

Can Attention Overcome Consumer Inertia?

Experimental Evidence from a Liberalized Market

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Abstract

I study consumer inertia in the Danish retail electricity market, where switching can yield substantial savings and frictions are low. Using administrative smart-meter data for 200,000 randomly-sampled households, a survey of 9,047 nationally-representative consumers, and a randomized experiment, I test whether attention and reduced switching costs increase switching. Targeted savings information and brokerage services raise switching by 0.8–1.3 percentage points over three months, despite average potential savings of \$140–\$360. Behavioral frictions—especially procrastination and distrust—drive a large gap between switching intentions and actions, suggesting that overcoming inertia may require active policies such as default enrollment into lower-cost contracts.

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1 Introduction

Attentive and active consumers who respond to prices and market signals are a cornerstone of well-functioning markets. However, substantial evidence in the electricity, health insurance, mortgage and credit card markets shows that consumers are often strikingly inert, failing to switch despite substantial potential savings¹ This inertia allows firms to charge markups, reducing consumer welfare (Gabaix & Laibson 2006). Understanding why many consumers remain inactive is essential for designing policies that improve competition and reduce inequality.

A large structural literature in health and utility markets attributes consumer inactivity mainly to limited attention, predicting that if consumers were made attentive through targeted information or salient reminders, switching would rise, yielding large welfare gains. In utility markets, structural estimates suggest that 50–80% of consumers would search and switch under full attention (Waddams Price & Zhu 2016, Hortaçsu et al. 2017, Heiss et al. 2023). For example, Hortaçsu et al. (2017) estimate that 50–75% of consumers would be induced to search and switch after a low-cost information intervention, such as an information brochure. In health insurance, similar models predict switching rates between 56 and 70% with full attention (Heiss et al. 2021, Drake et al. 2022, Bischof et al. 2022), with Heiss et al. (2021) finding that eliminating inattention in Medicare Part D could increase switching nearly as much as eliminating switching costs altogether. Although these models highlight attention as a key friction, they typically infer effects from counterfactual simulations rather than directly testing the causal impact of increasing attention.

Field experiments that provide information or nudges (e.g., DellaVigna & Linos (2022)) offer more direct evidence of attention on consumer choices, but most find only modest effects. These studies rarely combine administrative data with measures of consumer intentions and beliefs, making it difficult to separate the role of attention from other drivers of inertia such as satisfaction, distrust, or procrastination. They also often observe only subsets of the market, limiting conclusions about aggregate effects.

This paper overcomes these limitations by bringing together all three elements necessary to credibly assess whether attention can alleviate consumer inertia. First, I study real switching choices in the Danish retail electricity market, where consumers can realize substantial savings by switching and face minimal friction. I observe all electricity suppliers and third-party reported switching decisions from nationwide smart-meter data. Sec-

¹See Waddams Price & Zhu (2016), Hortaçsu et al. (2017), He & Reiner (2017), Ho et al. (2017), Handel & Schwartzstein (2018), Ziegler (2020), Abaluck & Adams-Prassl (2021), Adams et al. (2021), Heiss et al. (2021), Drake et al. (2022), Bischof et al. (2022), Brot-Goldberg et al. (2023), Dressler & Weiergraeber (2023), Heiss et al. (2023), Handel et al. (2024) for evidence from the utility and health insurance markets.

ond, I elicit consumer intentions, knowledge, beliefs, and preferences from a representative sample of the Danish population, enabling me to distinguish inattention from satisfaction with their provider or market misperception. Third, I establish causality through a large-scale randomized experiment. Survey respondents are randomized into either targeted savings information and switching instructions (attention boost), access to a switching broker (switching cost reduction), or a control group. By linking 1) administrative switching and background data (N = 200,000) with 2) rich survey data (N = 9,047) and introducing an 3) experimental variation, I can directly test predictions about attention from the structural literature while shedding new light on the mechanisms that sustain consumer inertia. To my knowledge, this is the first paper on consumer inertia that combines all three elements for the same representative sample of the population. This integrated approach allows me to separate attention from alternative explanations for inactivity, measure both stated intentions and revealed choices, and credibly assess whether informational interventions can meaningfully increase consumer engagement.

