthermore, an active and engaging state in general fits well within the ideological lefts understanding of the role of the state. People who sympathise with more left-leaning politics therefore accept

and support policies targeted at reducing emissions to a larger degree. This claim is supported by the findings of many scholars from different country contexts (Park and Vedlitz, 2013; Harring and Jagers, 2013; Tobler et al., 2012). If an individual exhibits high levels of trust in government, the predicted endorsement of climate change mitigation policies increases. The rational being that why should you accept or support a policy proposed by an institution or persons you do not trust? Since it is up to the government to implement the policy, people must rely on the effects being the intended ones and the management of the policy to be performed suitably (Uslaner, 2003). We find support for this hypothesis in the works of Kallbekken and Sælen (2011) as well as from Hammar and Jagers (2006).

An additional theoretical notion that plays a central role in predicting policy acceptance can be distinguished in the efforts made by Grelle and Hofmann (2023) where they try to establish what they call The Integrative Public-Policy Acceptance (IPAC) framework. They introduce a component they call "desire for governmental support", meaning that people will be more accepting of public policy if they desire the government to actively engage in that policy field. This closely resembles the discussion concerning intrusiveness, which concerns itself with the desirability of governmental intervention relating to liberal normative believes on freedom. I will call attention to this discussion in the following section, as intrusiveness is a vital feature of any policy but especially critical to understand within the food politics domain.

Turning to demographic factors, a lot of research has been done on environmental attitudes and how individuals' characteristics (gender, age, economic status, education) influence them. As rightly summarised by Beiser-McGrath and Huber (2018), the existing literature would predict a young, well-educated and economically well-off woman to exhibit the most favourable demographic traits for climate policy acceptance. However, turning to the meta-analysis performed by Bergquist et al. (2022) the relative impact of these demographic factors on public opinion concerning carbon taxes and laws are significant but fairly negligible, with gender showing no significant results at all.

As mentioned in the beginning of this thesis, an important group of determinants that has been overlooked thus far in the literature is policy design and the qualities of policies (Heyen and

Wicki, 2024) as well as social norms (Harring and Jagers, 2025). A contribution of this paper is to analyse the policy acceptability of different instrument types and explore the role of social norms, thus offering tentative input regarding these research gaps. In the following sections I will go on to highlight the research that has looked at policy specific determinants of acceptability and social norms, as well as elaborate on the theoretical reasoning that is going to be decisive to my hypotheses and analytical framework.

2.2 Design and Qualities of Policy

When studying the literature that concerns itself with the relationship between policy-specific beliefs and policy acceptance, primarily three concepts have been appropriately scrutinised and proven to have an effect: *intrusiveness, fairness and effectiveness*. I have divided the sections below accordingly and will summarise the findings and theoretical constructs concerning each of the three concepts.

2.2.1 Intrusiveness

Intrusiveness as a concept has a long history within policy research. The extent to which the government interferes with people's lives is one of the fundamental political boundaries in western societies. The perhaps most influential work to modern day politics in this area was done by John Maynard Keynes in the 1930s where he explored government intervention and economic stability (Keynes, 1937). Across policy domains, the maintenance of self-determined decision-making has been shown to be a significant predictor of public acceptance of a policy. When a policy is perceived by people to interfere with their freedom of choice or autonomy, they are less likely to accept it (de Groot and Schuitema, 2012; Gärling and Schuitema, 2007; Eriksson et al., 2006). Highly intrusive policies should therefore be understood as policies that greatly interfere with people's everyday lives and largely or completely alter certain behaviours. For example, this could be bans or regulations of certain commodities or taxes carried by the individual.

Turning to the research on climate change mitigation policy acceptance, carbon taxes have been extensively proven to be less acceptable compared to other less intrusive measures such as education initiatives or information campaigns on the effect of climate change (Hagmann et al., 2018; Grelle and Hofmann, 2023).

A closely related concept within policy acceptance research that also draws its theoretical reasoning from the infringement on the individual's freedom is coercion. Often exemplified with push versus pull policies. In this instance, the main mechanism is not people's desirability for government intervention in a certain policy domain but rather the level of coerciveness of the policy. For example, a tax is highly coercive (non-optional to abide) and highly intrusive (full government engagement), but a subsidy is non-coercive (push measure) but still highly intrusive.

Even though intrusiveness and coercion are two distinct concepts, the theoretical convergence and the general empirical similarities have made the overlap in the literature prominent. The more intrusive or coercive a policy is, the less likely it is to be accepted (Eriksson et al., 2006, 2008; Heyen and Wicki, 2024). This is deeply problematic since it is policies that are comparatively more intrusive and coercive that are more successful in reducing emissions and that are needed in order to reach the emissions goals set up by the international community (Steg and Vlek, 2009; de Groot and Schuitema, 2012).

2.2.2 Fairness

The fairness of a policy can be measured in many different ways and the contention of what is fair is by no means universal. In climate politics, the concept of fairness is illustrated in many ways, for example by the polluter-pays principle, the discussion on fossil fuel dependency, the divide between global north and south and the latter's right to development as well as the Just Transition Mechanism of the European Green Deal, to name a few.

Hammar and Jagers (2007) distinguish between 3 types of distributional fairness based on the works of Deutsch (1975) in their paper on acceptance for carbon taxes in the transportation sector. The 3 types are: need, equality and equity. Fairness based on 'need' stipulates that the

people who are less dependent on emitting should reduce their emissions the most (carry the major share of the costs), 'equality' is about sharing equal costs or benefits of a policy among all, and 'equity' looks to contribution to the issue, i.e. people who pollute more should carry more of the costs.

The importance of people perceiving a climate change mitigation policy as fair in order to increase policy acceptance has been conclusively proven. Not the least by Hammar and Jagers (2007) who look at the Swedish context, but also by Huber et al., (2020) who study attitudes towards seven different policy instruments in Switzerland and Kollmann et al. (2024) that study wastewater management policies in India. In the meta-analysis by Bergquist et al. (2022) perceived fairness of a policy is shown to be an important predictor of policy acceptance across regional contexts when looking at carbon taxes and laws. The same conclusion is drawn by Maestre-Andrés et al. (2019) in their review article on fairness and public acceptability.

There is also evidence from some studies that procedural fairness affects the acceptance (Kim et al., 2013). Worth noting however, is that little is known about the underlying considerations and mechanisms regarding perceptions of fairness and effectiveness when evaluating policy acceptance (Ejelöv and Nilsson, 2020).

2.2.3 Effectiveness

The perceived effectiveness of a policy has substantially been proven to influence the level of policy acceptability across policy domains (Gärling and Schuitema, 2007; Huber et al., 2020; Mantzari et al., 2022; Djupegot and Hansen, 2020; Bergquist et al., 2022). When the estimated result of a policy is communicated, acceptability for the policy increases. Even highly intrusive policies become more acceptable if the effectiveness is communicated (Pechey et al., 014).

Effectiveness can be analysed in many different ways and there exists an array of classifications. For example, you can talk about effectiveness in the input stage of a public policy, the effectiveness in terms of output and effectiveness sustained over time (Vedung, 1997).

However, due to the prevalent use of survey design within policy acceptance research, effectiveness has mainly been studied by including approximations of emissions reductions when introducing policy scenarios or by applying different framings. In a meta-analysis by Reynolds et al. (2020) where they synthesise the results of experimental studies across policy domains that present real or hypothetical policies to participants, they conclusively find that presenting information regarding the policy's effectiveness (e.g. how the policy would address the issue at hand or offer concrete numbers for expected reductions) result in greater levels of acceptance for the policy. Looking as well at the meta-analysis by Bergquist et al. (2022) perceived effectiveness of policy was shown to hold the second greatest explanatory power in predicting public opinion on carbon taxes and laws, only beaten by perceived fairness.

The theoretical explanation of the importance of perceived effectiveness would by Locke (1689) be explained with the fundamental assumptions about the social contract. The people allow for the rule of government and expect political delivery and execution in return. The governance of the democratic state is ultimately financed by taxpayers; thus, in line with traditional economic theory it would not be considered rational to support an endeavour that spends your money and gives little (if anything) back.

Often, if not always, the empirical research that does focus on the effects of the design and qualities of a policy presented above restrict themselves to a simple, underdeveloped, dichotomous focus and scope when it comes to instrument types. Mainly, only taxes and subsidies are considered, which is pointed out by Drews and van den Bergh (2016) as well as Fairbrother (2022) resulting in an exclusion of other applicable and important instrument types.

Today's policies include a multifaceted array of different policy measures beyond the simple taxonomy of tax and subsidy. By opting for this convenient type of division when studying policy acceptability, policy instrument types that are more relevant and applicable to everyday politics as well as to actors within the relevant field are being overlooked. If the research community is to provide policy makers with practical and feasible tools the variables we study must acknowledge this diversity. That is why this thesis, as mentioned, aims to scrutinise policy

acceptability of a diverse range of policy instruments, the academic literature of which will be presented now.

2.2.4 Policy type

The effect that different policy types have on policy acceptability has naturally been studied to a certain degree in previous literature. Much of the research done in this area stems from the public health sphere, where different policy measures such as labels, nudges and taxes have been presented to interviewees or respondents as ways to reduce unhealthy habits of consumption. For example, Hagmann et al. (2018) look at the reduction on sugar consumption in Switzerland and Diepeveen et al. (2013) look at general food policies targeted at promoting healthy eating.

