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Everyday Administrative Burdens and Inequality

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Everyday Administrative Burdens and Inequality

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02 February 2022

Abstract

Administrative burdens may deepen inequality by creating costly experiences for vulnerable groups. Research to date typically focuses on how burdens affect decisions in specific policy contexts, thus little is known about everyday experiences of burdens and their distribution in society. This is the first study to document everyday administrative experiences, accounting for time and emotional costs across ten domains: tax, retirement, government benefits, bills, goods and services, savings, debt, health, childcare, and adult care. Results from 2,243 UK adults show that administrative tasks are a significant part of life (one hour per day). Time and emotional costs vary by domain; government benefits emerge as particularly costly. There is evidence that administrative burdens are regressive, not only through their effects on decisions, but through their unequal distribution in society. Those in poor health and financial insecurity focus on tasks salient to them (e.g. benefits, health, debt), but are less likely to engage in beneficial longer-term tasks (e.g. savings, retirement), and suffer higher emotional costs from engaging in tasks relevant to their disadvantage, compared to non-disadvantaged groups. A choice experiment shows that (hypothetical) burdens discourage beneficial action in general, but even more so for some disadvantaged groups.

JEL Classification: D91; I30; J10

Keywords: administrative burden; inequality; time-use; subjective well-being; experiment

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Administrative processes are ubiquitous in daily life, from applying for welfare programmes to switching insurance providers, returning goods, or claiming tax credits. These processes impose costs on individuals' time, emotions, and decisions, thereby shaping policy outcomes. These costs have been studied as administrative burdens within a framework of learning, psychological, and compliance costs (Herd and Moynihan 2019) and through the related concept of "sludge" in the emerging behavioural public policy literature (Sunstein 2021). Administrative burdens significantly impact people's lives, for example by impeding access to education (Dynarski et al. 2021), government benefits (Linos et al. 2020), and healthcare (Fox, Stazyk, and Feng 2020). Furthermore, they may disproportionately prevent vulnerable groups such as those who are older, sicker, or poorer, from accessing government benefits (Bhargava and Manoli 2015; Deshpande and Li 2019; Finkelstein and Notowidigdo 2019). Hence administrative burdens are a feature of everyday life which may exacerbate inequality.

Current understanding of administrative burdens and inequality is limited. Most evidence comes from policy case studies which analyse the effect of specific burdens on individuals' choices and outcomes (e.g. Linos et al. 2020). This leaves three gaps in our understanding. First, it does not allow for observing cumulative burdens in everyday life, across both public (citizen) and private (consumer) contexts. Case studies usually focus on policy implementation processes, while consumer processes are studied as sludge or transaction costs (Shahab and Lades 2021). Yet both types involve similar costs and policy implications. As the combined effects of public and private burdens are rarely studied, information on comparative costs, total administrative workload, and potential trade-offs between tasks is missing. Second, focusing on outcomes such as programme enrolment means little is known about people's everyday experiences of administrative burdens, such as the time they spend on them or how they feel during them. Yet experiences are crucial to understanding administrative burdens and inequality. Burdens are defined as costly experiences of interacting with the state (Moynihan, Herd, and Harvey 2015), and these experiences involve time and emotional costs (Sunstein 2021; Hattke, Hensel, and Kalucza 2020), which are not accounted for in existing studies. Furthermore, theoretical literature suggests vulnerable groups may have more time-consuming or emotionally draining experiences when they engage with burdensome processes (Herd and Moynihan 2019; Christensen et al. 2020; Sunstein 2021). More generally, people's choices often do not reflect their "true" preferences due to bounded rationality, hence experiences of processes provide relevant policy information (Kahneman and Krueger 2006). They can reveal whether burdens are regressive not only through their effects on choices, but by involving costlier (e.g. time, emotions) experiences for vulnerable citizens. Third, analysing experiences provide contextual factors relevant to decision-making which are typically not observed when analysing the outcomes of administrative choices, as those who have more costly experiences may be less likely to complete burdensome tasks, as discussed above. Overall, while specific instances of burdens and their effects on outcomes are well researched, we are missing crucial information on cumulative everyday administrative experiences across population groups.

This study uses original survey data from 2,243 UK residents to measure everyday administrative experiences across ten domains: income and tax, retirement, government benefits, bills, goods and services, savings and investments, debt, health, childcare, and adult care. It accounts for the time and emotional costs of these experiences, and the distribution of these costs in society, focusing on older age, poor health, and financial insecurity. The survey is adapted from the Day Reconstruction Method (Kahneman et al. 2004a) and asks participants how much time they spent on various tasks in each domain over the past day or month, and how they felt while completing these tasks across various emotions. This is followed by an experiment which measures the distributional effects of burdens on choice. Participants are

shown two hypothetical scenarios: applying for a government benefit and claiming a phone bill refund. They are randomly assigned to a high or low-burden version of each scenario. The low-burden versions involve a short form, and the high-burden versions, a lengthy process or an unpleasant interaction (government benefit), and added complexity or a delay (phone bill). Participants report how likely they would be to complete the task in the scenario.

The results provide new insights into administrative burdens and inequality. The study empirically documents everyday administrative experiences and their time and emotional costs across different domains. It finds that people spend about one hour per day on administrative tasks, with tasks relating to bills, goods and services, and savings taking up the most time on average. However, there is substantial heterogeneity, with the minority of people who report engaging in tasks relating to government benefits and child- or adult care incurring significant time costs. Emotional costs vary significantly depending on the type of task conducted, with the highest costs associated with government benefits, debt, and tax, while the most positive emotions are associated with tasks relating to children, goods and services, and savings. The study also tests whether there are inequalities in everyday burdens, focusing on older age, poor health, and financial insecurity. It finds that disadvantaged groups' experiences differ from the rest of the population. They are more likely to engage with domains particularly salient to them (e.g. health, debt, government benefits), but less likely to engage in longer-term, beneficial domains such as savings and, except for older people, retirement. Emotional costs are higher for those with poor health or low financial well-being across all domains, but especially for those relevant to their disadvantage, such as benefits. The choice experiment provides causal evidence on how burdens exacerbate outcome inequality. As expected, all participants incur decision costs from additional burdens. They are less likely to complete a (hypothetical) task in scenarios with added burdens, despite the tasks generating monetary benefits. Furthermore, being in poor health increases the negative effect of added burdens. This suggests that disadvantaged groups' experiences may inform their choice to engage with burdensome tasks, hence the results may underestimate inequality in time and emotional costs due to biased selection into these tasks.

Overall, this study makes several contributions. It is the first to empirically document everyday administrative experiences across multiple domains. By measuring administrative tasks not only as barriers to action, but as subjective experiences, this study allows for accounting for time and emotions, which are central to administrative burden theory yet seldom captured in empirical research. Furthermore, the choice experiment allows for interpreting disadvantaged groups' decisions to engage with administrative tasks in the context of their real-life experience (such as higher time or emotional costs). Through this approach, the paper shows that some groups may suffer higher time, emotional, and decision costs from administrative tasks, suggesting that such tasks may foster inequality, not only in terms of their effects on citizens' or consumers' choices, but also in terms of disadvantaged groups' experiences with these tasks. The paper does not claim a causal effect of burdens on time and emotional costs, but rather it demonstrates that disadvantaged groups' administrative experiences involve different, often higher costs, compared to those of non-disadvantaged groups.

The paper is structured as follows. Section 1 discusses how measuring everyday administrative experiences can help us better understand inequality. Section 2 summarises the methodology and data. Section 3 presents the results on time, emotional, and decision costs. Section 4 discusses the results. Section 5 concludes with key implications for policy.

1. Background and Literature

1.1. Citizen and Consumer Burdens

The literature on administrative burdens is arguably fragmented, with different disciplines focusing on different concepts and domains (discussion in Madsen, Mikkelsen, and Moynihan 2020). Public administration research focuses primarily on domains related to public, citizen-state interactions, such as government benefits, as administrative burden is "the experience of policy implementation as onerous" (Burden et al. 2012). In contrast, behavioural science and economics research on sludge (Sunstein 2019) or transaction costs (Shahab and Lades 2021) extends to private consumer-provider interactions in domains such as bills, savings, or goods and services. A comprehensive study of everyday administrative burdens should arguably account for these private interactions, as their parameters and thus the "hassles" associated with them are often determined by public policy. For example, central banks make rules about how lenders communicate with borrowers, and industry regulators set implementation standards on how consumers can exercise their rights. Furthermore, the costs of private and public interactions are often the same, from complicated forms and long waiting times, to experiences of stress and frustration. In addition, in several domains, whether an interaction is with the state or a private provider may vary depending on the individual or situation. For example, a health-related burden may involve interacting with a private or a public hospital, or claiming private or public insurance. This study helps build a more comprehensive analysis of everyday administrative burdens by identifying, comparing, and adding up administrative processes relevant to public policy in a quantifiable way across ten domains: income and tax; retirement; government benefits; bills; goods and services; savings and investments; debt; health; caring for children; and caring for adults.

1.2. Time and Emotional Costs

Time and emotions matter for public policy. Though economists often study individuals' "revealed preferences" via their choices and outcomes (as seen in most quantitative research on administrative burden), insights from behavioural economics show that these choices may be impacted by biases, heuristics, or psychological costs, and may therefore not reflect "true" preferences (Kahneman and Krueger 2006). As a result, policy should arguably consider not only the results of a process (such as the decision to apply for a tax credit), but also people's experience of this process, which is an important outcome in its own right yet is not captured by information on choices or incentives (Kahneman et al. 2004b; Kahneman and Krueger 2006). These experiences can be measured via "evaluated time-use" (Kahneman and Krueger 2006), which measures how people spend their time, and how they feel during this time. This approach is particularly pertinent to administrative burdens. Moynihan, Herd and Harvey's (2015) framework specifies key dimensions of burdens which include learning and compliance costs, which broadly refer to the time and effort involved in learning about and complying with policy rules, and psychological costs, which encompass the negative emotions arising from policy processes. Hence this study seeks to account for individuals' subjective experiences of administrative burdens, separately from the effects of these burdens on outcomes.

Time Costs and Inequality. Administrative burden has been described as a "time tax" on citizens (Lowrey 2021), with Americans spending over 11 billion hours on federal paperwork yearly (Sunstein 2021). A stated goal of the US Paperwork Reduction Act is to quantify and minimise the time spent on such paperwork (Sunstein 2021). Moynihan, Herd, and Harvey (2015) highlight the time-consuming nature of many burdens, such as those involving learning

costs (e.g. researching insurance plans) or compliance costs (e.g. filling out eligibility forms). Time costs may be higher for disadvantaged groups. As government programmes are more relevant to these groups (e.g. social security), they may need to spend more time managing paperwork-heavy domains such as healthcare (if in poor health), retirement (if older), or finances (if financially insecure). Emens (2015) argues that administrative demands on a person's time may be inversely related to their wealth as richer people's time is treated as more valuable, and they can often outsource administrative tasks. Furthermore, disadvantaged groups may be differentially targeted by "universal" burdens. In the US, poor citizens are audited more frequently than top earners, adding significant time costs for those seeking to access low-income tax credits (Guyton et al. 2018; Kiel 2019). In the UK, following the digitisation of the welfare system, those without computers have to spend time waiting to access public computers to claim benefits (Human Rights Watch 2020). Disadvantaged groups may also have to prioritise some tasks at the expense of others if they face competing administrative demands. Christensen et al. (2020) argue that these groups may choose to focus their limited resources on tasks seen as more urgent or returning more immediate benefits, potentially at the expense of tasks with payoffs further into the future. For example, people may focus on immediate administrative priorities (e.g. paying bills, getting a short-term loan), over more complex, time-consuming burdens with future payoffs (e.g. opening a pension). By measuring time spent on administrative burdens in different domains, this study empirically assesses disadvantaged groups' workload, and whether they trade-off some burdens at the expense of others.