With this comprehensive design, I find that providing targeted savings information increases switching by only 0.8 percentage points relative to the control group, while offering a brokerage service that fully removes switching costs raises switching by 1.3 percentage points over three months. These effects correspond to increases 31% and 52%, respectively, in a baseline switching rate of 2.54% per three months, but in absolute terms remain economically small despite the expected average savings of 946–2,399 DKK (\$140–\$360) over six months. These treatment effects are substantially smaller than those implied by structural estimates, even in a highly competitive and transparent market. The results are robust to rich controls for demographics, electricity usage, and market expectations. I can rule out that switching is driven by income or average electricity consumption - both of which could affect the cost-benefit calculation of switching.²

To understand why increasing attention does not translate into large behavioral responses, I examine the mechanisms underlying consumer inertia. The muted impact of informational and switching-cost treatments suggests that inattention and search frictions are not the primary barriers to switching. Indeed, among recent switchers, most report that the process took less than ten minutes. Instead, behavioral frictions, particularly present-biased procrastination, distrust, and risk aversion, emerge as relevant factors. Although targeted information increases the stated intentions to switch by more than 20 percentage points (a 247% increase relative to the control mean of 8.5%), the actual switching behavior remains far lower. The broker treatment yields an even larger increase in switch-

²The study is powered to detect a 1 percentage point increase in switching over three months, ruling out the possibility that null results reflect insufficient sample size.

ing intentions (36%, or 27.5 percentage points, a 324% increase), yet the intention–action gap persists. This large intention-action gap is consistent with present-biased procrastination, where consumers recognize the benefits of switching but continually delay action. Consumers who report plans to switch immediately (on the day of the survey) are 22.5 percentage points more likely to follow through than those planning to switch within three to six months. The treatments causally shift intended timing: treated individuals are roughly ten times more likely than controls to plan immediate action.

Distrust and perceived risk also inhibit switching. Almost 18% of the respondents cite fear of being cheated or hidden risks as reasons for not switching, despite strong regulatory protections and a streamlined process. Personality traits such as trust and risk tolerance strongly predict switching, with more trusting and risk-seeking individuals significantly more likely to change providers.

These findings suggest that informational and cost-reducing interventions, while statistically significant, are insufficient to overcome consumer inertia at scale. Although structural models correctly highlight inattention as a barrier, my results indicate that attention alone cannot bridge the large gap between consumer intentions and actions. Models of consumer choice and market design must therefore account for behavioral frictions, particularly procrastination, distrust, and risk aversion, to accurately capture switching behavior and welfare implications.

From a policy perspective, these results indicate that traditional information campaigns or nudges are unlikely to substantially boost consumer engagement, even in liberalized, low-friction environments. The Danish electricity market features more than 40 suppliers, hundreds of contracts, strong consumer protections, and a government-run comparison website enabling one-click switching. Yet monthly switching rates remain around 1.5% and respond minimally to additional information. A conservative estimate suggests Danish households leave roughly 1.65 billion DKK unclaimed annually or about 0.06% of GDP—by not switching to cheaper plans. More active policy tools, such as smart defaults, automatic enrollment in lower-cost options, or institutionalized switching mechanisms, may be necessary to achieve substantial consumer savings and enhance competition (Handel & Kolstad 2015, Handel & Schwartzstein 2018, Abaluck & Adams-Prassl 2021, Brot-Goldberg et al. 2023, Heidhues et al. 2021).

My paper makes three contributions to the literature. First, it provides a large-scale experimental test of whether increasing consumer attention and reducing switching costs can overcome inertia, complementing structural models by empirically testing their predictions about the welfare potential of information interventions (Waddams Price & Zhu 2016, Hortaçsu et al. 2017, Handel & Schwartzstein 2018, Abaluck & Adams-Prassl 2021, Adams

et al. 2021, Heiss et al. 2021, Drake et al. 2022, Bischof et al. 2022, Dressler & Weiergraeber 2023, Heiss et al. 2023, Handel et al. 2024). Second, it advances experimental methodology by combining a randomized survey experiment on a population-representative sample with administrative, third-party verified switching data, allowing joint analysis of stated intentions and revealed behavior. So far, there are only very few studies that combine a population-based survey with administrative outcome data (Campos-Mercade et al. 2021). The large intention–action gap I document underscores the importance of measuring real behavioral outcomes, rather than inferring welfare impacts from beliefs or stated preferences alone. Unlike most survey studies on consumer inertia (Giulietti et al. 2005, Ziegler 2020, He & Reiner 2017, Deller et al. 2021, Schleich et al. 2019), my design avoids reverse causality by measuring switching *ex post* and uses population-level administrative data to adjust for potential self-selection into the survey. In fact, comparing the responses of respondents who have recently switched to those who have switched after the survey provides clear evidence of this reverse causality problem in previous studies. Finally, the paper contributes to the literature on information interventions and nudges (see for example Goldin et al. (2017), Domurat et al. (2021), DellaVigna & Linos (2022), Delfino (2024)), showing that even when attention can be verified, effects remain modest. By combining the information intervention with the survey, I can show whether a consumer has *considered* to switch. Knowing whether consumers plan to switch but end up not switching because of frictions or whether they do not intend to switch because they are satisfied with their provider has first-order welfare consequences (Abaluck & Adams-Prassl 2021). If consumers are inert because they are content with their contract policy should not interfere.

2 Market barriers to switching

The following section outlines why the Danish electricity market is ideal for studying the determinants of consumer inertia. I show that 1) switching is possible in terms of available options and legal framework, 2) search and switching costs are reasonably low, and 3) there are meaningful monetary gains from switching.