When studying the effect that policy types have on the level of acceptability, we are dealing with trade-offs in terms of desirability and effectiveness (Diepeveen et al., 2013; Arad and Rubinstein, 2018). Information campaigns or nudging schemes are less invasive, but not as effective at tackling the issue at hand in terms of resulting in emission reductions. Taxes face the opposite exchange. In general, however, the scholarly understanding is that less intrusive policy types can be seen to gather greater policy acceptance (Hagmann et al., 2018; Evers et al., 2018; Diepeveen et al., 2013).

There is further interest, however, to explore how instrument type affects acceptability of policies targeted at reducing our emissions. Scholars are in accordance that this remains an overlooked part in research on policy specific determinants for acceptance (Heyen and Wicki, 2024). Furthermore, within the domain of food politics, where policymakers struggle to legislate, a more comprehensive understanding of the public support across policy types are of interest, so as to better assess favourable avenues in this perilsome field.

Additionally, it is evident that more effective policies are needed in order to battle the consequences of climate change and the policies that most effectively do this are seemingly in turn the ones that are more intrusive or coercive, i.e. less acceptable in general (Heyen and Wicki,

2024; Eriksson et al., 2006, 2008). It is thus not a question of whether we need more or less of these policies, but rather how we foster greater acceptance for them in the public. It is here that social norms present themselves as a favourable endeavour and worthy of scrutiny as previous research done on policies on littering and transportation have shown that favourable social pressure can make such policies more acceptable (de Groot and Schuitema, 2012). Given the contentious and infected discourse concerning sustainable consumption and the simultaneous need for further research and scrutiny on applicable policy types, social norms can be expected to be a relevant variable to interact the relationship with and is therefore held as the main analytical focus of this thesis.

2.2.5 Social norms

Social norms or social context is a widely explored topic and analytical lens in all of social science, with action and behavioural research consistently including it in their explanatory models. Given that humans are social beings that are influenced by others, replicate behaviour and to some degree care what others think, the way people relate to each other is an important and decisive part of human psychology and behaviour. Amongst the most prominent works that look at social norms within the realm of attitudes on environmental and climate issues we find Elinor Ostrom.

Her research situated itself within the literature on environmental behaviour, collective action issues as well as sustainable governance and explored under what circumstances people divert from expected, short-term rational choice and actually make long-term sustainable decisions (Ostrom, 1998, 2015a, 2015b). Her research found, amongst other things, that social norms play a pivotal role in resolving collective action dilemmas and in fostering cooperation. This is due to the important role that social norms play in trust-building, since the risk of becoming the sucker (of paying the required costs while others defect) depends on the cooperation of all included in a social dilemma. To have common rules, expectations and understanding of an issue is paramount to govern a resource sustainably and to trust others and reciprocate.

A lot of studies where social norms and context have taken centre stage have been performed within environmental behaviour research as a cascade to the research by Ostrom. In general, social norms as an analytical lens has become heavily sedimented within behaviour and action research and been kept rather distant in the literature on policy acceptability. This view is partly reflected by Harring and Jagers (2025) in their report to the Expert Group on Public Economics (ESO).

Some promising findings regarding the effect of social norms on policy acceptability have albeit been found. For example, Bolsen et al. (2013), Schade and Schlag (2003) and Bamberg and Rölle (2003) all conclude that the social pressure felt from others indeed effects the acceptability for climate mitigation policies. For example, they operationalise this social pressure by communicating in a policy suggestion the extent to which others support it, showing that people tend to side with the majority as they evaluate the policy themselves.

In sum, social norm as a determinant for policy acceptance remains fairly unexplored but promising results exists and sound theoretical arguments for its relevance regarding policies on sustainable consumption are clear.

3. Theory

In this section of the paper, I will begin by problematising the concept of policy acceptability and define it within the scope of this thesis, concluding that policy acceptability should be understood as the expression of an evaluative attitude in a hypothetical situation. Furthermore, the discourse on food consumption policies is succinctly explained and intrusiveness is presented as an adequate standard for categorisation. The theoretical relevance and role of social norms in policy acceptability research is also reviewed. Ultimately an analytical framework is drawn up where theoretical mechanisms and concepts presented in previous literature is reiterated and developed further, concluding with the formulation of hypotheses for my analysis.

3.1 The Concept of Policy Acceptability

Policy acceptability is a concept with a long academic history given its irrefutable connection to democratic legitimacy, and as with any long-lived notion within the social sciences an array of different definitions as well as related terminology exist. Policy acceptance, public support, public opinion, policy support, willingness to accept/pay, citizen support or general support are among the most widely used. I have opted to use policy acceptability when referring to the notion of an individual or group expressing support or positive attitudes towards a policy proposal since its definition most closely reassembles the phenomena I explore as presented by Kyselá et al., (2019).

Most of the research in the field has utilised a survey design on a single country case basis and thereby studied public attitudes towards different, often hypothetical, policies. The method of this paper very much emulates this main approach, and the concept of policy acceptability should therefore be understood as an evaluative measurement of public attitudes towards a policy in a preliminary stage of the policy cycle, and not as a certain action such as casting a vote. Endorsement or support of a policy in the later stages is very difficult to measure and often irrelevant, since an individual accepting a policy after its implementation entail a passive behaviour and what can be observed clearly after policy implementation is often the opposite,

namely non-acceptance or dissatisfaction, i.e. demonstrations, protests or other public displays of discontent.

Policy acceptability should in the survey design context, at its core, be considered an expression of attitudes and namely a passive evaluative response to a certain proposal. This is the definition of policy acceptability given by Kyselá et al. (2019). To be mindful of the terminology and adapt it to the empirical context is something that Kyselá et al. (2019) clearly demonstrates to have been lacking. They present three main terms when studying these types of phenomena: *acceptability, acceptance* and *support*. As mentioned, I have opted to use the first one as this aligns well with the operationalisation and context within which this paper operates. The importance of clear and well-founded definitions is evident when it comes to comparability and replicability. So as to promote understanding and comply with the perceptive points made by Kyselá et al. (2019), this paper will opt for the term policy acceptability when analysing and discussing the results of this paper.

3.2 Understanding Food Policy

Policies targeted at sustainable food consumption can be categorised in many different ways. The taxonomy that I will draw on is that which Ammann et al. (2023) presents in their review article on policy instruments for sustainable food consumption, which in turn is founded on the work by Reisch et al., (2013). The categorisation is based on level of intrusiveness. I opted for this categorisation since it is based on a theoretical concept that conclusively has been proven to influence policy acceptability, making it a relevant categorisation for this research. In turn, the food policy area is in many ways a disputed topic and government intervention is by no means an agreed-upon tactic (Wahlen et al., 2012). As highlighted by Chen and Antonelli (2020) the politics concerning what we consume or how we interact with food is heavily shaped by cultural traditions, society and socio-economic status, and the debate is often characterised by scholars as stigmatised and contentious (Abdool Karim et al., 2024; Fry, 2012; Upshur, 2013).

The point of conflict in this policy domain lies in many ways in the infantile state of deliberation: what role should the government play here? Due to this, I believe categorising food policies in terms of intrusiveness and holding it as the decisive policy feature to be apt and correct. The discourse analysis by Bendz et al., (2023) where they study arguments of (non-)acceptance towards food consumption policies in Swedish online forums supports this understanding, since the contention that government intervention infringes upon the individual's freedom was the main argument for non-acceptability. This perception is also highlighted by the Swedish Food Agency as a potential risk in their theoretical analysis of public food policy for healthier consumption (Skogström and Holstein, 2023), giving further support to contention of the decisiveness of intrusiveness.

Additionally, the intrusiveness parameter should be thought of as relevant and applicable to everyday politics. It is a factor that legislators have direct influence over, to opt for a more or less intrusive type of policy when trying to resolve an issue. The categorisation presented by Amman contain 4 categories: *regulatory policies, market-based policies, nudging policies and information policies.* As illustrated by Figure 1 below, information policies should be thought of as the least intrusive and regulatory policies as the most intrusive.