Emotional Costs and Inequality. Administrative burdens may create emotional costs if policy processes are experienced as stressful or stigmatising (Moynihan, Herd, and Harvey 2015). A laboratory experiment (Hattke, Hensel, and Kalucza 2020) found that participants facing burdens exhibited negative responses such as confusion, frustration, and anger. More generally, household tasks classified as "admin" (Emens 2015) are typically seen as undesirable, something most people "*would be glad to spend less time doing*" (p.1420). Emotional costs may be higher for disadvantaged groups if they spend more time on administrative burdens in total, or more time on tasks that are least pleasant, which may have differential effects on well-being. Moynihan, Herd, and Harvey (2015) note that processes typically undertaken by disadvantaged groups, such as applying for public assistance, can involve negative interactions with officials and be felt as degrading. In the UK, the automation of the welfare system has led to volatile and unpredictable payments, leading to significant stress and worry for affected claimants (Human Rights Watch 2020). Disadvantaged groups also have more to lose if a debt resolution, benefits claim, or bill refund process is unsuccessful (Schilbach, Schofield, and Mullainathan 2016), which may exacerbate negative emotions. Finally, those who are older, sicker, or financially insecure may experience particularly negative emotions from administrative processes. Christensen et al. (2020) argue that people in these groups are especially averse to tasks seen as dull or time-consuming (e.g. filling out paperwork); less psychologically resilient to experiences perceived as stressful or demeaning (e.g. interacting with government officials or loan providers); and more likely to experience emotional distress from frustrating processes (e.g. completing clunky or poorly communicated processes). By measuring emotions during administrative tasks across multiple domains, this study provides evidence on whether disadvantaged groups experience higher emotional costs, and in which domains this is most pronounced.

Measuring Time and Emotions. Despite their central role in administrative burden theory, time and emotional costs are seldom studied, as they are difficult to observe in case studies or administrative data. Furthermore, case studies do not allow for comparing experiences across

burdens. A survey approach can address these issues. Time-use survey data is commonly used to quantify unpaid work and track non-monetary activities which may otherwise be difficult to observe. For example, the Eurostat Time Survey tracks time spent on "household management" which includes paperwork and corresponding with authorities (Eurostat 2019), while the American Time Use Survey has categories for "using social services" and "financial management" (US Bureau of Labour Statistics 2020). However, existing surveys do not provide sufficiently specific or comprehensive measures of administrative time-use, and they seldom measure emotions. Fortunately, methods of evaluated time-use (Kahneman et al. 2004b; Kahneman and Krueger 2006) provide a robust tool to measure individuals' experiences, by focusing on time-use and emotions. One such method is the Day Reconstruction Method (DRM), which collects detailed information about everyday life while offering a high degree of feasibility (Kahneman et al. 2004a). This study uses an original survey which adapts the DRM to measure time-use on administrative tasks over the past day or month, and emotions during these tasks. As a result, the study measures burdens in terms of individuals' subjective experiences of tasks (including their time and emotional costs), rather than solely as features of a task which affect their likelihood of completing this task. This approach offers a quantifiable measure of everyday burdens. While not every administrative process involves financial trade-offs or complex paperwork, all processes can be measured and compared in terms of time-use and emotions. By focusing on everyday administrative tasks, this study therefore allows for measuring the prevalence of burdens in everyday life, comparing their time and emotional costs across various domains and population groups.

1.3. Decisions Costs

Subjective experiences of administrative burden are not only an outcome of interest, but may also impact the decision to engage with administrative tasks. If these experiences involve higher costs for disadvantaged groups, they may disproportionately discourage these groups from engaging in burdensome tasks. Studying decision costs to assess whether burdens "target" disadvantaged groups is a major area of research (Herd and Moynihan 2019; Chetty and Finkelstein 2020). Theoretical literature points to time and emotional costs as deterrents from engaging with specific administrative tasks (Moynihan, Herd, and Harvey 2015; Christensen et al. 2020). Deshpande and Li (2019) show that removing application supports prevents more disadvantaged applicants from accessing disability benefits, while Dynarski et al. (2021) show reducing complexity and uncertainty in financial aid provision encourages low-income students to apply to college. In a consumer choice context, disadvantaged consumers overpay for services more often than others, due to the burdens involved in switching deals (Citizens Advice 2018). Overall, evidence on administrative burden and inequality typically focuses on specific contexts and hence does not consider the cumulative costs experienced by individuals from administrative tasks in their everyday life. This study uses a choice experiment to measure decision costs. It shows participants two scenarios with different levels of burden and asks them how they would react. These scenarios include a government benefit and a phone bill refund (varying levels of burden within each scenario). As a result, the study combines everyday administrative experiences with causal evidence from participants' experimental choices. This allows us to examine whether disadvantaged groups make different decisions than the rest of the population when faced with (hypothetical) burdens, and to interpret these decisions in the context of their real-life experiences, such as higher time or emotional costs. For example, the study provides information on the emotional state or time-use trade-offs which disadvantaged groups may be dealing with when making administrative choices. As an added benefit, the study design helps address selection bias concerns. If disadvantaged groups are less likely to overcome burdens in the experiment, and report higher time and emotional costs, then the

effects of being disadvantaged on these costs are likely to be lower-bound estimates. Indeed, these estimates are calculated on the subsample of disadvantaged people who chose to engage with these tasks, and therefore may experience lower costs than others.

2. Methodology and Data

This study uses original survey data on administrative burdens. The questionnaire draws on best practice from the field and methodological literatures, and on the results of two pilot studies. The study design was pre-registered online on the *Open Science Framework*[1] (the appendix lists deviations from the analysis plan). This section summarises the survey design, including both "evaluated time-use" and "choice experiment" sections, and describes the data collection and sample.

2.1. Everyday Administrative Experiences

The first part of the survey collects demographic information and asks participants to report and evaluate their recent administrative experiences:

- ***Demographics***. Participants are asked about their age; gender; education; employment status; and household income and composition. They rate their physical and mental health on 5-point scales ("very bad" to "very good") and their financial well-being using a 5-item subjective questionnaire (US Consumer Financial Protection Bureau 2017).
- ***Domains***. Participants are randomly assigned to one of two time periods: the past day or month. They are asked whether they engaged in any administrative tasks in each domain over this period (tax, retirement, benefits, bills, goods and services, savings, debt, health, childcare, caring for adults). To help participants, they are given examples of relevant tasks, and further information where relevant (see table 1).
- ***Time and Emotions***. Participants are shown five tasks for each domain they engaged in (see table 1). They are asked how many times they did each task over their randomised period, and how long the task usually takes them. For each relevant domain, participants then evaluate their emotions during these tasks, rating six emotions (happy/ enjoying myself, competent/ capable, frustrated/ annoyed, bored /impatient for it to end, stressed/ under pressure, worried/ anxious) on a 7-point scale from "not at all" to "very much".

The survey design required identifying key administrative domains, as well as tasks in each domain. We first drafted a preliminary list of domains and commonly associated burdens using sources such as the administrative burden and sludge literatures, government lists of policy areas, and literature from other fields, such as law on "admin" (Emens 2015), and economics on time-use and unpaid work (Veerle 2011). Very infrequent burdens (such as voting or applying to college) were excluded. The first pilot study was conducted with 50 participants. It presented each domain to participants with examples of tasks and asked them to describe recent administrative tasks they had completed in each domain. There were also feedback questions on the domains themselves. Based on responses to the pilot, an updated list was created, including ten domains with five tasks each (this includes an "other administrative tasks" option to account for relevant tasks not listed). A second pilot study with a further 50 participants was conducted to ensure the tasks were relevant, unambiguous, and that the survey was not excessively long or difficult.

[1] Pre-registration available at: https://osf.io/4tq67. Note some of the hypotheses are not tested here, as they will form another study on gender and administrative tasks. See pre-registration and appendix for more details.

The measurement of time and emotions was another important design choice. Participants are randomly assigned to answer questions about the past day or month.[2] This is to balance the benefits of short, recent timescales for minimising recall bias, as seen in "diary" methods (Kahneman et al. 2004a), with those covering a longer period to capture less frequent burdens, as done in "stylised" surveys (Benes, Tinonin, and Walsh 2018). To further minimise bias, questions are simple and task-specific: participants are shown five tasks for each domain, asked how many times they engaged in each task in their randomised period, and how long this task usually took them. For example, the five tasks for "bills" are managing bills, reviewing or renewing plans, contacting providers, researching deals, and other administrative tasks on bills. Time costs for each domain are obtained by multiplying each instance by length of each task and adding up all five tasks. Restricting participants to specific tasks also helps avoid reports of irrelevant tasks. Emotional costs are measured via an adapted version of the Day Reconstruction Method. This method asks participants to rate how much they experienced various emotions during the activity of interest (Kahneman et al. 2004a). Average ratings of positive and negative emotions can then be used as a policy-relevant measure of subjective well-being (e.g. OECD 2013). In this study, we selected six relevant emotions based on the literature, and asked participants to rate these emotions for each administrative domain they engaged in.

Table 1 Administrative tasks surveyed for each domain

Domains	Tasks shown to participants
Income and tax	1. Filing payslips or managing income paperwork 2. Declaring income and paying taxes 3. Researching or claiming tax credits 4. Managing other tax issues (e.g. checking tax code) 5. Any other administrative tasks (e.g. paperwork, research, communications) on income or tax
Retirement	1. Researching pensions (e.g. age, eligibility, payments) 2. Researching and choosing a pension plan 3. Managing a pension plan (e.g. making payments, checking statements) 4. Contacting the government or a private provider about your pension 5. Any other administrative tasks (…) *(as above)*
Government benefits	*(Participants were shown examples of benefits which may be applicable, e.g. welfare programmes relating to income, work, housing, and household bills).* 1. Researching benefits 2. Applying for benefits 3. Providing documentation or doing assessments to show eligibility for a benefit 4. Contacting government offices about your benefits 5. Any other administrative tasks (…) *(as above)*
Bills	*(Participants were shown examples of specific bills which may be applicable, relating to household utilities, local services, insurance, telecoms, etc.)* 1. Managing bills (e.g. setting up direct debit, checking, paying, and filing bills) 2. Reviewing/renewing plans (e.g. insurance, phone) 3. Contacting providers (e.g. to resolve issues) 4. Researching better deals/providers, switching deals

[2] Two further groups were piloted (three and six months) but did not lead to significantly more relevant domains being reported compared to the "past month" group, hence they were not used in the final survey.

