

Examining pathways to more sustainable consumption – the role of social-norm interventions

Aim of the Project

This project examines whether and to what extent the problem of overconsumption in the Netherlands can be resolved by interventions that are focused on changing social norms around consumption to more sustainable ones. To understand how to design interventions that address the problem of unsustainable consumption and to be able to examine their effectiveness, it is necessary to first understand the specific context in which consumption occurs. Therefore, the project will first seek to identify the main mechanisms of consumption in the areas of mobility/transport and food, two major contributors to carbon footprints at the individual level. While doing so, the study will focus on the broader socio-cultural context in which individuals consume and specifically on the role of social norms, which have been shown to be an important driver of many behaviours. The insights gained from the first part of the project, alongside findings from existing literature, will then be used to design and implement social-norm interventions (using an experimental design) and assess their effectiveness in different contexts.

Background

Existing household- and individual-level consumption patterns in the global North are unsustainable and can be described as a vicious cycle of ever-increasing consumption (Bell & Ashwood, 2015; Constantino et al., 2022; Rieger & Schor, 2021). These patterns result in an ‘overconsumption’ problem and substantially contribute to environmental degradation and climate change (Ehrhardt-Martinez & Schor, 2015; Rieger & Schor, 2021; Stuart et al., 2020). It is necessary, using interventions focusing on consumer demand, to interrupt this vicious cycle and transform it into a virtuous one in which consumption is a sustainable, self-enforcing mechanism that induces people to consume less and in a way that minimizes environmental impact. Such a transition has the potential to greatly reduce emissions (Ivanova et al., 2020).

Therefore, climate change mitigation strategies, in addition to looking at the macro level and targeting large industries, should also consider the micro level and target consumption behaviour, which has been extensively discussed in the IPCC’s Sixth Assessment Report (AR6; IPCC, 2022). Such demand-side interventions can induce sociobehavioural changes that have the potential to reduce CO₂ emissions by 40% to 70% by the year 2050 (IPCC, 2022). Despite this, current climate policies do not pay sufficient attention to the direct role of individuals and households (as consumers) and focus primarily on market incentives and adjusting economic policies (Ehrhardt-Martinez & Schor, 2015; Islam & Kieu 2021). What is more, most current policies that do target micro-level consumption are economic in nature and do not consider the socio-cultural aspects of consumption (Ehrhardt-Martinez & Schor, 2015).

As social norms¹ have been shown to shape numerous everyday behaviours, including dietary choices and transportation decisions (Bell & Ashwood, 2015; Constantino et al., 2022; Davies et al., 2014), many scholars have argued that collective climate action can be boosted by implementing social-norm interventions (Mildenberger & Tingley, 2019; Nolan, 2021; Nyborg et al., 2016; Otto et al., 2020). Such interventions usually focus on promoting sustainable norms over unsustainable ones, by, for instance, highlighting the existence of a sustainable norm in a certain group or emphasizing the recent emergence of a new more sustainable norm overall (Constantino et al., 2022). Social-norm interventions can potentially have long-term and durable effects (i.e., that last beyond the duration of the intervention itself), as they aim to introduce and establish new, more sustainable norms and as a result shift individuals’ values, motivations, and habits (Frey & Rogers, 2014; Nolan

¹ Defined as “patterns of behaviors or values that depend on expectations about what others do and/or think should be done” (Constantino et al., 2022).

2021). Thus, these interventions have the potential to interrupt the vicious cycle of consumption and lead to a permanent transition towards more sustainable consumption patterns.

While it is a promising and increasingly explored avenue to tackle this problem, the effectiveness and successful implementation of social-norm interventions is heavily context specific (Constantino et al., 2022). As a result, the first step in designing and evaluating such interventions is to understand the consumption patterns at hand. This entails identifying the social norms associated with specific consumption behaviours and examining the extent to which they drive these behaviours, while also considering other relevant contextual factors.

The effect of existing social norms on consumption appears to be mixed as these norms have been shown to both promote pro-environmental behaviour (e.g., encourage water or energy conservation and increase demand for sustainable goods) and reinforce unsustainable behaviours (e.g., lead to frequent meat consumption) (Allcott & Rogers, 2014; Brent et al., 2015; Lede et al., 2019; Carlsson et al., 2010; Berg & Jackson, 2021; Francovich, 2020). Additionally, the prevalence of specific norms and their effect on consumption has also been shown to vary at the group- and individual-level. To illustrate, in the US individuals with lower income tend to place an overall higher emphasis on social norms than those with higher income levels (Eom et al., 2018). What is more, tighter groups, which have faced more risks or threats, tend to have stronger norms and are less accepting of deviant behaviour, compared to looser groups who usually have weaker norms and greater tolerance for deviant behaviour (Gelfand, 2012).

While many studies have focused on group-level differences regarding social norms and their impacts on environmental behaviour incl. consumption, a more comprehensive understanding of systematic group-level differences is needed. Namely, it is important to also consider how different groups are subject to different structural facilitators and barriers, as well as institutional constraints that influence their perceptions of social norms and the effect of these norms on consumption behaviour. Socio-economic status (SES) is arguably a particularly important characteristic (Eom et al., 2018; Sherman et al., 2022), as it plays a highly important role in shaping individuals' psychological and behavioural tendencies (incl. perceived social norms and consumption behaviour) (Ishii & Eisen, 2020). Also, SES is closely linked to such aspects as income, education and social capital which are likely to moderate the impact of social norms on consumption. To illustrate, sustainable food consumption will be heavily hindered by income considerations for lower socioeconomic groups. Also, the switch to an electric vehicle in addition to being costly will depend on the availability and accessibility of charging stations in one's residential area.