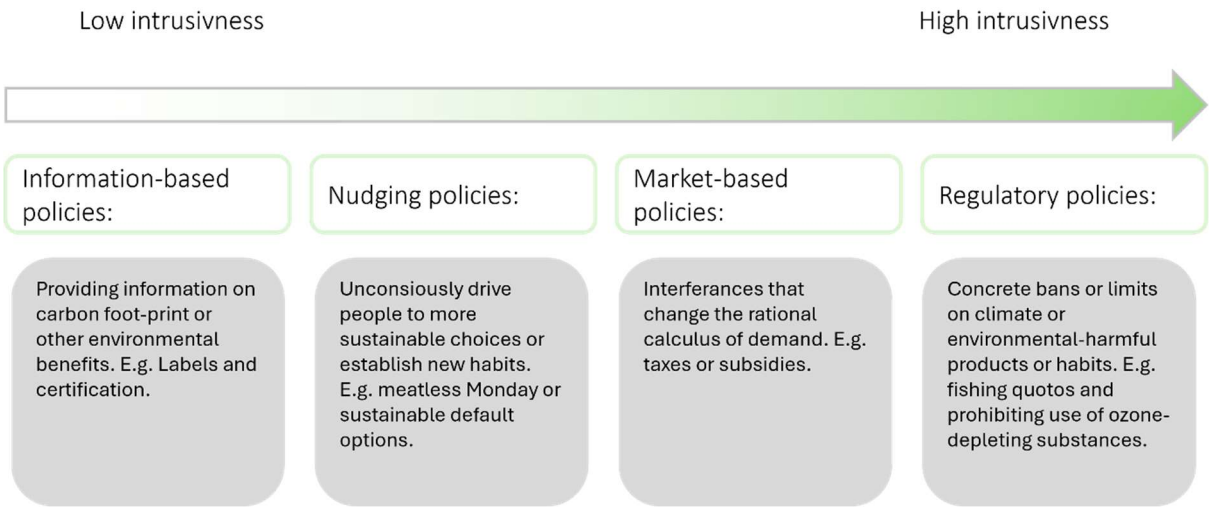

Figure 1: Food Policy Categorisation

3.3 Social Dilemma and Pressure

As mentioned throughout this thesis, exploring the role of social norms in predicting policy acceptability within the realm of food policy is one of the distinct aims. In this section I will introduce the concept of a social norm further, as well as elaborate on the theoretical foundations for policy acceptability.

A social norm should be understood as a normative consideration regarding the beliefs of important others (Ajzen, 1988). In the context of this thesis, a social norm should be understood as concerning itself with the perceived or expected social pressure to accept or reject an environmental policy due to the expectations of relevant others in the situation. Within a given group, there are informal rules and certain behaviours that are socially encouraged. The perception of these rules and behaviours will ultimately dictate how an individual presents themselves and the attitudes they convey since the deviation from the norm translates to social costs (Ajzen, 1988).

The research that has been done on policy acceptability and social norms follow the general dichotomous focus of the field with taxes and subsidies being the main analytical objects, however, offer promising insights in terms of effect. Bolsen et al. (2013) find that when a person receive information regarding the attitudes of others towards a carbon tax, they are less likely to accept the tax if a majority is negative towards it. The same moderating factor of social pressure is found by Bamberg and Rölle (2003) that study acceptability of pricing measures on transportation in Germany. There is also evidence within the policy acceptance literature that social norms can make less palatable policies, such as push policies, more acceptable (de Groot and Schuitema, 2012). The expectations about other people's attitudes towards a given policy influence how respondents position themselves. Pro-environmental endeavours may within a given social context be something that one "should" care about, thus actualising a social pressure to accept such policies in order to avoid social ostracism and sanctions. However, what the effect looks like for more diverse policy types and within the food policy domain remains unknown.

To accept or not accept a climate policy can also be thought of as a social dilemma as rightly pointed out by Biel and Thøgersen (2007). A social dilemma is a situation where individual interest and collective interests are at odds. Taking a gasoline tax as an example, this would mean that individuals have a short-term rational not to accept the policy, since this results in increased costs for the individual, and consequently the socially preferred optimum (a liveable climate) would be compromised. The theoretical foundations for the importance of social norms in policy acceptability can therefore be derived from the aforementioned work of Ostrom. The trust in others or rather the expectations regarding the behaviour of others is vital to solving a social dilemma. If a person believes that no other will accept a policy targeted at reducing emissions, this affects the willingness to accept it. In democratic societies the support of a majority is decisive, meaning in situations where a person believes only a minority to support a policy, the policy will be poorly evaluated and the person will not be incentivised to give up the environmentally harmful behaviour, i.e. the person will not accept the policy.

Given that government intervention on sustainable food consumption is a controversial and contentious topic, it is fair to assume that the explanatory power of social norms should be comparatively strong here. This is due to a person's position on a controversial or polarised issue being greatly influenced by social context and present norms in a given social group, due to high risks and costs associated with opting for unendorsed options (Cole et al., 2023). The contentiousness of food policy and general struggle to legislate in the policy area is highlighted by several scholars (Abdool Karim et al., 2024; Chen and Antonelli, 2020; Upshur, 2013; Fry, 2012).

To summarise, a social norm in the context of this paper should be understood as a perceived social pressure and in turn a social calculus where individuals strive to avoid social costs by expressing the attitudes held by, to them, relevant others. For a person who operates within a social context where environmental consciousness regarding consumption is prominent and the expected social pressure therefore high, the acceptance of government intervention targeted at accomplishing sustainable consumption will be higher. Whereas a person who operates in a social context with the opposite prevailing norm, the likelihood to accept or evaluate a policy targeted at sustainable consumption as positive will be much lower.

3.4 Framework and Hypotheses

Having presented the relevant literature and theories to this thesis, in this section I will draw up the analytical framework that I will use when analysing my results as well as stipulate hypotheses regarding expected findings.

High intrusiveness has, as previously stated, been found to be negatively correlated with acceptance or support of a policy. This is due to intrusiveness being at odds with personal freedom of choice and thus directly challenging the universal liberal norms of the western world. Intrusive policies are furthermore associated with higher costs for the individual due to intrusive policies directly influencing behaviour and requiring people to substitute or change it. What is more, the legislation on food consumption and passing of policies is controversial and the violation of personal autonomy, that the government has no place to meddle or intervene in people's consumption, is often held as a strong argument.

Therefore, I will expect the level of acceptability of the studied policies on food consumption in this paper to differ according to level of intrusiveness. This results in my first hypothesis:

H1: *Food policies that are more intrusive will enjoy a lower level of acceptability.*

My analytical understanding is that the level of intrusiveness directly influences the acceptability as visualised by Figure 2 below.

Figure 2: Initial Framework

After introducing social norms to this framework, the arrows will change slightly. As discussed, I expect the prevailing social norm in a given context to influence not only an individual's behaviour but also expressed attitudes. This is due to the norms or informal rules indirectly ascribing certain views, standpoints and actions as being commendable or preferred, and in order to avoid social costs individuals align themselves accordingly. Humans want to fit it and

care about the social structures and present social dynamics conveyed by relevant others, resulting in a social pressure. The act of accepting a policy can in turn be thought of as a social dilemma where this social pressure once again is reiterated. It is rational for a person to accept a measure targeted at resolving a short-term beneficial issue first when the person believe others to do the same. I therefore expect a social norm that pressures individuals to favour pro-environmental attitudes and behaviours to directly influence the level of expressed acceptability for climate mitigation food policies. Furthermore, the inhibiting effect on acceptability that the level of intrusiveness has will be lowered. In a social context where pressure to accept climate mitigation policies exists, the intrinsic reluctance towards intrusiveness will be diluted since other clear values are challenging the core principles of individual autonomy. This means that I also expect the differences in acceptability between policies of varying intrusiveness to become somewhat levelled out when a beneficial norm is high or strong. The following hypotheses looks as follows:

H2: *Individuals that operate in a context with favourable social norms to policy acceptability, will express higher levels of acceptability for food policies.*

H3: *Individuals that operate in a context with favourable social norms to policy acceptability, will express a more equal level of acceptability for all food policies.*

My analytical understanding is that a favourable social norm will directly influence the level of evaluated acceptability but also indirectly by diminishing the negative perception of intrusiveness. This is demonstrated by Figure 3.

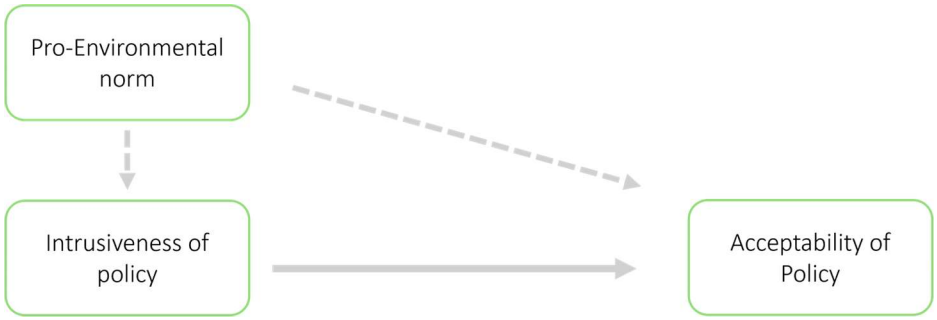

Figure 3: Integrated Framework

The expected findings in this thesis are furthermore visualised in Figure 4. The position of the green boxes in the two-way graph is the expected results when only considering the direct influence of intrusiveness (H1). The dashed boxes represent the expected results after the introduction of the social norms component (H2) and the grey arrows under the dashed boxes help visualise the expected interaction of equalised acceptability and the consequential vertical shift (H3).