	5. Any other administrative tasks (…) *(as above)*
Goods and services	*(Participants were told to include all goods/services aside from regular bills and were given example tasks such as buying appliances or organising deliveries.)* 1. Researching and comparing deals for a product 2. Contacting a company or customer service 3. Claiming a discount, using a warranty, returning an item, disputing a charge 4. Tracking the delivery of an item 5. Any other administrative tasks (…) *(as above)*
Savings and investments	1. Reviewing savings and investments (e.g. check accounts, view statements) 2. Researching savings accounts, ISAs, bonds, investments, or other options 3. Opening a new savings or investment account 4. Deciding how much to save and paying into savings or investment accounts 5. Any other administrative tasks (…) *(as above)*
Debt	*(Participants were shown a list of relevant types of personal and household debt, loans, and lines of credit to consider.)* 1. Researching/applying for loans/credit (incl. refinancing/switching lenders) 2. Managing loans/credit (e.g. making repayments, checking statements) 3. Communicating with lenders/creditors 4. Researching/applying for government support/financial advice on loans/credit 5. Any other administrative tasks (…) *(as above)*
Health	*(Participants were given examples of benefits which may be applicable, such as the Disability Living Allowance, Personal Independence Payment.)* 1. Researching or applying for health-related benefits 2. Finding a doctor or a specialist 3. Scheduling appointments and communicating with health professionals 4. Filling out health paperwork (e.g. health insurance claims, GP/hospital forms) 5. Any other administrative tasks (…) *(as above)*
Caring for children	*(Participants were given examples of benefits which may be applicable, such as child benefit, parental leave, and free school meals.)* 1. Researching or applying for child-related benefits 2. Communicating with a child's school (e.g. letters, calls, texts, emails) 3. Scheduling appointments for a child (e.g. healthcare) 4. Filling out paperwork for a child (e.g. school, healthcare, activities, banking) 5. Any other administrative tasks (…) *(as above)*
Caring for adults	1. Helping with managing an adult relative or loved one's bills, pension, benefits, or finances 2. Helping with their healthcare or home care paperwork/administration 3. Researching other services or filling out other paperwork for them 4. Applying for assistance (e.g. Carer's Allowance) 5. Any other administrative tasks (…) *(as above)*

2.2. Choice Experiment

In the second part of the survey, participants complete a short choice experiment. Participants are shown two scenarios: claiming a government benefit and getting refunded on a phone bill. They see one (randomised) version of each scenario: a low-burden version involving filling out a short form, or a high-burden version. For the benefit scenario, the high burden version is either an unpleasant phone interaction with a government worker, or a lengthy process with a

10-page form and an in-person appointment (see Figure 1). For the phone bill scenario, the high burden version involves having to find and report obscure information in the form, or a delay in the refund due to a backlog. Participants answer how likely they are to complete each task on a 5-point scale from "extremely unlikely" to "extremely likely". The full scenarios are available in the appendix. The scenarios are based on common examples in the literature (applying for a benefit and contacting a provider). These burdens are relevant to policy and cover citizen and consumer issues (social welfare and consumer rights). The second pilot study allowed for testing (and updating) of the scenarios based on feedback about their realism and clarity. Low-burden and high-burden scenarios only differ by the sentence included in high-burden scenarios to describe the additional burden. An obvious limitation with this design is that choices are hypothetical, and individuals may be overly optimistic about their ability to overcome burdens (Tasoff and Letzler 2014). However, when individuals decide whether to start a task in their everyday life, its costs are often still "hypothetical" (not yet experienced), yet they can still affect this decision. Furthermore, the aim is not to assess the likelihood of overcoming burdens, but rather the difference in this likelihood arising from burdens and participants' demographics.

Figure 1 Example of a high-burden treatment in the choice experiment

You learn from a Government announcement that you might be eligible for a one-off government payment equivalent to one week's income for your household. **To receive this payment, you need to print and fill out a 10-page application form and mail it to your local government office. Then, you will be invited to attend an in-person appointment at this government office, in order to show original identity documents and other documents ensuring your eligibility**.

Thinking about any previous experiences with a similar situation, and about your current circumstances and preferences, **how likely is it that you would complete the task(s) described above in order to get the payment**?

□ Extremely likely
□ Fairly likely
□ Neutral or not sure
□ Fairly unlikely
□ Extremely unlikely

2.3. Data Collection and Sample

The survey data was collected online in July 2021, following two pilot studies carried out in May and June. Participants were recruited via Prolific, a survey recruitment platform aimed at academic research. The survey took on average 12 minutes to complete – this varied based on the timescale group and the number of relevant domains.[3] Participants were compensated via a small monetary reward in line with institutional ethical guidelines.[4]

[3] The median survey time was 10 minutes. The minimum time was 1.9 minutes (this participant had no relevant domains). Out of the 143 participants who spent less than 5 minutes on the survey, about 90% engaged in two or less domains, and 78% were in the "yesterday" group (in which fewer domains are likely to be relevant). The maximum survey time was 967 minutes, likely due to a participant leaving the survey and coming back to finish it later. Out of the 188 participants who spent more than 20 minutes on the survey, 77% engaged in at least four domains, and 69% were in the "past month" group (in which more domains are likely to be relevant).

[4] This study was approved by University College Dublin's Human Research Ethics Committee. Participants were compensated £2.50 each for completing the survey. This was based on a £7.50 hourly rate and a 20-minute survey.

The sample consists of 2,243 adult UK residents.[5] A nationally representative sample (in terms of age, sex, and ethnicity) of 1,500 participants was first recruited to ensure diversity. A further 743 responses were then collected, targeting a mix of older people, people with health issues, and people across the income scale, using Prolific's recruitment filters. Table 2 summarises the sample's demographics. The sample is not fully representative by construction (743 responses from target groups). It skews female and university educated, reflecting the fact that 60% of Prolific's UK users are female and 37% hold a degree.[6] However, the sample offers good socio-economic diversity overall, allowing for comparisons of different groups, which is the focus of this study. More generally, the recruitment platform used in this study has performed favourably in recent studies in terms of participants' diversity, comprehension, attention, and honesty (Peer et al. 2017; 2021), and provides a high level of transparency between participants and researchers which is beneficial to data quality (Palan and Schitter 2018).

Table 2 Sample demographics

	Mean / %	SD
Age (years)	42.85	16.87
Female (%)	0.60	0.49
University degree (%)	0.51	0.50
Full-time job (%)	0.39	0.49
Household income < £20,000 (%)	0.27	0.44
Living with children (%)	0.30	0.46
Living with spouse/partner (%)	0.56	0.50
Health (from 1-5)	3.76	0.75
Financial well-being (from 0-100)	52.63	12.41
Observations	2243	

Notes: Health is the average of physical and mental health, self-reported on 5-points scales ("very bad" to "very good"). Financial well-being scores are based on the US Consumer Financial Protection Bureau's (2017) 5-item questionnaire. 127 participants (6% of the sample) did not disclose their income and 28 participants (1% of the sample) did not disclose their gender or identified outside the gender binary. These participants are excluded from summary statistics on income and gender and from analysis models which use these variables.

3. Results

The results show the time and emotional costs of everyday burdens, and the experimentally elicited decision costs of hypothetical burdens, focusing on how these costs are distributed across disadvantaged groups. This study examines three areas of disadvantage: older age, health issues, and financial insecurity. Older people are defined as aged 65 or older and comprise 14% of the sample. People with health issues are those who report either their physical or mental health as "bad" or "very bad" (15% of the sample). The study uses two indicators of financial insecurity: a yearly household income below £20,000 (27% of the sample, excluding those who did not disclose their income), and a financial well-being score in the bottom quintile of the sample (19% of the sample, by construction).

3.1. Time Costs

Participants spend an average of one hour per day doing administrative tasks (see Table 3). As expected, the "yesterday" group has higher daily averages, possibly due to lower recall bias

[5] One participant submitted two responses, which were both dropped due to inconsistency.
[6] Based on Prolific's database of active users on 21 November 2021 as available to researchers.

(85 minutes, compared to 32 minutes for the past month group), while the "past month" group engaged in more administrative domains (4.6 domains, compared to 2.6 for the yesterday group). The most reported domains are goods and services (75% of the sample), bills (64%), and savings (57%), followed by health and debt. The least reported domains relate to caring for adults (14%) and government benefits (14%), with slightly more participants conducting tasks related to retirement, childcare, and tax. These patterns hold within both timescale groups.[7]

Table 3 shows average time costs for each domain. The most frequent domains - goods and services, bills, and savings - also have the highest time costs, between 9 and 16 minutes per day each. However, when restricted to participants who engaged in each domain, the highest time costs are associated with government benefits and caring for children/adults, alongside the previous three domains. In other words, while few people engage in administrative tasks relating to care work or benefits, those who do incur significant time costs.

Table 3 Time costs for each domain

	Full sample	Engaged participants only	
	Time per day (minutes)	Number of participants	Time per day (minutes)
Income and tax	2.2	483	10.4
Retirement	2.2	364	13.5
Government benefits	2.1	287	16.6
Bills	10.8	1390	17.4
Goods and services	15.9	1661	21.5
Savings and investments	9.3	1257	16.7
Debt	3.8	669	12.9
Health	5.1	958	11.9
Caring for children	3.1	401	17.6
Caring for adults	4.2	298	31.6
Total daily time	58.8		63.1

Notes: Time-use is prorated daily for the "past month" group. Engaged participants in each domain are those who did any administrative tasks in this domain. Total daily time is averaged over the whole sample for "full sample" and over the subsample of those who engaged in at least one task for "engaged participants".

Disadvantaged groups' total time costs differ somewhat from the rest of the sample.[8] Compared to the daily sample average (59 minutes), older people spend 21 minutes less on administrative tasks, and those on low incomes, 7 minutes less. On the other hand, those with poor health or low financial well-being spend more time on tasks than the rest of the sample; 9 and 13 minutes more respectively. However, regression analysis finds that these differences are only significant for older people. These patterns are rarely significant in alternative specifications.[9]

Examining time costs by domain highlights how different groups allocate their time. Table 4 shows the effect of being in a disadvantaged group on time costs for each domain. A two-part model first estimates the likelihood of engaging in each domain using logistic regressions, and linear regressions are used to examine time costs on the sub-samples of those who engaged with each domain. The results show that each group focuses on the domains most salient to

[7] See Table A1 in Appendix.
[8] See table A2 in Appendix.
[9] See tables A3 (OLS with and without demographic controls), A4 (two-part model to account for the large amount of null observations), A5 (full variation in age, health, and financial indicators) in Appendix.

them. Being in poor health, on a low income, or having low financial well-being significantly increases the probability of engaging in government benefits-related tasks (by 7, 12, and 11 percentage points respectively). Those in poor health are more likely to engage with health tasks, and those with low financial well-being are more likely to engage with bills and debt. Older people are more likely to engage with bills and retirement. However, there may be a trade-off between salient tasks and those which generate future benefits, as people with poor health, low income, or low financial well-being are less likely than others to engage with their savings and pension. Note that disadvantaged and non-disadvantaged groups differ mainly in their probability of engaging in each domain (i.e. at the extensive margin), and less so in the time they spend on this domain once engaged (intensive margin), as there are few significant results in the second part of the model. However, older people spend less time on most domains, and those on low incomes spend 4 minutes less on savings, and those with poor health, 7 minutes more on health. Alternative specifications confirm these results, though they often reduce in size or statistical significance.[10] Most notably, controlling for gender and children erases most of the group differences in care work-related tasks except for those on a low income as shown in the appendix.