Therefore, this project will first explore the prevalence of different food and transport consumption behaviours for different socio-economic status levels in the Netherlands. Then, it will examine how and to what extent social norms influence the identified behaviours. The first part of the project will answer the following research questions:

- 1. What are the different food and transport consumption patterns for people from different socio-economic status levels in the Netherlands?**
- 2. What is the role of social norms in driving food and transport consumption for different socio-economic status levels in the Netherlands?**

The insights gained in the first part of the project will be then used to design, as well as (experimentally) implement and evaluate social-norm interventions that induce people in the Netherlands to consume more sustainably. Again, group-level differences based on socio-economic status will be explored. This will allow to answer the following research question:

3. To what extent can social-norm interventions lead to more sustainable food and transport consumption in the Netherlands among the different socio-economic status levels?

It is important to note that the effectiveness and success of social-norm interventions has been shown to largely depend on the way in which these interventions are designed and implemented (Constantino et al., 2022). Specifically, such considerations as how the norm is communicated (e.g., through which medium), the exact content of the message, the language and style used, as well as the credibility of the messenger all have the potential to affect the adaptation of the norm by individuals and consequently the adjustment of consumption behaviour. For instance, Goldstein et al. (2008) in their study on water conservation and towel reuse in hotels find that norm messages focusing on others at the specific locale of interest are more effective than general norm messages. More specifically, individuals who received a message stating that guests who stayed in their room before them reused their towels were more likely to also reuse their towels, compared to individuals who received a message stating the guests of the hotel overall reused their towels. Therefore, the study will also answer the following research question:

4. What are the main determinants of an effective social-norm intervention for food and transport consumption among the different socio-economic status levels?

Throughout the entire project an emphasis will be placed on assuring high validity of the measurements collected, using the appropriate measurement tools and settings (Constantino et al., 2022). This is particularly important in the context of behaviours, as self-reported measures of behaviours are shown to often suffer from low validity (due to, among other reasons, the presence of social desirability). These self-reported measures appear more reflective of intentions and motivations than real behaviour and are only weakly correlated with objective measures, such energy or water meter readings (Constantino et al., 2022; Koller et al., forthcoming). It is difficult to assess the effectiveness of social-norm interventions using low-validity or biased measures of behaviour as the end goal of these interventions is to induce a permanent behavioural change rather than merely a shift in attitudes, beliefs, or intentions. In addition, it is also difficult to accurately assess the prevalence of behaviours in the population and how they are influenced by social norms.

Research Design

The analysis will focus on the Netherlands and the data will be collected using CBS micro-data, a survey, and behavioural experiments.

The first step will consist of an exploratory analysis in which the prevalence of specific (transport and food) consumption patterns among the different socio-economic status levels will be established, and the social norms related to these patterns will be identified. The prevalence of different consumption behaviours will be based on CBS microdata, which contains detailed expenditure information from surveys and administrative data. The identification of corresponding social norms will be done using observational data, i.e., an in-person or online survey. The questionnaire will focus on which norms drive people to pursue specific consumption behaviours and can be for instance administered in various supermarkets. As individuals with different socio-economic status tend to shop in different supermarkets, this would assure that the different socio-economic status levels are represented in the sample.

The data collected will be analyzed using a multilevel path analysis that will examine the role of social norms in driving consumption, while considering other relevant predictors of consumption. The use of multilevel modelling will allow for the inclusion of predictors at varying levels (specifically, individual, and group level). Additionally, this modelling technique will also allow for the inclusion of different paths through which social norms can affect consumption choices.

The information gathered regarding the different social norms and their effect on consumption for different socio-economic status levels in the Netherlands will be used as input to design interventions that can effectively influence consumption behaviour. This information will be used in combination with insights from a literature

review on existing demand-side interventions, The design and implementation of interventions is expected to be dependent on the socio-economic status targeted.

Next, vignette studies will be used to explore how and to what extent different experimental manipulations of social norms affect the consumption choices of different socio-economic status levels. Depending on the outcomes of the first part of the study, the socio-economic status levels will be either analyzed separately (if they are subject to fundamentally different norms) or they will be analyzed jointly (if they are largely subject to similar norms) and the interactions between the experimental manipulation and socio-economic status will be examined. These studies can be based on self-reported behavioural interventions and/or economic interventions that examine task behaviour. To illustrate, in the former, participants could be notified that most of their friends (the ref. group) are travelling by train on holidays in the summer and asked how they are planning on traveling. In the latter, participants would be given a certain amount of money and after being notified that travelling by train is more sustainable than by plane, they could choose how to donate the money – whether to contribute to cheaper train or flight tickets.

Finally, the study will investigate whether social-norm interventions that were identified as effective in the experiments also work in real-life, using a field experiment. For example, such an experiment could take place in supermarkets; the insights gained when administering the survey in supermarkets in the first part could be used to design this experiment. In this setting, for a period of a few weeks, in some supermarkets shoppers would be given information about the increased popularity of meat-substitutes among the shop's clients (treatment group), while in other, comparable supermarkets (e.g., belonging to the same chain and/or in neighbourhoods with similar characteristics) the shoppers would not be given any information (control group). The purchase of meat and meat-substitutes will then be compared across the two groups. This experiment will be repeated across different supermarkets, which are representative of different socio-economic status levels.

Literature

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