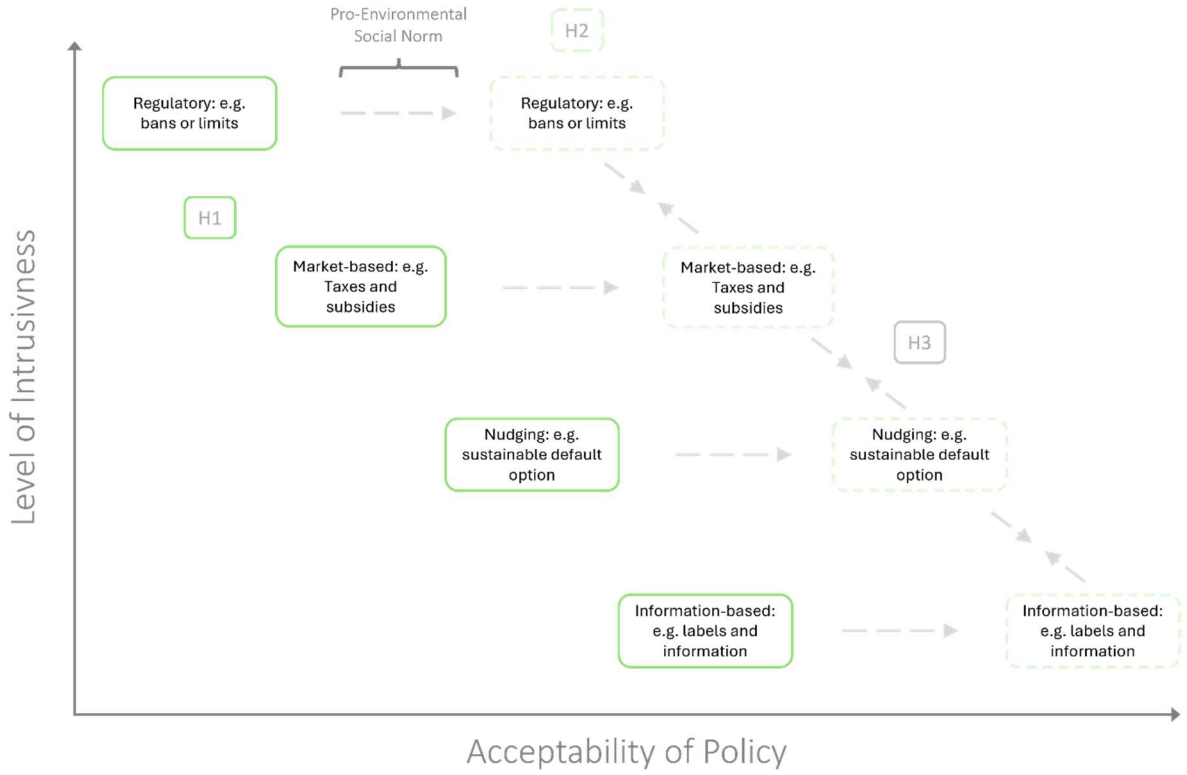

Figure 4: Predicted Relationships

Having outlined the expected results of my study and the theoretical foundations I will now go on to explain the data I will use, argue for the validity of the data collection as well as dive deeper into the method that will be employed to analyse the material.

4. Research design

To test the presented hypotheses, I will analyse survey data gathered within the scope of a research project on sustainable food systems funded by Mistra Food Futures and Formas. I will perform different descriptive analyses including confidence interval plots in order to scrutinise and evaluate the differences in policy acceptability between the policy instrument types, and when applying the full-fledged analytical framework and analysing the explanatory power of social norms I will employ OLS linear regression and include relevant controls in order to isolate the relationship of interest.

4.1 Data

The survey data analysed in this thesis was, as mentioned, gathered within the scope of a research project on sustainable food systems funded by Mistra Food Futures and Formas. The survey period was in October 2023 and participants were recruited using Origo group panel, which consists of approximately 15,000 participants. The representativeness of the sample was ensured by distributing the survey randomly to participants in the panel stratified by gender, education and age so as to resemble the Swedish population until around 2000 survey responses had been collected. In total 2248 responses were gathered. Before going live, the survey also went through an ethical review.

The survey consists in total of 25 hypothetical policy suggestions, however, in this thesis 8 of these suggestions will make up the analytical material. In order to operationalise the information, regulation and nudge policy one suggestion each will be used. As for tax and subsidy different suggestions exist in the dataset, however one average and traditional version each will be used. Regarding social norm, several background variables from the dataset will be combined in order to create a proxy variable for a relevant social norm. In the section below I will go on to explain the operationalisation of the different policy suggestions in detail as well as discuss the measurement of policy acceptability in the dataset.

During the design of the survey, researchers together with actors in the food sector were consulted when formulating and structuring the different policy suggestions and the survey, ensuring a high level of relevance and applicableness of the operationalisations.

4.2 Operationalisation

4.2.1 Dependent Variables

Policy acceptability in the survey is estimated by having the respondents indicate their inclination towards the policy suggestion on a 5-point scale. The scale ranges from "Very Negatively Inclined" (1) to "Very Positively Inclined" (5). There is also a sixth option indicating "No Opinion", however this option is not included in the results or analysis.

The policy instrument types that I analyse are, as mentioned, operationalised in the dataset as separate policy suggestions. Each type is presented as a hypothetical suggestion to the respondent with some types being represented by different versions. The information-based policy type is operationalised as one suggestion in the survey, in which the respondents are asked about their opinion on *a climate certification label policy that would require all animal products to have this label and also include information on plant-based substitutes.*

The nudge policy type occurs in four different versions with the main difference being the sector scope. Given that I want to study the general acceptability level of policy types, I found it important to choose a version that had a combined private and public sector scope so as to avoid skewness due to people's inclination or relation towards either sector. The nudge policy type was consequently operationalised by asking respondents about their opinion on a policy that would *require menus in the public and private sector to give the dishes with the biggest climate-impact a less prominent role and place them at the end of the menu.*

The regulation policy is tested in two different versions in the survey. I opted for the one with a more general scope, following the same reasoning outlined for the nudge policy. The

regulation policy is operationalised by asking respondents about their opinion on a policy that would *ban all types of advertisement of the most climate-damaging grocery products.*

I chose to include one survey variable for each policy instrument type, since this serves the purpose best and is in line with the scope of the paper. As mentioned, I chose to include a tax and a subsidy measure as well, since these are the traditional analytical objects in policy acceptability research, and they serve as important and interesting reference points when analysing the differences in policy acceptability across policy types. The tax and the subsidy policy type are presented in many different versions in the survey data. I chose to opt for the most general versions in terms of stringency and design so as to maintain the focus on policy type effect.

The tax policy type is operationalised by asking respondents about their opinion on a *tax policy that would take most of the climate and environmental damages associated with production into consideration for animal products.* In the suggestion, estimated price increases on the products are presented. The subsidy is operationalised by asking respondents about their opinion on *removing the value added tax on plant-based proteins. This subsidy would be financed by the general resources in the state budget.* In the suggestion, estimated price decreases on plant proteins are presented.

4.2.2 Independent Variable: Social Norm

The social norm as an independent variable is operationalised using several different indicators that measure social pressure to accept climate mitigation policies or in other ways capture an underlying social context regarding commendable attitudes on environmental issues. The indicators are measured on a 7-point scale ranging from 1 (Not applicable at all) to 7 (Completely applicable). The indicators constituting the social norm variable are as follows: (1) People in my surroundings eat meat almost every day, (2) people in my surroundings eat less meat today than 5 years ago, (3) most people in my surroundings would not accept a climate tax on meat products with a big climate impact, (4) my family and friends would not accept a climate tax on meat products with a big climate impact, (5) people similar to me would not accept a climate

tax on meat products with a big climate impact, (6) the majority of people in Sweden would not accept a climate tax on meat products with a big climate impact and (7) I feel that I should accept more strict climate laws and regulations.

The indicators capture different nuances of amiable behaviour and attitudes in a social context regarding climate policy on varying societal levels, making for a comprehensive understanding of the concept and an appropriate operationalisation. Before combining these indicators into a proxy variable, I inverted the scales for several of the indicators (1, 3, 4, 5, 6) so that high values would translate to a favourable social context and checked the reliability of the measurements to ensure they were sufficiently consistent with each other by performing a Cronbach's alpha test. The alpha value was 0.8209.

The method I used for estimating my social norm variable using these indicators was Item Response Theory (IRT). This was done since the social context of individuals can be understood as a latent trait and the indicators available to me should be understood as having diverging "difficulty" and weight in terms of indicating a pro-environmental norm. Difficulty here means that an item (question) can be more or less difficult to agree with. A person might need more of the latent trait (social norm) in order to agree fully with one of the indicators, whereas very low levels of social norm is needed for another. This reflects the fact that indicators can capture widely accepted or endorsed aspects of the latent trait or other more demanding and controversial ones. I therefore wanted to utilise a method that takes these aspects into account. To simply combine the indicators additively would treat the contribution of each indicator equally, which I find in methodological terms to be undesirable as well as theoretically incorrect, since the indicators used evidently capture normative standpoints regarding commendable behaviour more or less strongly.

In concrete terms, I opted for the graded response (GR) model of IRT. This model is used when dealing with polytomous items that are measured on a graded scale, often a Likert-scale, making it an appropriate choice for my analysis. The GR model, like any IRT model, considers item difficulty and discrimination, weighting the observed values based on these parameters (DeMars, 2010). A table over the difficulty thresholds for the indicators can be found in the

appendix. I then move on to predict the values of the GR model and end up with an index ranging from -3 to 3, with 0 being the average level of the studied trait, i.e. the social norm. This index is the variable that I will utilise as a proxy for the social context in my regression analyses. Additionally, I created a group variable based on the value of this proxy (below or above average) in order to easily compare the lower, i.e. low norm, and higher scoring, i.e. high norm, groups with each other.