Table 4 Effect of group membership on time costs, by domain (two-part model)

	Tax	Pension	Benefits	Bills	Goods	Savings	Debt	Health	Children	Adults
Part 1: Logistic regression (probability of engaging in domain, marginal effects)										
Older	-0.04	0.06**	-0.03	0.08***†	-0.05*	-0.00	-0.04	-0.02	-0.17***†	0.01
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Bad health	-0.04	-0.09***†	0.07***†	-0.02	0.00	-0.09***†	-0.04	0.13***†	-0.04**	-0.02
	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Low income	-0.05**	-0.06***†	0.12***†	-0.01	-0.05**	-0.07***†	-0.09***†	0.01	-0.11***†	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Low fin. WB	0.02	-0.04*	0.11***†	0.09***†	-0.04	-0.10***†	0.21***†	0.01	0.07***†	0.01
	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Observations	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116
Part 2: Linear regression (time costs in minutes, conditional on non-zero time-use in that domain)										
Older	-6.13***†	-1.45	-2.90	-4.80**	-6.02***†	-5.49***†	-4.80**	-4.18**†	11.27	-2.09
	(1.89)	(3.07)	(6.80)	(2.10)	(1.86)	(1.88)	(2.26)	(1.65)	(11.63)	(7.41)
Bad health	-0.56	0.71	-1.82	-1.81	0.19	1.61	5.12	7.12**†	-7.97*	38.79*
	(2.72)	(6.07)	(4.88)	(2.44)	(2.78)	(2.90)	(4.05)	(2.86)	(4.51)	(21.54)
Low income	0.31	0.31	5.62	-1.63	-2.46	-3.98**	0.34	1.62	-0.66	-8.80
	(2.46)	(3.61)	(6.43)	(2.23)	(1.97)	(1.84)	(2.98)	(2.05)	(4.53)	(9.73)
Low fin. WB	-0.33	1.46	0.11	3.08	2.53	-3.11	4.05	-0.31	2.59	9.30
	(2.59)	(4.60)	(6.06)	(2.79)	(3.30)	(2.33)	(3.09)	(2.46)	(6.04)	(13.61)
Constant	10.97***	13.65***	14.73***	18.05***	22.27***	18.63***	11.57***	10.39***	18.13***	26.33***
	(2.02)	(1.92)	(4.02)	(1.33)	(1.13)	(1.25)	(1.31)	(1.43)	(2.35)	(5.82)
Observations	460	354	276	1323	1570	1201	653	907	389	282

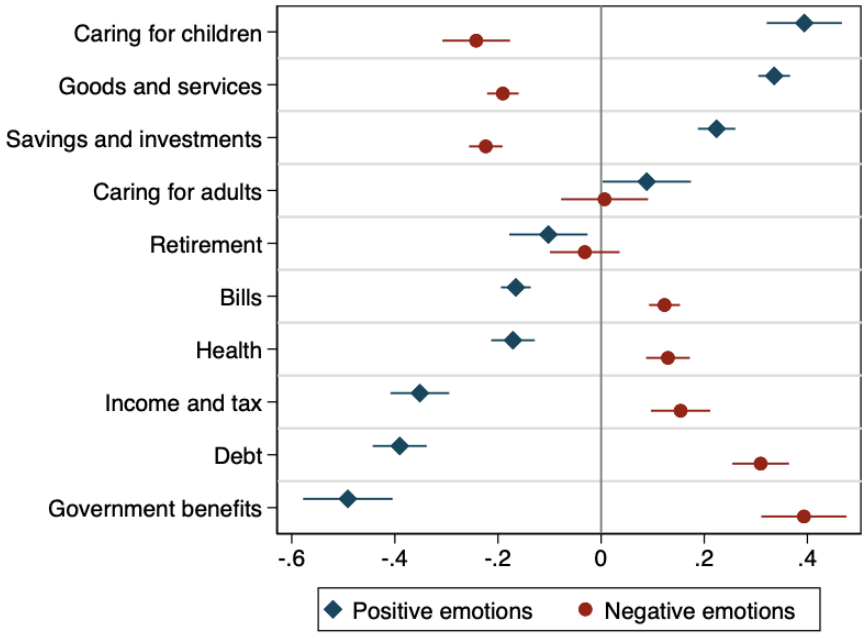
Note: The first part of the model shows marginal effects on the likelihood of engaging in each domain. The second part shows time-use coefficients and is conditional on having spent a non-zero amount of time on the domain, as reflected by the number of observations. Participants who did not report their income are excluded. Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg correction.

[10] See tables A6 (demographic controls), A7 (linear regressions only), A8 (full variation in age, health, and financial indicators instead of binary group variables) in Appendix.

3.2. Emotional Costs

Emotions vary significantly depending on the task. Administrative tasks relating to childcare, goods and services, and savings are associated with the highest positive emotions (average of "happy/enjoying myself" and "competent/capable") and the lowest negative emotions (average of "frustrated/annoyed", "bored/impatient for it to end", "stressed/under pressure", and "worried/anxious"). On the other hand, tasks related to debt, tax, and most of all government benefits, show the lowest positive emotions and the highest negative emotions. Health tasks are also associated with high negative emotions.[11] To reliably compare the emotional costs of each domain, we use within-person models of emotions which remove individual-level effects thus reducing bias induced by happier people being more (or less) likely to engage in some domains. Figure 2 shows the results of these models.[12] The models confirm the pattern found in the descriptive statistics: administrative tasks relating to tax, debt, and especially benefits, have the highest emotional costs, while childcare, goods and services, and savings have the lowest costs. The high emotional costs of government benefits are noteworthy as these tasks also involve high time costs for those who engage in them.

Figure 2 Within-person effects of administrative tasks on emotions, by domain



Note: Marginal effects on standardised emotions (z-scores), shown with 95% confidence intervals.

Disadvantaged groups experience different emotional costs from the rest of the sample. We examine inequalities in total emotional costs using participants' average net (positive minus negative) emotions across all domains, weighting each domain by its relative size in participants' total administrative time-use. Regression analysis shows that those with poor health or low financial well-being have significantly lower (worse) net emotions, and older people, significantly higher net emotions.[13] People on low incomes seldom differ from the rest of the sample. Alternative specifications replicate these patterns.[14]

[11] See table A9 (average positive and negative emotions by domain) in Appendix.
[12] See table A10 in Appendix for underlying regressions.
[13] See table A11 in Appendix.
[14] See table A12 in Appendix.

Analysing emotional costs by domain can identify whether some tasks are especially costly for disadvantaged groups. This is useful because the observed patterns in overall emotions may reflect baseline differences (for example, older people report higher emotional well-being, see Steptoe, Deaton, and Stone 2015). Table 5 shows the relationship between group membership and net emotions by domain, using linear regressions. Those with poor health and low financial well-being have lower net emotions across all domains (which may reflect baseline differences), but these differences are particularly large in domains most relevant to their disadvantage. For example, those with low financial well-being have the largest emotional differences from the rest of the sample when dealing with debt, savings, and benefits, while those with poor health have the highest relative emotional costs during tasks relating to health, benefits, and retirement. Low income does not significantly affect emotions across domains. Being older results in lower emotional costs across almost all domains, but especially so for domains which other groups may find particularly taxing, such as debt, bills, and health. Alternative specifications confirm these patterns.[15] Notably, after controlling for children, the effects of low income and low financial well-being on childcare-related emotional costs become larger and significant.

Table 5 Effect of group membership on emotions, by domain

	Net emotions in each domain									
	Tax	Pension	Benefits	Bills	Goods	Savings	Debt	Health	Children	Adults
Older	1.04**†	0.44	0.79	1.41***†	0.55***†	0.99***†	1.43***†	1.15***†	-1.29**	0.14
	(0.41)	(0.34)	(0.53)	(0.18)	(0.17)	(0.19)	(0.28)	(0.21)	(0.64)	(0.40)
Bad health	-1.05***†	-1.74***†	-1.36***†	-1.25***†	-0.74***†	-1.05***†	-1.08***†	-1.22***†	-0.50*	-0.67*
	(0.36)	(0.59)	(0.32)	(0.17)	(0.16)	(0.22)	(0.27)	(0.20)	(0.30)	(0.40)
Low income	-0.20	-0.18	0.09	-0.20	0.13	-0.15	0.22	-0.06	-0.63**	-0.45
	(0.29)	(0.34)	(0.28)	(0.14)	(0.13)	(0.16)	(0.24)	(0.18)	(0.31)	(0.31)
Low fin. WB	-1.30***†	-0.92**	-1.55***†	-1.37***†	-0.73***†	-1.76***†	-2.22***†	-0.45**	-0.57**†	-0.41
	(0.28)	(0.43)	(0.31)	(0.15)	(0.14)	(0.20)	(0.21)	(0.20)	(0.24)	(0.34)
Constant	0.76***	1.70***	0.10	1.13***	2.01***	2.30***	0.70***	0.71***	2.08***	1.31***
	(0.16)	(0.17)	(0.23)	(0.09)	(0.07)	(0.09)	(0.13)	(0.10)	(0.13)	(0.18)
Observations	476	356	281	1336	1565	1191	662	923	397	285

Note: Observations vary because only participants who engaged in a domain reported emotions for this domain. Participants who did not report their income are excluded.
Robust standard errors in parentheses.
* p < 0.10, ** p < 0.05, *** p < 0.01, † p <0.05 after Benjamini-Hochberg correction.

[15] See tables A13 (controls) and A14 (full variation in age, health, financial indicators) in Appendix.

3.3. Decision Costs

The results of the choice experiment show the negative impact of administrative burdens on decision-making. Participants are randomly assigned to high- or low-burden versions of two hypothetical scenarios: applying for a government benefit and getting refunded for a phone bill. In the low-burden (control) versions, applicants must fill out a short form, whereas in the high-burden versions, the process is lengthy or involves an unpleasant interaction (benefit scenario), complex information, or a delayed payment (phone bill scenario).[16] Key participant demographics are balanced across treatment groups.[17] Table 6 shows the results of the experiment, using linear regressions.[18] In each scenario, higher burden significantly reduces participants' self-reported likelihood of completing the task. These results are in line with the administrative burden literature, whereby burdens discourage action.

Table 6 Effects of administrative burdens on decision-making

	Likelihood of completing the task			
	Scenario 1: Government benefit		Scenario 2: Phone bill	
Lengthy process	-0.87***†	(0.05)		
Negative interaction	-0.44***†	(0.05)		
Complex task			-0.21***†	(0.04)
Delay			-0.08**†	(0.04)
Constant	4.61***	(0.03)	4.67***	(0.02)
Observations	2243		2243	

Note: The coefficients reflect the difference in responses between the control and the high-burden versions of each scenario. The outcome is a 5-points Likert scale from "Extremely unlikely" to "Extremely likely". Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

An important question in the choice experiment is whether its effects are evenly distributed. Table 7 reports the results of regression models examining whether being in a disadvantaged group impacts the effects of burdens on decision-making. For example, the fourth coefficient for scenario 1 is the added effect of being older, given a "lengthy process" burden. Being in bad health exacerbates the negative effect of burdens, with negative coefficients in all scenarios including a significant effect for the "unpleasant interaction" burden (the "delayed refund" burden is also marginally significant). Older people also differ from the rest of the sample: in the low-burden versions of both scenarios, they are more likely than others to complete the task. There are no significant effects of low income or low financial well-being. Alternative specifications using ordered logistic regressions or the full variation in age, health, and financial indicators find similar patterns, though a notable difference is that the ordered logistic regressions find added negative effects for the older and low financial well-being groups in some high-burden scenarios.[19] Overall, these results show that being in poor health exacerbates the negative impact of administrative burdens on decision-making, while other forms of disadvantage do not seem to have this effect (depending on the specification).

[16] All scenarios and link to full survey questionnaire in Appendix.
[17] See table A15 in Appendix.
[18] See table A16 for alternative specification (ordered logistic regressions); findings are consistent with the main model though the "delay" coefficient becomes only marginally significant.
[19] See tables A17 (logistic regressions) and A18 (full variation in age, health, financial indicators) in Appendix.

Table 7 Effects of group membership on administrative burden decision costs

	Likelihood of completing the task			
	Scenario 1: Government benefit		Scenario 2: Phone bill	
Lengthy (scenario 1) // Complex (scenario 2)	-0.79*** †	(0.07)	-0.15*** †	(0.05)
Interaction (scenario 1) // Delay (scenario 2)	-0.35*** †	(0.06)	-0.03	(0.05)
Older				
Control	0.14*	(0.07)	0.25*** †	(0.04)
Lengthy // Complex	0.06	(0.15)	-0.09	(0.08)
Interaction // Delay	-0.09	(0.14)	-0.12	(0.09)
Bad health				
Control	-0.02	(0.09)	-0.07	(0.07)
Lengthy // Complex	-0.27	(0.18)	-0.04	(0.12)
Interaction // Delay	-0.46*** †	(0.16)	-0.24*	(0.12)
Low income				
Control	-0.03	(0.07)	0.03	(0.05)
Lengthy // Complex	-0.20	(0.13)	-0.11	(0.09)
Interaction // Delay	0.02	(0.11)	-0.09	(0.09)
Low financial well-being				
Control	0.01	(0.09)	-0.05	(0.08)
Lengthy // Complex	0.08	(0.16)	-0.02	(0.12)
Interaction // Delay	-0.09	(0.13)	0.16	(0.11)
Constant	4.62***	(0.04)	4.66***	(0.04)
Observations	2116		2116	

Note: Each scenario is analysed via a separate model (results are shown on single lines for ease of reading). The outcome is a 5-points Likert scale from "Extremely unlikely" to "Extremely likely". The values for "control" are the baseline coefficients for each group. The values for each treatment are the coefficients on the interaction between group and treatment. Participants who did not disclose their income are excluded.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

4. Discussion

This study demonstrates the role of administrative burdens in everyday life. Participants' time-use on administrative tasks, an hour per day on average, shows that they represent a significant form of unpaid work which may detract from other activities. Time costs are particularly high for tasks involving private providers (such as bills or goods and services), however government benefits also impose high time costs on the minority of people who engage with them. This is important as government benefits are associated with the highest emotional costs, alongside debt and tax. This is the first study to compare the costs of administrative burdens across different domains. The results are in line with expectations: emotionally costly tasks such as benefits, debt, and tax may involve lengthy processes, potentially negative outcomes, and intertemporal trade-offs (with payoffs far in the future), while tasks related to children, goods and services, and savings may be shorter, have lower stakes, involve more positive framing (e.g. helping children, getting a deal, building savings), or pay off sooner. Lastly, the experiment shows that even in hypothetical settings, burdens are a barrier to action, as they significantly reduced participants' likelihood of completing a task in both scenarios, in line with the empirical literature, which finds negative effects of burdens in a variety of contexts (Fox, Stazyk, and Feng 2020; Linos et al. 2020).

The study shows that administrative burdens have higher costs for some disadvantaged groups, such as those with poor health and low financial well-being. First, these groups spend slightly more time on administrative tasks in total and are more likely to engage in costly domains such as government benefits, which are more salient to them. Second, they experience particularly high emotional costs during these tasks. Not only do they have lower net emotions across all domains (which may be due to baseline group differences), these differences are especially large in domains salient to their disadvantage (e.g. benefits for both groups, debt for the low financial well-being group, health for the poor health group). Third, competing administrative demands and limited time resources may create trade-offs between domains. Those dealing with health or financial issues are more likely than others to engage in domains salient to them (e.g. benefits, health, debt), but longer-term yet important tasks may be neglected: for example, both groups are less likely to engage with savings or retirement. These results are in line with the literature which argues that disadvantaged groups may face higher administrative demands (Emens 2015) and worse emotional costs from burdens (Christensen et al. 2020). This study provides empirical evidence in support of these hypotheses. Scarcity theory also argues that these groups may prioritise salient tasks at the expense of longer-term tasks (Mullainathan and Shafir 2013), though empirical evidence on scarcity is mixed (de Bruijn and Antonides 2021). Finally, disadvantaged groups' administrative experiences may inform their choices when facing new burdens, as those in poor health are more negatively affected by burdens in the choice experiment, especially the "unpleasant interaction" burden. This is in line with evidence that those with medium and high levels of disability were most affected by burdens in disability benefits applications (Deshpande and Li 2019). These results also help address selection bias in everyday experiences: those in poor health suffer higher time and emotional costs from administrative tasks, yet they are less likely to engage in these tasks in the first place (as per the experiment), hence these costs are likely to be a lower bound estimate, as those who overcome burdens (and are therefore able to report their experiences) may suffer lower costs.

Important findings on the role of income and age also emerge. Those with low income, while prioritising similar domains to the low financial well-being group (more time on benefits, less time on pension and savings), do not differ from the rest of the sample in their emotional or decision costs. A potential explanation is that people with low income are similar to those with low financial well-being in their objective need to access benefits and reduced scope for savings, which explains their similar time-use patterns. However, those with low income are not as emotionally affected by administrative tasks, as emotional costs depend on subjective perceptions of financial insecurity which low-income households do not necessarily have. Finally, older adults are less adversely affected by burdens than others. They spend less time on administrative tasks, though they focus this time on tasks salient to them (bills, retirement). They have higher net emotions than younger groups (which is consistent with the literature, in which older people report higher well-being, Steptoe, Deaton, and Stone 2015), and in the choice experiment, they are more likely to complete low-burden tasks (though they are also more negatively affected than others by the "complexity" burden in an alternative model). A potential explanation is that older people who answer online surveys do not suffer from the cognitive decline thought to drive the adverse effects of burdens on older people (e.g. in Christensen et al. 2020).

This study has several limitations. The results may be affected by choices made in the design of the survey (such as the periods and tasks selected) and analysis (such as model specifications and key variables). The methodology section and pre-registered analysis plan justify these choices, which are based on best practice and aim to minimise such effects. There are also potential biases from using an online survey (e.g. a more highly educated sample) and

collecting data at a particular point in time (e.g. seasonal effects). An important consequence of the data collection method is that individuals who select into the sample (Prolific members willing to take the survey) are likely to face lower costs from administrative tasks, compared to the broader population, given that the survey itself represents an administrative task. This means that the study's results are likely to under-estimate the costs of administrative burdens. Additionally, the results are based on a UK sample and may not be generalisable to very different societies. However, while the exact values in the study's results may be influenced by the methodology, the precautions taken in the study design lend credibility to the consistent patterns they uncover. Another feature of the study is that the results on time and emotional costs are based on observational data and cannot be claimed as causal (unlike decision costs, which are obtained via an experiment). This is not necessarily an issue as the aim of this study is to show the variation in groups' everyday experiences. Lastly, the experiment is hypothetical (participants do not suffer real consequences), which may partly explain the sparse heterogeneous effects.

The study suggests several avenues for future research. The first is to investigate the mechanisms determining people's experiences and choices when encountering burdens in everyday life. Day reconstruction surveys can be used for this purpose, as they allow for measuring real-life experiences, choices, and the choice architectures surrounding them (Kahneman et al. 2004a; Lades, Martin, and Delaney 2018). This study hints at the time and emotional factors under which people may be making administrative choices. An example could be to survey people shortly after major tax deadlines and ask them detailed questions about what they did "yesterday" to identify if they applied for tax credits and what time and emotional costs may have been at play. Furthermore, this approach could be used to understand the behavioural mechanisms which may influence people's administrative experiences in the first place; for example, follow-up work could test whether tasks involving intertemporal choice have different emotional costs than those with more immediate payoffs. Another approach could involve directly observing administrative experiences (e.g. using audio-visual tools), as this approach helped build evidence on emotional costs in laboratory contexts (Hattke, Hensel, and Kalucza 2020). Measuring these reactions "in the wild" would help better understand real-life experiences. Alternatively, this study shows that survey experiments can show the effects of burdens on choice; experiments could test how various (randomised) levels of emotional or time costs affect the ability to overcome burdens. Finally, this study focused on age, health, and financial inequality, but did not account for gender inequality within households. Burdensome tasks may be allocated based on gender norms or intra-household bargaining, following similar patterns to other unpaid work such as house or care work, hence they could be a source of gender inequality. The survey used in this study includes data on intra-household dynamics, and a follow-up study will focus on gender.

5. Conclusion

This study measures everyday administrative burdens and investigates whether their costs are disproportionately borne by disadvantaged groups. It is the first to empirically document everyday administrative experiences in a variety of contexts, as most evidence focuses on outcomes within specific case studies. As a result, the study accounts for two dimensions of burdens which are central to administrative burden theory yet seldom captured in empirical research: time and emotions. Through this approach, the study shows that administrative tasks are a significant part of everyday life involving time, emotional, and decision costs. The study also shows that disadvantaged groups, notably those with poor health or financial well-being, may have more costly administrative experiences than others. These groups may face trade-

offs between salient tasks (e.g. benefits) and longer-term outcomes like savings, and suffer disproportionately high emotional costs from burdens relating to their disadvantage. Hence experiences matter, both as an important aspect of burdens, and as a channel of inequality. Finally, these experiences provide useful contextual information when observing the heterogeneous effects of burdens in a choice experiment, as they point to behavioural factors (such as time constraints or emotional costs) which may negatively affect disadvantaged groups' decisions; in particular, those in poor health face higher decision costs.