I also checked the correlation between the different indicators for the social norm variable in order to avoid multicollinearity. The same was done for the controls. The correlation matrixes can be found in the appendix. It should also be noted that before settling on the IRT method I tried a simply additive approach as well as factor analysis, and the results were very similar. However, as explained above I believe the IRT method to hold greater theoretical validity and to make for a more convincing operationalisation.

4.3 Sample

Regarding environmental and climate politics, Sweden is in many ways an outlier. In terms of environmental attitudes and behaviour the country finds itself among the highest-ranking ones (Block et al., 2024). As for governmental intervention, Sweden is an interesting case with a history and tradition of an active government and expansive public sector (Premfors, 1991; Svallfors, 2004). One could therefore argue that there exists a favourable norm in Sweden in general to accept climate mitigation policies and that this may possibly interact with the findings and results of this study. To that end, I would say that due to the representativeness of the sample being secured due to random selection within the panel much of this concern is resolved.

Food politics is furthermore by no means a valence issue in Sweden. It is still controversial and contentious and governmental intervention is not an agreed upon approach in this domain (Thander K., 2017; Rogsten, 2019; Callstam J., 2024; Bendz et al., 2023). Swedish politicians remain, as politicians in many other countries, hesitant to legislate due to it being controversial for the state to dictate a person's diet or consumption (Winberg Z., 2018). The contentiousness

of the food politics discussion in Sweden is also captured, as previously highlighted, by the works of (Bendz et al., 2023).

4.4 Method

The applied method to test the second hypothesis (H2) in this thesis is OLS linear regression. One of the great strengths of this method is its ability to reveal counterfactual differences and the possibility to isolate relationships (Teorell and Svensson, 2007). The evaluative attitudes of people and social norms are complex concepts, making the ability to isolate the studied relationship of utmost importance when analysing the results. A weakness of OLS linear regression, however, is that it struggles to establish chronology (Teorell and Svensson, 2007). However, it is deemed as theoretically unlikely that individuals' evaluative attitudes towards climate mitigation policies in the realm of food policies at a given time affect the present social norm. The presented weakness of linear regression is therefore evaluated as fairly diminishable to this paper. Conclusively, due to the strengths presented, together with established praxis within the field, OLS linear regression has been chosen as the method to study the formulated hypotheses. In this paper I utilise survey data gathered from the Swedish context in the autumn of 2023. The data in this thesis should thus be thought of as cross-sectional data.

4.4.1 Controls

When performing my OLS linear regression analyses I control for several relevant variables in order to decrease omitted variable bias. Given that I use survey data where the objective of analysis is the attitudes of people, I will control for relevant cofounders on the individual level. The controls used are: age, gender, level of education, ideology (left-right), income, degree of climate anxiety and perceived climate urgency. The gender variable was recoded to only include man (1) and woman (2) since the third option offered in the survey, "other", was an open-ended question and the diverging responses would only distort the analysis. 18 observations were excluded due to this. From a theoretical standpoint, since I am exploring the relationship between psychological factors and policy-specific beliefs I am controlling for the two

other determinant groups, climate change evaluations and demographic factors, as outlined in the literature (Bergquist et al., 2022).

5. Results

In this section I present the, for this thesis, relevant results gathered in the survey and analyse the differences between policy types as well as interact the findings with my social norm variable. Initially I go on to analyse the data descriptively and compare the acceptability levels of the different policy types. In a second section I present more developed results after having introduced social norm as an explanatory variable.

5.1 Descriptive Statistics

On average, we see that the acceptability is highest for the information-based policy with respondents ranking themselves around 3.2 on the 5-point scale. The subsidy policy and nudge policy are ranked quite similarly (2.8 and 2.9 respectively) and the same can be said regarding the tax and regulation policy that enjoy the lowest level of acceptability with an average of 2.50 and 2.49 respectively. The paring of the nudge and subsidy policy as well as for the tax and regulation become even more clear when we look at the confidence interval plot in Figure 5 and study the histograms (Figure 6-9).

Table 1: Policy Types Summary

Variable	Obs	Mean	Std. Dev.	Min	Max
Label	2068	3.204	1.32	1	5
Nudge	2087	2.856	1.358	1	5
Subsidy	1345	2.912	1.342	1	5
Tax	1452	2.507	1.352	1	5
Regulation	2076	2.495	1.359	1	5

The label policy is clearly ranked as the most preferable by respondents and with no overlap in the confidence interval it is safe to say that the level of acceptability for that policy is significantly different from the other policy types. This would suggest that information-based policies generally receive a significantly higher level of acceptability than nudge, market-based and regulatory policies. Worth noting however, is that the average acceptability of the label policy,

nudge policy and regulation policy are significantly different from one another as well with no overlap in the confidence intervals on the 95% level.

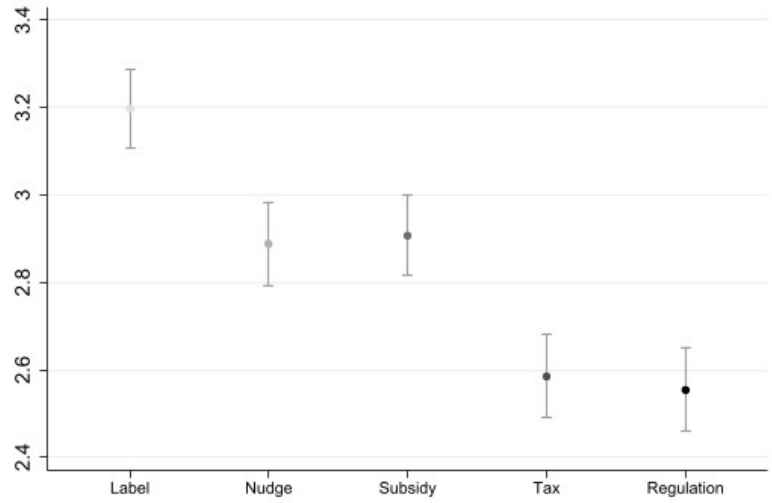

Figure 5: Confidence Interval Plot (95% Level)

The similarities in evaluated acceptability between the nudge and subsidy policy as well as the tax and regulation become, as mentioned, even more apparent when we study the spread in the histograms below.

A similar pattern and trend across the scale can be observed. Each scale option is indicated by around 10-20% of the total sample, with exception of the regulation and tax policy where the option "Very negatively inclined" (1) was indicated by more than 30% of the sample.

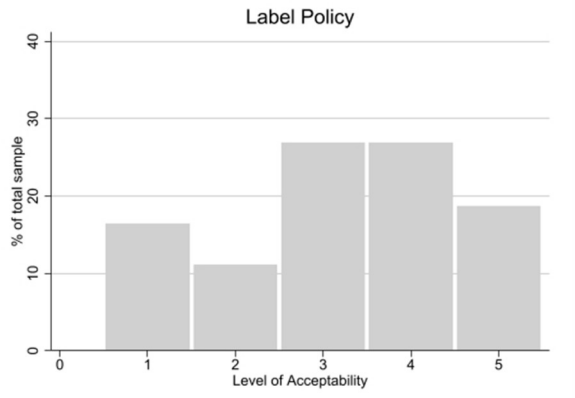

Figure 6: Spread Label

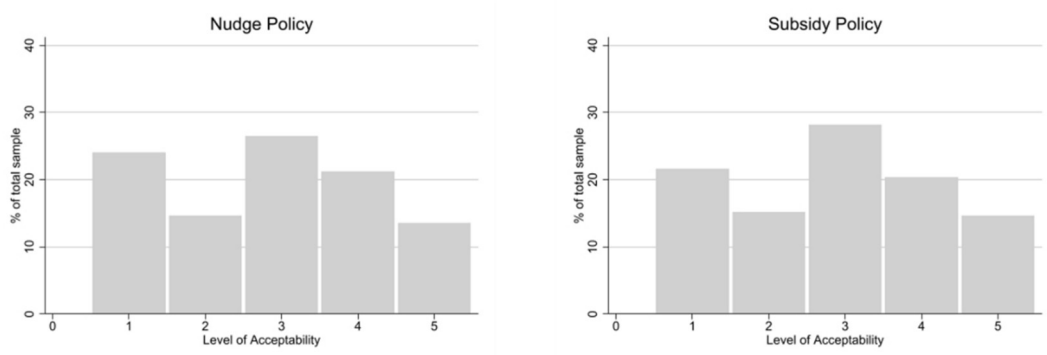

Figure 7: Spread Nudge and Subsidy

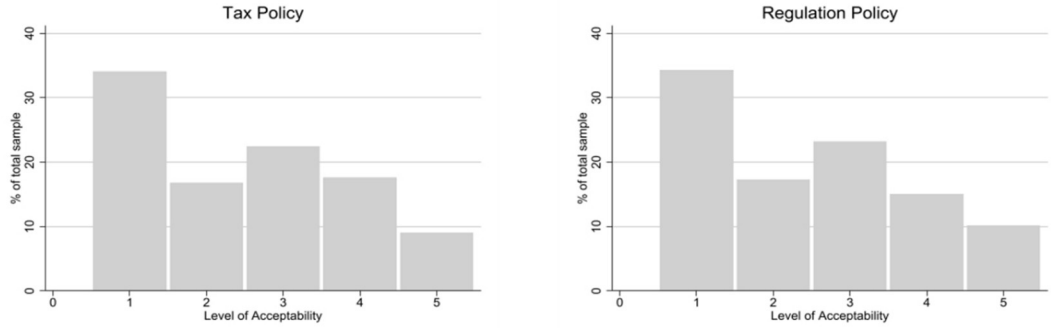

Figure 8: Spread Tax and Regulation

Evaluating the first hypothesis of this paper (H1), the results are ambiguous. The observed average level of acceptability decreases with the intrinsic intrusiveness of the policy type (as categorised by Amman and visualised in Figure 4) with the exception for the subsidy policy. However, given the evaluation of the nudge and subsidy policy not being significantly different from each other due to the width of the confidence interval, it is possible that this variation exists in the population but could not be observed in this sample. The same should be noted regarding the tax and regulation policy. It should, however, as mentioned be noted that the information-based policy, nudge policy and regulation policy enjoy significant different levels of acceptability. Before moving on to the regression analyses, I will present a first descriptive overview of the impact of social norms on policy acceptability.