The results have important policy implications. First, domains involving private providers (such as bills or goods and services) have particularly high time costs, underlining a need to include consumer processes in administrative burden policy alongside government processes. Second, government benefits also impose high time costs on those who engage with them and are associated with the highest emotional costs. The fact that administrative interactions with the government are the most negative experience for participants out of all administrative domains suggests a need for reform. Third, the choice experiment provides a tool for practitioners to assess such reforms: its results show that even in a hypothetical setting, burdens discourage action, hence choice experiments have potential as easy-to-scale, affordable, low-risk instruments to pre-test policy or to justify intervention in consumer markets. Fourth, and most importantly, this study shows that people's experiences of burdens, and not only their outcomes, are key channels of inequality. Burdens are regressive through heterogeneous effects on decisions, but they also involve different time and emotional costs for disadvantaged groups who engage with burdensome tasks. Furthermore, practitioners should be aware that placing burdens on disadvantaged groups in one domain may impact their ability to meet demands in other domains, given the potential trade-offs between salient and longer-term tasks. Overall, the study suggests a way forward for policy: if the same process is more costly for more vulnerable groups, then policy resources such as application assistance services or fast-track processes should be spent mainly on these groups.

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Appendix

1) Deviations from the analysis plan

The study is pre-registered on the Open Science Framework at: https://osf.io/4tq67. The analysis in this paper deviates from the pre-registered analysis plan in several instances, for feasibility reasons or to correct oversights. In particular:

- **Gender analysis**: Research questions and hypotheses about gender and reporting of intra-household task division (hypotheses 1, 2, 3a, gender aspects of 4 and 6) will form the subject of a separate, dedicated paper (to be published as a working paper in 2022). Hence this paper does not report dedicated results on gender. However, it does control for gender in models of inequality in time-use and emotions (either in the main specification, or in additional specifications shown in the appendix).
- **Multiple hypothesis testing**: As discussed in the pre-registration, the analysis corrects for multiple hypothesis testing using the Benjamini-Hochberg method, which corrects for the false discovery rate using a step-down procedure: rank p-values by size, then compare each p-value to the critical value ((i/m)Q), where i is the rank, m is the number of tests, and Q is the false discovery rate, set at 5%). In addition, the pre-registration planned to use an adaptation of the Romano-Wolf bootstrapping method for experimental results, given the greater statistical power this allows, however this led to coding issues when looking at group effects. Hence this paper uses Benjamini-Hochberg (which is a more conservative approach) throughout the entire paper.
- **Exploratory analysis**: Note that the analysis of inequality in emotional costs by domain was pre-registered as "exploratory". Other exploratory lines of enquiry were also pre-registered (e.g. doing factor analysis on types of tasks) but were not further explored.

2) Supplementary tables on time costs

Table A1 Frequency of participation in each domain

	Frequency of participation (%)		
	Full sample	Yesterday group	Past month group
Income / tax	23	11	35
Retirement	17	10	23
Government benefits	14	08	19
Bills	64	45	83
Goods / services	75	64	87
Savings / investments	57	47	67
Debt	31	21	41
Health	44	26	63
Caring for children	19	14	23
Caring for adults	14	09	18
Observations	2243	1139	1104

Table A2 Average total daily administrative time costs by group (minutes)

	Older	Bad health	Low income	Low fin. WB
No	61.9	57.5	60.9	56.4
Yes	40.6	66.3	54.0	69.4

Table A3 Effect of group membership on total time costs (OLS)

	Total daily administrative time costs (minutes)			
	(i)		(ii)	
Older	-18.82***†	(4.61)	-10.63**	(5.07)
Bad health	6.18	(7.63)	9.29	(8.15)
Low income	-8.48	(5.54)	-2.16	(5.75)
Low financial WB	10.81	(7.31)	9.82	(7.49)
Constant	61.01***	(3.03)	44.84***	(5.81)
Controls	No		Yes	
Observations	2116		2092	

Notes: Controls include being female, having a degree, a full-time job, and having children in the household. The difference in observations is due to participants not disclosing income or gender.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

Table A4 Effect of group membership on total time costs (two-part model)

	(i)		(ii)	
Part 1: Logistic regression (marginal probability of engaging in one or more tasks)				
Older	-0.04**	(0.02)	-0.04*	(0.02)
Bad health	-0.01	(0.02)	-0.01	(0.02)
Low income	-0.02	(0.01)	-0.01	(0.01)
Low fin. WB	0.03**	(0.01)	0.03**	(0.01)
Controls	No		Yes	
Observations	2116		2092	
Part 2: Linear regression (total daily time costs, in minutes, conditional on engaging)				
Older	-17.95***†	(4.97)	-9.69*	(5.46)
Bad health	7.44	(8.11)	10.64	(8.69)
Low income	-8.05	(5.88)	-1.53	(6.13)
Low fin. WB	9.69	(7.59)	8.88	(7.78)
Constant	64.78***	(3.20)	49.72***	(6.17)
Controls	No		Yes	
Observations	1977		1953	

Note: The first part (logit) estimates the likelihood of spending any (non-zero) time on administrative tasks. The second part (linear regression) estimates the time spent on tasks, provided it is not zero. Controls include being female, having a degree, a full-time job, and having children in the household. The difference in observations is due to participants not disclosing income or gender or having not done any tasks.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg correction.

Table A5 Effect of age, health, and financial indicators on total time costs (OLS)

	Total daily administrative time costs (minutes)			
	(i)		(ii)	
Age *(base level: 35-44)*				
<25	-29.16***†	(7.94)	-19.77**	(9.05)
25-34	-17.48**	(8.35)	-14.16	(8.77)
45-54	-18.64**	(8.36)	-14.19*	(8.59)
55-64	5.96	(11.00)	15.43	(12.04)
65 and older	-23.12***†	(8.24)	-10.21	(9.68)
Health	-0.77	(3.61)	-2.61	(3.78)
Income	1.22	(0.87)	0.08	(0.95)
Financial WB	-0.87***†	(0.25)	-0.82***†	(0.25)
Constant	116.27***	(16.52)	105.06***	(17.93)
Controls	No		Yes	
Observations	2116		2092	

Note: The age category "35-44" is the base level as it reflects the average age of the sample (42.8). Controls include being female, having a degree, a full-time job, and having children in the household. Health is an average score between 1 and 5 (higher scores indicate better health); income is a categorical variable (increasing in income categories); financial well-being is between 0 and 100 (higher scores indicate better well-being). The discrepancy in observations is due to some participants not disclosing income or gender.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

Table A6 Effect of group membership on time costs, by domain (two-part model, controls)

	Tax	Pension	Benefits	Bills	Goods	Savings	Debt	Health	Children	Adults
Part 1: Logistic regression (probability of engaging in domain, marginal effects)										
Older	-0.01	0.07**	-0.02	0.11***†	-0.04	-0.00	0.04	-0.02	-0.05	0.01
	(0.03)	(0.03)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.02)
Bad health	-0.02	-0.08***†	0.07***†	0.00	0.00	-0.08**	-0.01	0.11***†	-0.02	-0.03
	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Low income	-0.02	-0.05**	0.10***†	0.02	-0.03	-0.05*	-0.04*	0.00	-0.05***†	0.01
	(0.02)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)
Low fin. WB	0.02	-0.04	0.10***†	0.08***†	-0.04	-0.10***†	0.20***†	0.00	0.04**	0.00
	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)
Observations	2092	2092	2092	2092	2092	2092	2092	2092	2092	2092
Part 2: Linear regression (time costs in minutes, conditional on non-zero time-use in that domain)										
Older	-6.10**	-1.69	-1.85	-3.22	-3.75*	-6.83***†	-1.96	-2.80	12.16	0.06
	(2.43)	(3.43)	(6.36)	(2.21)	(1.99)	(2.37)	(2.59)	(1.74)	(13.90)	(9.43)
Bad health	0.06	0.89	-1.20	-1.30	1.09	1.66	6.13	7.95**	-8.12*	43.38*
	(2.87)	(6.69)	(5.02)	(2.58)	(2.91)	(2.91)	(4.24)	(3.12)	(4.92)	(23.43)
Low income	1.46	-0.27	6.88	-1.08	-0.69	-4.37**	2.38	3.04	-0.59	-5.86
	(2.73)	(4.04)	(5.65)	(2.27)	(2.07)	(2.01)	(3.08)	(2.13)	(5.37)	(9.72)
Low fin. WB	-0.49	1.74	0.57	2.75	2.33	-3.02	3.72	-0.30	3.07	10.88
	(2.70)	(4.66)	(6.34)	(2.81)	(3.33)	(2.34)	(3.29)	(2.57)	(6.18)	(13.51)
Constant	6.70**	13.62***	14.11*	15.96***	16.74***	24.93***	7.28**	7.00***	16.29**	21.82**
	(2.67)	(3.32)	(7.55)	(2.43)	(2.19)	(3.40)	(3.45)	(1.98)	(7.62)	(9.39)
Observations	455	351	267	1310	1549	1189	647	890	387	279
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Controls include being female, having a degree, a full-time job, and having children in the household. The difference between observations and full sample size is due to those not disclosing income or gender (part 1), and not engaging in the task (part 2).
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † p < 0.05 after Benjamini-Hochberg correction.

Table A7 Effect of group membership on time costs, by domain (OLS)

	Daily administrative time costs (minutes) in each domain									
	Tax	Pension	Benefits	Bills	Goods	Savings	Debt	Health	Children	Adults
Older	-1.48***†	0.55	-0.80	-2.07	-5.62***†	-3.20***†	-1.61**†	-2.03***†	-2.46***†	-0.09
	(0.44)	(0.73)	(0.79)	(1.42)	(1.40)	(1.16)	(0.64)	(0.73)	(0.66)	(1.07)
Bad health	-0.49	-1.04*	1.08	-1.32	0.16	-0.37	1.13	5.24***†	-2.12**	3.92
	(0.61)	(0.59)	(1.02)	(1.60)	(2.17)	(1.55)	(1.33)	(1.59)	(0.89)	(2.65)
Low income	-0.38	-0.69	2.85**	-1.35	-2.57*	-3.34***†	-1.19	0.92	-1.87**†	-0.86
	(0.54)	(0.54)	(1.43)	(1.46)	(1.50)	(1.04)	(0.90)	(0.96)	(0.74)	(1.41)
Low fin. WB	0.16	-0.45	1.89	3.67*	0.96	-3.15**†	4.43***†	-0.10	1.90	1.50
	(0.65)	(0.60)	(1.18)	(1.97)	(2.48)	(1.25)	(1.38)	(1.17)	(1.51)	(2.00)
Constant	2.55***	2.63***	1.00***	10.95***	17.12***	11.44***	3.55***	4.23***	4.09***	3.45***
	(0.46)	(0.39)	(0.35)	(0.85)	(0.90)	(0.79)	(0.43)	(0.60)	(0.55)	(0.79)
Observations	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116

Note: This is a linear regression model (does not account for the large number of "0" observations). Participants who did not disclose their income are excluded.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg correction.

Table A8 Effect of age, health, and financial indicators on time costs, by domain (OLS)

	Daily administrative time costs (minutes) in each domain									
	Tax	Pension	Benefits	Bills	Goods	Savings	Debt	Health	Children	Adults
Age *(base level: 35-44)*										
<25	-1.56	-0.73	-0.53	-6.03***†	-7.25***†	1.61	-3.30***	-0.46	-6.28***†	-4.65**
	(1.25)	(0.62)	(0.92)	(2.15)	(2.71)	(1.68)	(1.22)	(1.10)	(1.34)	(1.92)
25-34	-2.27**	-0.02	-1.17	-3.51	-5.25*	1.29	-1.00	1.82	-3.34**	-4.02**
	(1.14)	(0.63)	(0.78)	(2.24)	(2.74)	(1.66)	(1.42)	(1.81)	(1.70)	(1.97)
45-54	-1.34	0.87	-0.09	-2.31	-7.41***	-1.00	-2.04	-0.06	-4.47***	-0.79
	(1.28)	(0.75)	(0.89)	(2.69)	(2.76)	(1.81)	(1.24)	(1.23)	(1.59)	(2.19)
55-64	-0.20	4.35***†	2.47	0.78	-2.66	3.63*	-0.65	0.56	-4.40***	2.07
	(1.43)	(1.36)	(2.24)	(2.63)	(3.14)	(2.20)	(1.51)	(1.46)	(1.70)	(3.37)
65+	-2.52**	1.75*	-0.02	-2.59	-8.57***†	-2.65	-1.24	-1.01	-4.70***†	-1.57
	(1.23)	(0.95)	(0.97)	(2.38)	(2.57)	(1.82)	(1.23)	(1.14)	(1.49)	(2.20)
Health	-0.07	0.50	-0.16	0.40	-0.29	0.15	-0.51	-1.60**	1.01	-0.20
	(0.42)	(0.36)	(0.95)	(0.94)	(0.99)	(0.77)	(0.52)	(0.73)	(0.63)	(0.88)
Income	0.05	0.14	-0.34**	-0.04	0.43	0.48**	0.35*	-0.22*	0.47***	-0.09
	(0.12)	(0.13)	(0.14)	(0.26)	(0.27)	(0.23)	(0.19)	(0.13)	(0.18)	(0.19)
Fin. WB	-0.00	-0.02	-0.11***†	-0.23***†	-0.13*	0.13**	-0.21***†	-0.08**	-0.14**	-0.08
	(0.03)	(0.03)	(0.04)	(0.07)	(0.07)	(0.05)	(0.04)	(0.04)	(0.06)	(0.08)
Constant	3.57	0.16	10.03***	23.78***	26.75***	-0.39	16.81***	15.78***	8.51***	11.26*
	(2.78)	(1.65)	(2.48)	(3.88)	(5.19)	(2.79)	(2.58)	(2.86)	(2.54)	(5.78)
Observations	2116	2116	2116	2116	2116	2116	2116	2116	2116	2116

Notes: The age category "35-44" is the base level as it reflects the average age of the sample (42.8). Health is an average score between 1 and 5 (higher scores indicate better health); income is a categorical variable (increasing in income categories); financial well-being is between 0 and 100 (higher scores indicate better well-being). Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg correction.

3) Supplementary tables on emotional costs

Table A9 Mean positive and negative emotions in each domain

	Mean positive emotions	Mean negative emotions
Caring for children	4.02	2.25
Goods and services	3.99	2.12
Savings and investments	3.91	1.95
Caring for adults	3.65	2.58
Retirement	3.64	2.10
Bills	3.36	2.55
Health	3.23	2.73
Income and Tax	3.07	2.64
Debt	3.04	2.93
Government benefits	2.63	3.39

Table A10 Within-person effects of administrative tasks on emotions, by domain

	Positive emotions		Negative emotions	
Income and Tax	0.04	(0.04)	-0.16*** †	(0.04)
Retirement	0.29*** †	(0.05)	-0.34*** †	(0.05)
Government benefits	-0.10*	(0.05)	0.08	(0.05)
Bills	0.23*** †	(0.03)	-0.19*** †	(0.03)
Goods and services	0.73*** †	(0.03)	-0.50*** †	(0.04)
Savings and investments	0.61*** †	(0.03)	-0.53*** †	(0.03)
Debt *(base)*				
Health	0.22*** †	(0.04)	-0.18*** †	(0.04)
Caring for children	0.78*** †	(0.05)	-0.55*** †	(0.05)
Caring for adults	0.48*** †	(0.05)	-0.30*** †	(0.05)
Constant	-0.39*** †	(0.03)	0.31*** †	(0.03)
Observations	7899		7878	

Notes: Standardised relationships are presented (both outcomes have a mean of 0 and a standard deviation of 1). Positive emotions are the average of "happy/enjoying myself" and "competent/capable". Negative emotions are the average of "frustrated/annoyed", "bored/impatient for it to end", "stressed/under pressure", and "worried/anxious". Debt is used as the base category because it has the net (positive minus negative) emotions closest to zero. The lack of significance of benefits and tax is because debt is the closest to both domains, as all three have the least positive (and the most negative) emotions out of all the domains. The discrepancy in observations between positive and negative emotions is because participants had the option to answer "not applicable" for each emotion, which was treated as a missing observation when computing average emotions.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg correction.

Table A11 Effect of group membership on emotions during administrative tasks

	Average weighted net emotions			
	(i)		(ii)	
Older	0.86***†	(0.14)	0.80***†	(0.15)
Bad health	-1.11***†	(0.13)	-1.08***†	(0.13)
Low income	-0.15	(0.11)	-0.17	(0.12)
Low fin. WB	-1.35***†	(0.12)	-1.34***†	(0.12)
Constant	1.60***	(0.06)	2.03***	(0.13)
Controls	No		Yes	
Observations	1991		1967	

Notes: Controls are being female, having a degree, a full-time job, or having children in the household. The discrepancies in observations are due to participants who did not engage in any administrative tasks or did not disclose their income or gender. Average weighted emotions are the sum of net emotions for each domain, weighting these net emotions by the time the participant spent on this domain, and dividing the sum by the total time spent on administrative tasks across all domains.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

Table A12 Effect of age, health, and financial indicators on emotions during tasks

	Average weighted net emotions			
	(i)		(ii)	
Age *(base level: 35-44)*				
<25	-0.35**†	(0.14)	-0.32**	(0.15)
25-34	-0.05	(0.14)	-0.01	(0.14)
45-54	0.22	(0.15)	0.18	(0.15)
55-64	0.13	(0.15)	0.15	(0.16)
65 and older	0.32*	(0.17)	0.32*	(0.19)
Health	0.67***†	(0.07)	0.66***†	(0.07)
Income	-0.03*	(0.02)	-0.03	(0.02)
Financial WB	0.06***†	(0.00)	0.06***†	(0.00)
Constant	-4.26***	(0.27)	-3.89***	(0.29)
Controls	No		Yes	
Observations	1991		1967	

Notes: Controls are being female, having a degree, a full-time job, or having children in the household. The age category "35-44" is the base level as it reflects the average age of the sample (42.8). Health is an average score between 1 and 5 (higher scores indicate better health); income is a categorical variable (increasing in income categories); financial well-being is between 0 and 100 (higher scores indicate better well-being). The discrepancies in observations are due to participants who did not engage in any administrative tasks or did not disclose their income or gender.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

Table A13 Effect of group membership on net emotions, by domain, with controls

	Net emotions in each domain									
	Tax	Pension	Benefits	Bills	Goods	Savings	Debt	Health	Children	Adults
Older	1.03**†	0.25	1.02*	1.31***†	0.42**†	0.95***†	1.26***†	1.08***†	-0.54	0.11
	(0.43)	(0.37)	(0.55)	(0.19)	(0.18)	(0.20)	(0.33)	(0.23)	(0.72)	(0.43)
Bad health	-0.94***†	-1.68***†	-1.18***†	-1.28***†	-0.76***†	-0.93***†	-1.03***†	-1.18***†	-0.43	-0.56
	(0.36)	(0.61)	(0.33)	(0.17)	(0.16)	(0.22)	(0.27)	(0.20)	(0.29)	(0.40)
Low income	-0.20	-0.21	0.20	-0.26*	0.05	-0.08	0.14	-0.15	-0.85**†	-0.57
	(0.31)	(0.36)	(0.32)	(0.15)	(0.14)	(0.17)	(0.26)	(0.19)	(0.33)	(0.35)
Low fin. WB	-1.21***†	-0.97**	-1.60***†	-1.33***†	-0.68***†	-1.70***†	-2.16***†	-0.40*	-0.58**†	-0.40
	(0.28)	(0.45)	(0.31)	(0.15)	(0.14)	(0.20)	(0.22)	(0.21)	(0.23)	(0.35)
Constant	1.45***	2.47***	0.10	1.73***	2.46***	2.69***	1.10***	1.14***	1.51***	1.99***
	(0.32)	(0.35)	(0.42)	(0.16)	(0.15)	(0.18)	(0.31)	(0.21)	(0.45)	(0.41)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	471	353	271	1325	1545	1179	656	907	395	282

Note: Controls are being female, having a degree, a full-time job, or having children in the household. Participants who did not engage in the domain or did not disclose their income or gender are excluded. Net emotions are average positive emotions minus average negative emotions.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † p < 0.05 after Benjamini-Hochberg correction.

Table A14 Effect of age, health, and financial indicators on net emotions, by domain

	Net emotions in each domain									
	Tax	Pension	Benefits	Bills	Goods	Savings	Debt	Health	Children	Adults
Age *(base level: 35-44)*										
<25	-0.20	-0.49	-0.59	-0.75***†	0.30*	-0.56***†	-0.23	-0.30	-0.89**	0.49
	(0.38)	(0.66)	(0.45)	(0.20)	(0.17)	(0.21)	(0.33)	(0.23)	(0.45)	(0.48)
25-34	-0.08	0.47	-0.68	-0.30	0.21	0.02	-0.08	-0.41*	-0.35	0.33
	(0.37)	(0.48)	(0.44)	(0.19)	(0.17)	(0.21)	(0.25)	(0.24)	(0.25)	(0.48)
45-54	0.21	-0.02	-0.31	0.64***†	0.36*	0.40	0.59**	0.41	-0.37	0.45
	(0.41)	(0.50)	(0.47)	(0.20)	(0.18)	(0.24)	(0.28)	(0.28)	(0.29)	(0.43)
55-64	-0.06	0.10	-0.64	0.51***†	0.08	0.32	0.90***†	0.23	-0.49	-0.25
	(0.39)	(0.45)	(0.49)	(0.19)	(0.18)	(0.23)	(0.28)	(0.26)	(0.39)	(0.40)
65 and older	0.57	0.35	-0.09	0.92***†	0.30	0.36	0.94***†	0.77***†	-1.67**†	-0.01
	(0.49)	(0.49)	(0.62)	(0.22)	(0.21)	(0.25)	(0.33)	(0.27)	(0.66)	(0.54)
Health	0.61***†	0.68***†	1.05***†	0.65***†	0.55***†	0.55***†	0.62***†	0.79***†	0.40**†	0.59***†
	(0.17)	(0.20)	(0.19)	(0.09)	(0.08)	(0.10)	(0.13)	(0.11)	(0.17)	(0.21)
Income	-0.08	-0.10*	-0.15**	-0.07**†	-0.07***†	-0.06**	-0.08*	-0.04	-0.03	-0.06
	(0.05)	(0.06)	(0.07)	(0.03)	(0.02)	(0.03)	(0.04)	(0.03)	(0.05)	(0.05)
Fin. WB	0.06***†	0.06***†	0.06***†	0.06***†	0.04***†	0.07***†	0.10***†	0.03***†	0.03***†	0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Constant	-4.60***	-4.05***	-6.03***	-4.59***	-2.07***	-3.88***	-7.17***	-3.54***	-1.00	-2.12**
	(0.75)	(0.98)	(0.76)	(0.37)	(0.35)	(0.44)	(0.50)	(0.46)	(0.62)	(0.90)
Observations	476	356	281	1336	1565	1191	662	923	397	285

Notes: The age category "35-44" is the base level as it reflects the average age of the sample (42.8). Health is an average score between 1-5 (higher scores indicate better health); income is a categorical variable (increasing in categories); financial well-being is between 0-100 (higher scores indicate better well-being). Participants who did not engage in the task or did not disclose their income are excluded.
Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † p < 0.05 after Benjamini-Hochberg correction.