Table 2: Overview Social Norm Group

	N	Mean	SD	Min	Max
Low Norm					
Label	884	2.655	1.383	1	5
Nudge	905	2.175	1.316	1	5
Subsidy	581	2.418	1.410	1	5
Tax	645	1.795	1.188	1	5
Regulation	898	1.959	1.281	1	5
High Norm					
Label	1184	3.614	1.107	1	5
Nudge	1182	3.377	1.141	1	5
Subsidy	764	3.288	1.154	1	5
Tax	807	3.076	1.197	1	5
Regulation	1178	2.903	1.273	1	5

In Table 2 above I present the descriptive results after having split the sample into two groups using the group variable discussed in the research design section. “Low norm” represents the group that scored below average on the index and “high norm” the group that scored above average.

As can be seen, the average acceptability for each policy type in the group operating within a high norm context is higher on average compared with the whole sample (Table 1). This provides preliminary support for H2 and the general shift up the acceptability scale as depicted in Figure 4. What is more, the spread of the observations is more contained in the high norm group and the levels of acceptability align themselves according to the predictions of H1. For the group operating within the low norm context, the predictions of H1 are, as for the full sample, ambiguous. The difference in average acceptability between the highest and lowest scoring policy type in the full sample is 0.709. The same difference in the high norm group is 0.711 and in the low norm group 0.86.

In order to quantify the estimated effect of the social norm on the level of acceptability and more carefully study this relationship, I will in the following section present the results from

the regression analysis. Initially, simple linear regressions were performed followed by more intricate models that included controls.

5.2 Regression Analyses

The results of the initial bivariate regressions can be found in Table 3. A bivariate regression was performed for each policy type with the social norm variable as the only independent variable and the results were later combined into one table. All of the policy types show significant results at the 99 percent confidence level. The interpretation for the label policy would be the following: a one-unit increase on the social norm variable, as estimated from my IRT model, is expected to result in a 0.608 unit increase in policy acceptability, holding all other variables constant. For a person operating within a social norm that is one scale-step higher on the index variable than another, it is expected that that person will evaluate the label policy as 0.608 scale steps more acceptable on average.

Table 3: Simple Linear Regression

	Label	Nudge	Subsidy	Tax	Regulation
Social norm	0.608***	0.699***	0.542***	0.733***	0.539***
	(22.11)	(25.89)	(15.08)	(23.34)	(18.70)
_cons	3.194***	2.851***	2.903***	2.524***	2.493***
	(122.28)	(110.25)	(85.76)	(83.40)	(90.33)
N	2068	2087	1345	1452	2076

T statistics in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Considering that the full scale for policy acceptability is 1-7, the expected effect of a one-unit increase in social norm is substantial for all policy types. The effect is largest for the tax policy with a coefficient of 0.733 and smallest for the regulation policy with a coefficient of 0.539.

In Table 4 the results of the multiple regressions are shown with all controls included. The effect of the social norm variable remains significant for all policy types at the 99 percent

confidence level. However, the size of all coefficients has decreased but remain quite substantial given the full range of the scale.

Turning to the controls, age, climate anxiety and climate importance show significant effects on all policy types at the 99 percent confidence level. For the age variable the coefficient is negative, meaning that older people are expected to evaluate the acceptability of all policies lower on average. The youngest individual in the sample is 18 and the oldest 82, translating to a scale range of 64. This is important when evaluating the seemingly small coefficients, since the full range effect (to go from 18 to 82 years of age) is quite substantial (0.48 for the label policy). Interestingly, education, ideology and income have only a significant effect for one policy type respectively at the 90% confidence level.

Table 4: Multiple Regression All Controls

	Label	Nudge	Subsidy	Tax	Regulation
Social norm	0.319***	0.423***	0.321***	0.512***	0.363***
Age	-0.00762***	-0.00960***	-0.0107***	-0.00733***	-0.0154***
Gender	0.0668	0.212***	-0.0163	0.173*	0.0356
Education	-0.0128	-0.0129	0.118*	0.0644	-0.0404
Ideology	-0.0186	-0.0335*	-0.00118	-0.00894	0.0136
Income	-0.00420	-0.0177	-0.0277	-0.0420*	-0.00439
Climate Anxiety	0.141***	0.157***	0.122***	0.107***	0.158***
Climate Important	0.197***	0.131***	0.135***	0.138***	0.0763**
Constant	2.112***	2.036***	2.068***	1.575***	2.302***
*** p<.01, ** p<.05, * p<.1					
	N = 1655	N = 1669	N = 1070	N = 1156	N = 1667
	Adj. R-squared = 0.3657	Adj. R-squared = 0.3942	Adj. R-squared = 0.2606	Adj. R-squared = 0.3813	Adj. R-squared = 0.2574

The models explain between 25 and 39% of the variation in the dependent variables when considering the adjusted R-squared values. The model for the nudge policy enjoys the highest value and the regulation policy the lowest.

In short, it is clear that the present social norm influences the predicted evaluative acceptability of the different policy types and does so substantially when comparing with the explanatory power of the other variables in the model. It has in fact the largest significant effect on acceptability for all studied policies. The effect of the social norm that can be studied varies however

between the policy types but remain fairly similar in size. These results clearly demonstrate the importance and relevance of adopting a sociocultural context-lens when analysing and evaluating the ripeness and appropriateness of climate change mitigation policies. The social norm is a distinct determinant of and contributor to policy acceptability.

Below, I move on to utilise the regression results presented in Table 4 to create adjusted predictions for the value of my dependent variable (policy acceptability) given different levels of my main independent variable (social norm) and keeping all other controls at their mean. This is done in order to more clearly illustrate the effect and to explore my H3 further by studying the spread within the different levels of social norm. In Table 5, the predicted acceptability of the policies is presented given a certain level of social norm together with the confidence intervals for that prediction.

Table 5: Predicted Acceptability at Different Levels of Social Norm

	Social N. = -2.031019 (1)		Social N. = -1.031019 (2)		Social N. = -.031019 (3)		Social N. = .968981 (4)		Social N. = 1.968981 (5)	
	Predicted value	CI (95%)	Predicted value	CI (95%)	Predicted value	CI (95%)	Predicted value	CI (95%)	Predicted value	CI (95%)
Label	2.56602	2.430766 - 2.701273	2.884718	2.802627 - 2.966809	3.203416	3.15231 - 3.254523	3.522115	3.445223 - 3.599007	3.840813	3.711816 - 3.969811
Nudge	2.011511	1.879155 - 2.143866	2.434632	2.35437 1 - 2.514892	2.857753	2.807122 - 2.908383	3.280874	3.204173 - 3.357575	3.703995	3.575931 - 3.832059
Subsidy	2.280126	2.093898 - 2.466354	2.600679	2.488531 - 2.712826	2.921231	2.852065 - 2.990398	3.241784	3.135475 - 3.348094	3.562337	3.383088 - 3.741586
Tax	1.493381	1.332896 - 1.653865	2.005523	1.908698 - 2.102348	2.517665	2.455838 - 2.579492	3.029807	2.934424 - 3.125189	3.541949	3.383201 - 3.700697
Regulation	1.769313	1.620799 - 1.917827	2.132376	2.042394 - 2.222358	2.495439	2.438674 - 2.552205	2.858503	2.772287 - 2.944719	3.221566	3.077589 - 3.365543

It can be noted that the predicted values for the different policies become more concentrated for each increase in social norm level when considering the difference between the highest and lowest predicted value. The difference at each social norm level can be studied in Table 6. However, when considering the confidence intervals at each level the same narrowing effect is not fully captured. The CI:s become successively narrower for the first three groups only, as can be seen in Table 6.

Table 6: Spread Predicted Values

	Social N. = -2.031019 (1)	Social N. = -1.031019 (2)	Social N. = -.031019 (3)	Social N. = .968981 (4)	Social N. = 1.968981 (5)
Difference (Highest -Lowest)	1.072639	0.879195	0.707977	0.663612	0.619247
Full CI Range	1.368377	1.058111	0.815849	0.82672	0.892222

Taking all of this into account, this could offer some support to the notion that individuals who operate in a more favourable social context evaluate the acceptability of different food policies more equally. The spread is nonetheless predicted to be largest amongst people at the lowest social norm level.

The adjusted predictions tell us, given the model presented in Table 4, the expected acceptability of the policies when only social norm varies and all other controls are kept at their mean. We would therefore, for example, expect a person that scores high on the social norm variable (i.e. column 5 in Table 6) to evaluate the acceptability of the label policy at 3.84. In Figure 10, the adjusted predictions are visualised in a combined plot. As discussed above, a potential concentration of the predicted values for the different policies can be studied with the increase of the social norm variable. However, given the overlap and increased width of the CI:s for group 4 and 5 significant claims concerning H3 should not be made.

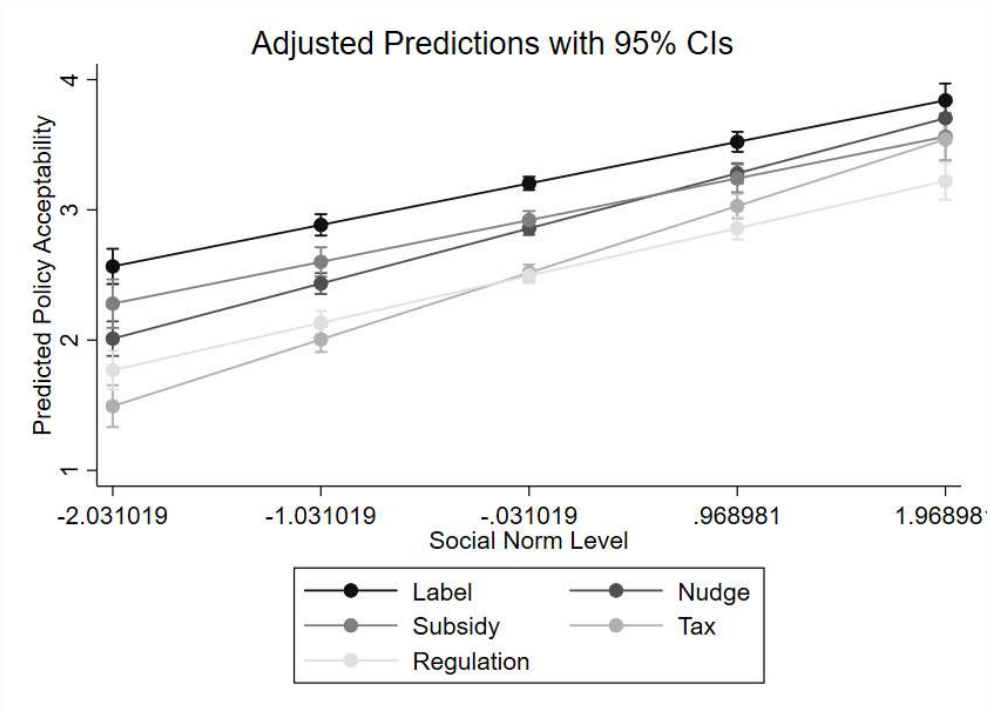

Figure 9: Marginsplot at Different Levels of Social Norm

To summarise my findings, I conclude the results by relating back to my hypotheses.

H1: There is a significant difference in policy acceptability between the different types of policies studied. However, the studied level of acceptability does not wholly align itself as hypothesised according to the intrusiveness of the policies.

H2: The social norm within which an individual operates does affect the studied policy acceptability. This effect is significant for all the studied policy types but strongest for the tax policy.

H3: Individuals operating within a higher social norm that represents higher values of social pressure and environmental concern can, according to the results shown, seemingly be seen to evaluate the acceptability of all policy types more equally. However, these results are not significant.

In the following section I will go on to discuss the findings of this thesis, relate them back to theory as well as to greater societal discussions and climate politics in general. I will also highlight interesting future research avenues as well as critically assess the limitations. Lastly, I draw up conclusions and offer some final remarks.

6. Discussion

6.1 Discussion of Results

Firstly, it should be noted that the average indicated level of acceptance is significantly different between the information, nudge and regulation policies. This is consistent with the findings of Diepeveen et al. (2013) and Hagmann et al. (2018), concluding that instrument design is also relevant in policymaking on sustainable consumption and something to consider when evaluating democratic legitimacy in this domain.

The results concerning H1 are in many ways interesting, however as mentioned, ambiguous. It seems that intrusiveness as a policy feature only at high levels of social norm is a deciding factor as predicted. Studying the descriptive measures of the full sample (Table 1) the policies do not align with the expectations of H1. This does not necessarily mean that intrusiveness is an irrelevant feature of food policies in general when discussing policy acceptance but that other considerations are made by individuals as well when evaluating the policy. These considerations could, for example, have to do with perceived effectiveness, transparency and fairness. As mentioned in the paper, these features are all expected to influence policy acceptability. Level of intrusiveness was chosen as a hierarchical and categorical structure of the policies as this was expected to be a vital feature. However, the results indicate that trade-offs in terms of underlying considerations may exist between the other significant policy features. To clarify and explore these potential trade-offs would be an interesting future research avenue, since little is known of the underlying considerations made by individuals when evaluating policies.

Moving on to the effect of social norms, the results paint a clear picture: the present social norm matters. Individuals that operate within an environment where attitudes are expressed and behaviours performed that in one way or another indicate endorsement or promotion of sustainable food policies, are more likely to accept policies on sustainable food consumption themselves. Interestingly, this effect is strongest for the tax policy. This, I believe, reflects the traditional left-right polarisation towards taxes and is in line with the arguments put forward by Cole et al. (2023). The behaviour of individuals is especially influenced by social context

when dealing with polarising or controversial issues. Due to taxes themselves being subject to social stigma, the expected social costs of not aligning with the attitudes of important others are great, translating to greater experienced or perceived social pressure to conform and in turn a strong social norm effect as found.

Worth mentioning is also the fact that the effect for level of education, ideology and income is fairly small and non-significant in the model (Table 4) compared with the social norm variable. This is despite sound theoretical foundations and previous research holding these variables as important predictors for policy acceptability (Park and Vedlitz, 2013; Beiser-McGrath and Huber, 2018). It could be that the food policy domain is specific for some reason and less sensitive or receptive to these analytical axes than other policy domains. An initial explanation could be that consumption of food is in many ways culturally significant, an important part of communal identities and traditions and therefore not something dictated by individual traits but rather habit and belonging, specific to a person's social context.

As for H3 the results were ambiguous even if some results were found in support of the hypothesis. When simply studying the predicted values amongst the policy types at the different social norm levels, the spread is more concentrated for higher levels of social norm. However, when considering the full span of the confidence intervals the highest social norm levels (column 4 and 5 in Table 6) show greater spread. It can therefore not be said, at the 95% confidence level, that the spread of the predicted values significantly becomes more concentrated for each level increase in social norm.

6.2 Social Relevance and Policymaking

When evaluating the results found in the survey data it is clear that the social context in which the respondents operate affect their evaluative responses towards the different food policies. This naturally emphasises the importance of including the interpersonal context as a lens when analysing the ripeness and design of policies targeted at reducing emissions in the food consumption sector. The difference between operating in a high norm context and a low norm context is substantial, testifying to the contentiousness of the discussion on governmental intervention in the food sector.

The main results of this thesis are in line with those of Bamberg and Rölle (2003) and Bolsen et al. (2013), giving further scholarly relevance to the relationship between social norms and policy acceptability. As pointed out in the introduction of this thesis, more research is needed and the findings presented emphasise this need as well as offer contributing insights in expecting interesting and relevant effects. The social context and effects of social pressure has in many ways belonged to action and behaviour research or been neglected, but the results here indicate that this analytical perspective should indisputably be included in the toolbox for acceptability research and policy analysis. To this end, I want to highlight two policy approaches that consider and utilise the effect of social pressure and thus could be fruitful for the procurement of democratic legitimacy when implementing climate mitigation policies.

The first one is the usage and creation of a story. Storytelling is an important and powerful instrument in politics and is about motivating political decisions by communicating a rational and showcasing clear paths to desirable futures. A well-constructed and exercised story can embed itself in the general societal consciousness and serve as a moral guide to what is appropriate or commendable, i.e. a norm. These types of communicative approaches are used in many forms of politics. Concrete examples from the Swedish context would include the public campaigns and reforms on alcohol and tobacco. The younger generations in Sweden consume less alcohol and tobacco than previous generations, which is true in many other country contexts as well. The numerous campaigns in the form of advertisements, slogans and educational programmes commissioned by the public sector are clearly to thank for this and points to a shift in the societal consciousness in terms commandability and desirability. This type of storytelling, of tying the knot and consequently communicating a red thread and reasoning for the implemented politics has been requested as an approach in climate politics by many different actors, and the result of this thesis arguably reiterates the relevance of this.

Storytelling is for example highlighted as an important approach by the Swedish Climate Policy Council in their assessment reports on Swedish climate politics from 2024 and 2025. To paint a clear picture of where we are headed, how and why we need to get there is in itself a powerful tool in fostering acceptability and understanding for climate politics. Additionally, as argued above, I believe it would also push or develop the greater societal perception or

understanding of environmentally harmful behaviours by creating a cultural or social norm that can guide people's behaviour and attitudes. It is important for policymakers to make an effort in communicating the story of why mitigation policies are needed in a consequential way so as to shift the greater norms in society that, in turn, this thesis has proven can affect policy acceptability.