4) Supplementary tables on decision costs

Table A15 Demographics across treatment groups in the choice experiment

	Scenario 1: Government benefit			Scenario 2: Phone bill		
	Control	Lengthy	Interaction	Control	Complex	Delay
Age (years)	42.93	43.31	42.32	42.71	43.14	42.69
Female	0.62	0.57	0.60	0.57	0.61	0.61
University degree	0.51	0.49	0.53	0.50	0.51	0.51
Full-time job	0.39	0.38	0.40	0.41	0.37	0.39
Income <£20,000	0.25	0.28	0.27	0.26	0.26	0.28
Living with children	0.32	0.29	0.30	0.30	0.32	0.29
Live-in partner	0.56	0.55	0.58	0.58	0.57	0.54
Health (1-5)	3.78	3.75	3.74	3.75	3.76	3.76
Fin. WB (0-100)	52.43	53.32	52.18	52.85	52.76	52.29
Observations	771	715	757	768	737	738

Note: The figures represent averages for each variable in each treatment group. In both scenarios, the control version involves filling out a short form. In scenario 1, the "lengthy" burden requires a 10-pages form and an in-person appointment, and the "interaction" burden is a government worker being condescending on the phone. In scenario 2, the "complex" burden involves tracking down obscure information for the form, and the "delay" burden means the refund is not processed for several months.

Table A16 Effects of administrative burden on decision-making (ordered logistic models)

	Likelihood of completing the task (5-points scale)			
	Scenario 1: Government benefit		Scenario 2: Phone bill	
Lengthy process	-1.78***†	(0.11)		
Negative interaction	-1.07***†	(0.11)		
Complex task			-0.59***†	(0.11)
Delay			-0.20*	(0.12)
cut1	-4.58***	(0.15)	-5.23***	(0.26)
cut2	-3.22***	(0.10)	-3.54***	(0.13)
cut3	-2.54***	(0.09)	-2.74***	(0.10)
cut4	-1.04***	(0.08)	-1.13***	(0.08)
Observations	2243		2243	

Notes: Dependent variable is a 5-points Likert scale from "Extremely unlikely" to "Extremely likely". Robust standard errors in parentheses.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

Table A17 Effects of group membership on decision costs (ordered logistic models)

	Likelihood of completing the task (5-points scale)			
	Scenario 1: Government benefit		Scenario 2: Phone bill	
Lengthy (scenario 1) // Complex (scenario 2)	-1.62***†	(0.14)	-0.42***†	(0.15)
Interaction (scenario 1) // Delay (scenario 2)	-0.84***†	(0.14)	-0.05	(0.16)
Older				
Control	0.82***†	(0.30)	1.20***†	(0.34)
Lengthy // Complex	-0.39	(0.37)	-0.86**	(0.41)
Interaction // Delay	-0.62	(0.38)	-0.73	(0.45)
Bad health				
Control	0.12	(0.25)	-0.51**	(0.21)
Lengthy // Complex	-0.47	(0.34)	0.16	(0.31)
Interaction // Delay	-0.79**	(0.34)	-0.34	(0.32)
Low income				
Control	-0.18	(0.20)	0.15	(0.20)
Lengthy // Complex	-0.28	(0.26)	-0.31	(0.28)
Interaction // Delay	0.11	(0.25)	-0.33	(0.28)
Low financial well-being				
Control	0.46*	(0.26)	0.04	(0.23)
Lengthy // Complex	-0.14	(0.35)	-0.21	(0.32)
Interaction // Delay	-0.69**	(0.32)	0.31	(0.33)
cut1	-4.53***	(0.16)	-5.18***	(0.28)
cut2	-3.16***	(0.13)	-3.54***	(0.16)
cut3	-2.50***	(0.12)	-2.73***	(0.13)
cut4	-0.94***	(0.11)	-1.07***	(0.11)
Observations	2116		2116	

Note: Each scenario is analysed via a separate model (results are shown on single lines for ease of reading). The values for "control" are the baseline coefficients for each group. The values for each treatment are the coefficients on the interaction between group and treatment. Participants who did not disclose their income are excluded. Robust standard errors in parentheses.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

Table A18 Effects of age, health, and financial indicators on decision costs

	Likelihood of completing the task (5-points scale)			
	Scenario 1: Government benefit		Scenario 2: Phone bill	
Lengthy (scenario 1) // Complex (scenario 2)	-1.11***	(0.39)	-0.64**	(0.25)
Interaction (scenario 1) // Delay (scenario 2)	-1.35***†	(0.34)	-0.22	(0.23)
Age (base: 35-44)				
<25				
Control	-0.08	(0.09)	-0.23**	(0.09)
Lengthy // Complex	-0.18	(0.19)	0.23	(0.14)
Interaction // Delay	-0.05	(0.16)	-0.14	(0.15)
25-34				
Control	0.03	(0.09)	0.06	(0.08)
Lengthy // Complex	0.00	(0.18)	-0.11	(0.13)
Interaction // Delay	0.11	(0.14)	-0.09	(0.12)
45-54				
Control	0.04	(0.11)	0.03	(0.10)
Lengthy // Complex	-0.11	(0.20)	-0.07	(0.15)
Interaction // Delay	0.12	(0.17)	0.03	(0.14)
55-64				
Control	-0.03	(0.10)	0.15*	(0.08)
Lengthy // Complex	0.03	(0.20)	-0.05	(0.14)
Interaction // Delay	0.28*	(0.16)	0.00	(0.12)
65 and older				
Control	0.08	(0.10)	0.21***	(0.07)
Lengthy // Complex	0.10	(0.20)	-0.08	(0.13)
Interaction // Delay	0.01	(0.17)	-0.16	(0.13)
Health				
Control	0.04	(0.05)	0.04	(0.03)
Lengthy // Complex	0.13	(0.09)	0.09	(0.06)
Interaction // Delay	0.22***	(0.08)	0.07	(0.06)
Income				
Control	-0.02	(0.01)	-0.02**	(0.01)
Lengthy // Complex	0.04*	(0.02)	0.02	(0.02)
Interaction // Delay	0.01	(0.02)	0.01	(0.02)
Financial well-being				
Control	0.00	(0.00)	0.00	(0.00)
Lengthy // Complex	-0.01	(0.01)	0.00	(0.00)
Interaction // Delay	-0.00	(0.00)	-0.00	(0.00)
Constant	4.41***	(0.22)	4.48***	(0.14)
Observations	2116		2116	

Note: Each scenario is analysed via a separate model (results are shown on single lines for ease of reading). The values for "control" are the baseline coefficients for each group. The values for each treatment are the coefficients on the interaction between group and treatment. Participants who did not disclose their income are excluded. Robust standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, † $p < 0.05$ after Benjamini-Hochberg corrections.

5) Survey questionnaire

The full questionnaire is on the Open Science Framework at: https://osf.io/tzxup/

Choice experiment scenarios

Before both scenarios, participants are shown the following message:
"Please read the scenario below carefully. Imagine you are in the situation described in the scenario. You will be asked how you would react to this situation. Please answer as honestly as possible, thinking about how you would likely act in real life (NOT how you would ideally act). To help you answer, you can think about a time when you were in a similar or comparable situation in the past."

Participants are randomised before each scenario into being shown either the control, treatment 1, or treatment 2 version of this scenario.

Hypothetical Scenario 1 – What would YOU do?

Control: "You learn from a Government announcement that you might be eligible for a one-off government payment equivalent to one week's income for your household. To receive this payment, you need to fill out a short application form and send it to your local government office (you can choose to do this online or via post)."

Treatment 1: "You learn from a Government announcement that you might be eligible for a one-off government payment equivalent to one week's income for your household. To receive this payment, you need to print and fill out a 10-page application form and mail it to your local government office. Then, you will be invited to attend an in-person appointment at this government office, in order to show original identity documents and other documents ensuring your eligibility."

Treatment 2: "You learn from a Government announcement that you might be eligible for a one-off government payment equivalent to one week's income for your household. To receive this payment, you need to fill out a short application form and send it to your local government office (you can choose to do this online or via post). You will then receive a phone call from the local government office to ask you for further information and confirm your eligibility. Your friend told you that when they applied, they found the local government worker who rang them to be judgmental and condescending about verifying their eligibility for the payment."

Participants across all treatment groups are then asked:
"Thinking about any previous experiences with a similar situation, and about your current circumstances and preferences, how likely is it that you would complete the task(s) described above in order to get the payment?". The answer scale is a 5-points Likert scale (Extremely likely, fairly likely, neutral or not sure, fairly unlikely, extremely unlikely).

Hypothetical Scenario 2 – What would YOU do?

Control: "You receive your latest phone bill. You notice that the bill amount is unusually large, and you suspect you have been overcharged by mistake. You call your provider, who tells you that you can make a claim by filling out a form and sending it to them (you can

choose to do this online or via post). Your provider will then be able to verify your account and, if they agree that you have been overcharged, they will send you back a refund. Thinking about any previous experiences with a similar situation, and about your current circumstances and preferences, how likely is it that you would complete the task(s) described above in order to get the payment?"

Treatment 1: "You receive your latest phone bill. You notice that the bill amount is unusually large, and you suspect you have been overcharged by mistake. You call your provider, who tells you that you can make a claim by filling out a form and sending it to them (you can choose to do this online or via post). Together with the form, you must provide a copy of your three previous bills, as well as your customer number and your contract start date. Your provider will then be able to verify your account and, if they agree that you have been overcharged, they will send you back a refund."

Treatment 2: "You receive your latest phone bill. You notice that the bill amount is unusually large, and you suspect you have been overcharged by mistake. You call your provider, who tells you that you can make a claim by filling out a form and sending it to them (you can choose to do this online or via post). Your provider will then be able to verify your account and, if they agree that you have been overcharged, they will send you back a refund. Due to a claims processing backlog, you will receive the refund between two and three months from now."

Participants across all treatment groups are then asked:
"Thinking about any previous experiences with a similar situation, and about your current circumstances and preferences, how likely is it that you would complete the task(s) described above in order to get the payment?". The answer scale is a 5-points Likert scale (Extremely likely, fairly likely, neutral or not sure, fairly unlikely, extremely unlikely).

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