Secondly, simply communicating the attitudes of others towards a given policy can trigger the social pressure effect. As mentioned this is something Bolsen et al. (2013) looks into. The result of this thesis reaffirms the validity of this approach. However, as mentioned by Bolsen et al. (2013), this approach should only be used when the attitudes held by the larger part favours the resolving of the societal issue at hand, in this case climate change. It is often the case that a vocal minority dominate the public political discussion in traditional media and online. By making an effort to communicate the attitudes of the silent majority, a favourable societal norm is reproduced and can consequently increase policy support.

6.3 Limitations and Future Research

An important limitation to be transparent about in this thesis is the operationalisation of the social norm variable in terms of included indicators. Social norm or context as a concept is broad and can entail many different parts. I contend that I have explained and maintained the scope of the operationalisation appropriately, however it is difficult, if not impossible, to capture all kinds of attitudinal and behavioural factors that might indicate or reflect a desired social norm in a given context. This is something to be aware about when trying to replicate results and generalise findings. On the subject of social norms, it is also worth noting that this thesis did not have the scope or possibility to study times series data.

The introduction of time is however arguably an important analytical factor since norms, given that they reflect attitudes and normative standpoints of important others, change over time. They are mouldable and operate on many different levels, within the close personal sector, broader social circle or in society at large. The findings in this thesis offer a snapshot of how the current social context greatly affects the policy acceptability of food policies but potential changes and fluctuations over time are not included and could hold great analytical value.

As for future research, studies that scrutinise the underlying considerations and potential trade-offs between different determinants of policy acceptability would be most welcomed. There are several determinants that we know effectively predict anticipated policy acceptance, for example fairness and effectiveness, but we know little to nothing about the underlying considerations. In what way is one alternative more or less fair than another and what happens when effectiveness is combined with low fairness, which takes precedence? This thesis provides fruitful and important insights to the role of social norms in explaining policy acceptance. Studies that comprehensively, and in combination with other effective indicators, study the effect of social norms is a fertile future endeavour, as indicated by the results in this thesis. The study of the effect of social norms over time is, as previously mentioned, also a fruitful future research avenue that should be explored.

6.4 Conclusion

To conclude, the aim of this thesis was to answer the following research questions:

1. *Does the level of policy acceptability differ between regulation policies, nudging policies and information policies targeted at mitigating emissions from food consumption?*
2. *Does the present social norm affect the acceptance of these policies?*

This aim was attainted in turn by analysing survey data from Sweden and by studying the results descriptively as well as running regression models. It was found that there is a significant difference in acceptability between information policies, nudging policies and regulation policies targeted at mitigating emissions from consumption. It was also found that the present social norm greatly and significantly influences the acceptability of a policy and holds strong explanatory power compared to many other determinants.

The findings further stress the importance of being aware of social context and pressure in policy acceptability research. Having been a fairly neglected lens within the field, the paper sought to remedy this, and the promising results strongly highlight the need for further research and inclusion.

As policymakers and states world-wide continue to toil in their work towards global and national climate targets it has never been clearer that a greater understanding and consideration for policy success is needed. The fostering and designing for policy acceptability is a vital part in this and the results in this thesis offer valuable insights to that end.

What is more, the safeguarding of legitimacy cannot be understated in a world where we see worrisome trends of democratic backsliding and undermining of democratic principles. The inclusion of a public perspective and promotion of acceptance is crucial and carries great significance for legislators, politicians and society overall if we are to resolve the complex issues of climate change and secure a sustainable future.

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Appendix

Social Norm Var. Correlations	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Decreasedmeat	1.000							
(2) jagbordeaccept~r	0.356	1.000						
(3) jagbordeaccept~t	0.322	0.854	1.000					
(4) inverted_svens~a	0.145	0.259	0.294	1.000				
(5) inverted_likna~k	0.260	0.480	0.493	0.606	1.000			
(6) inverted_famil~t	0.272	0.410	0.434	0.644	0.770	1.000		
(7) inverted_omgiv~k	0.217	0.302	0.331	0.618	0.662	0.741	1.000	
(8) inverted_Meata~y	0.277	0.043	0.058	0.274	0.259	0.339	0.346	1.000

Correlation Matrix	(1)	(2)	(3)
(1) Regulation	1.000		
(2) jagbordeaccept~r	0.516	1.000	
(3) jagbordeaccept~t	0.508	0.855	1.000

Threashold Values GR IRT

	Coefficient	Std.	err.	z	P>z	[95%	conf.	interval]
jagbordeac~r								
Discrim	1.082	0.052	20.890	0.000	0.981	1.184		
Diff								
>=2	-1.731		0.088	-1.905	-1.558			
>=3	-1.062		0.067	-1.193	-0.930			
>=4	-0.342		0.050	-0.441	-0.243			
>=5	0.738		0.054	0.632	0.844			
>=6	1.693		0.086	1.524	1.862			
=7	2.453		0.121	2.216	2.690			
Decreasedm~t								
Discrim	0.679	0.046	14.880	0.000	0.590	0.769		
Diff								
>=2	-2.942		0.201	-3.336	-2.547			
>=3	-1.849		0.138	-2.118	-1.579			
>=4	-0.781		0.086	-0.949	-0.613			
>=5	0.844		0.084	0.680	1.008			
>=6	2.301		0.161	1.985	2.616			
=7	3.837		0.263	3.322	4.352			
inverted_s~t								
Discrim	2.254	0.081	27.770	0.000	2.095	2.413		
Diff								
>=2	-1.083		0.045	-1.171	-0.996			
>=3	-0.481		0.036	-0.551	-0.412			
>=4	0.270		0.032	0.208	0.332			
>=5	1.102		0.042	1.019	1.185			
>=6	1.861		0.065	1.733	1.988			
=7	2.473		0.097	2.283	2.663			
inverted_l~t								
Discrim	3.745	0.135	27.730	0.000	3.481	4.010		
Diff								
>=2	-0.780		0.034	-0.848	-0.713			
>=3	-0.290		0.029	-0.348	-0.233			
>=4	0.129		0.027	0.075	0.182			
>=5	0.685		0.029	0.628	0.743			
>=6	1.038		0.034	0.971	1.105			
=7	1.415		0.043	1.332	1.499			

inverted_f~t						
Discrim	5.939	0.296	20.040	0.000	5.358	6.520
Diff						
>=2	-0.714		0.031	-0.775	-0.653	
>=3	-0.230		0.027	-0.283	-0.176	
>=4	0.198		0.026	0.148	0.248	
>=5	0.710		0.028	0.656	0.765	
>=6	1.087		0.033	1.022	1.151	
=7	1.507		0.043	1.423	1.591	
inverted_o~t						
Discrim	3.525	0.125	28.210	0.000	3.281	3.770
Diff						
>=2	-0.735		0.034	-0.803	-0.668	
>=3	-0.227		0.029	-0.285	-0.170	
>=4	0.311		0.028	0.256	0.365	
>=5	0.958		0.033	0.893	1.024	
>=6	1.381		0.042	1.298	1.463	
=7	1.784		0.055	1.675	1.892	
inverted_M~y						
Discrim	0.813	0.047	17.240	0.000	0.720	0.905
Diff						
>=2	-1.921		0.119	-2.154	-1.687	
>=3	-0.778		0.073	-0.920	-0.636	
>=4	0.460		0.062	0.338	0.582	
>=5	2.037		0.124	1.794	2.281	
>=6	3.208		0.191	2.834	3.582	
=7	4.415		0.272	3.881	4.949	

Controls: Corr. Matrix	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Ã…lder	1.000						
(2) gender_new	-0.152	1.000					
(3) Education	-0.067	0.061	1.000				
(4) Ideology	-0.009	-0.099	0.017	1.000			
(5) Income	0.025	-0.241	0.302	0.154	1.000		
(6) Climate_worry	-0.089	0.150	0.071	-0.315	-0.035	1.000	
(7) klimat_viktigf~a	-0.059	0.145	0.091	-0.377	-0.008	0.788	1.000

	Label	Nudge	Subsidy	Tax	Regulation
Social norm	0.338***	0.478***	0.363***	0.510***	0.407***
Age	-0.00706***	-0.00896***	-0.00950***	-0.00686***	-0.0145***
Gender	0.0679	0.211*** -	-0.00455	0.178***	0.0381
Education					
Elementary	0.388	-0.0629	1.088	-0.649	-0.298
Highschool	0.486	-0.0791	1.282*	-0.611	-0.234
Higher Education	0.386	-0.148	1.261*	-0.558	-0.361
Post-doc	0.429	-0.00774	1.979***	0.305	-0.228
Ideology	-0.0101	-0.0199	0.00514	-0.000440	0.0253
Income	-0.00552	-0.0188	-0.0268	-0.0459***	-0.00535
Climate Anxiety	0.115***	0.116***	0.0909***	0.0692**	0.124***
Climate Important	0.166***	0.0842***	0.0974***	0.0944***	0.0368
Constant	0.670	0.764*	0.154	0.939**	1.290***
	N = 1655	N = 1669	N = 1070	N = 1156	N = 1667
	R-squared = 0.390	R-squared = 0.445	R-squared = 0.301	R-squared = 0.418	R-squared = 0.295

*** p<.01, ** p<.05, * p<.1

Multiregression Additative Index