Market Structure Since 1999, the Danish electricity sector, like all EU countries and many US states, is liberalized. This means consumers are free to buy electricity from electricity suppliers, who purchase electricity on the energy exchange. In April 2022, the time of my experiment, the Danish market had around 50 retail electricity companies and around 250 contracts with little differentiation, except for price. Denmark has nation-wide coverage of smart-meters which allows me to observe which household has which supplier as well as their electricity consumption. There is still a high market concentration, with a few

companies holding a majority of the market in different regions. Across Denmark, a 50% share is held by the 5 largest suppliers (see Figure B.2 in the Appendix.) In Copenhagen region, the largest supplier has 58% of the market with the second largest supplier serving less than 9% of the market.³ In more rural areas or islands such as Bornholm, some incumbents still hold around 90% of the market.

Switching costs The Danish Utility Regulator runs a free comparison website, elpris.dk, which presents all available electricity contracts in an easy-to-search database. Consumers can search by price, contract type, green energy share, and several more contract features. The website is comprehensive and there is no advertising. Companies upload their available contracts into the database. To search, consumers choose one of four housing categories⁴ or their yearly electricity consumption and their postal code. By default, the contracts are sorted by average price per kWh. The list also shows the expected total electricity costs for six months for a household of the chosen size/consumption. If a consumer clicks on a contract, they see standardized details of the different price components, such as subscription costs and distribution fees, which additional fees and conditions might apply, and a graph of how the price has developed during the past six months compared to the spot price on the Danish energy exchange. See Figure D.1 in the Appendix for screenshots of the platform.

The website not only informs consumers and thus minimizes search costs, but also aims to reduce switching costs. At the top of each contract details page a "Switch to this product" button sends the consumer directly to the supplier's sign up form for the chosen contract (see Figure D.2 for a screenshot). Dressler & Weiergraeber (2023) highlights a simple switch button as an important feature to reduce switching costs. Since all Danes and people legally living in Denmark have a social security number connected to their address, smart meter and the bank account, a supplier needs very little information to set up a new contract. Taken together, if a consumer wanted to switch to the cheapest eligible contract on the market, the whole process from opening up the elpris.dk website to having switched would take around 5 minutes. This claim is confirmed by my survey respondents. 78% of those who have switched said that it took them less than 15 minutes to switch and fewer than 2% said it took them more than an hour.

Savings Despite competition, electricity prices in Denmark are some of the highest in the world and the highest in the European Union.⁵ The average consumer could save hundreds

³This share is very similar to Hortaçsu et al. (2017) who find that the incumbent holds 60% of the market four years after liberalization.

⁴The categories are small apartment (up to 80sqm and 2000kWh), large apartment (over 80sqm and 3000kWh), small house (up to 130sqm and 4000kWh) and large house (over 130sqm and 6000kWh). If consumers know their annual electricity consumption, they can enter the exact amount

⁵A large share of the price is due to taxes and does not vary by supplier, but the overall high price should

of dollars a year by switching. For a household with a yearly consumption of 4000kWh per year, the maximum difference in average costs was 9160DKK (\$1300) per year.⁶ Average savings (switching from the average contract to the cheapest at the time of the survey) are between 946DKK and 2399DKK, depending on household size.⁷ The average Danish employee earns ca. 185DKK per hour after tax, so 47 DKK per 15 minutes, a generous estimate for switching. As this back-of-envelope calculation shows, even for households on the lower end of the price distribution, switching to the cheapest contracts would be optimal for most consumers. Figure B.3 shows the average price distribution for all contracts offered on elpris.dk, in April 2022, right before the survey.

How can it be that average prices are so different for the same product? A large part of the variation comes from subscription costs (from 0 up to 299 DKK per month), fees on top of the spot price ("spottillæg") (up to 20 øre/kWh), fees for sending invoices (up to 500 DKK per year), additional customer service or green or social contributions (around 4 øre/kWh). Variation also comes from the difference in fixed prices versus variable or flex prices. With fixed prices, consumers pay a fairly high fixed amount per kWh for several months, regardless of the time the energy is consumed. Flex prices follow the hourly price on the energy exchange. Variable prices are in between - fixed per day or up to a month. The cheapest prices are so-called intro prices for new customers that turn into a more expensive contract after 6 months. Sometimes, these are combined with a marketing gift to new customers. A rationally attentive consumer should thus switch between intro contracts every 6 months, collect the welcome gifts, and realize large savings compared to staying with an existing contract. If one wants to minimize switching costs and is concerned about forgetting to switch, there are contracts with zero subscription costs and zero invoice fees that provide the spot price with only minor spot price fees (around 0,6 øre/kWh).⁸

Despite these favorable conditions on the Danish market, consumers are highly inactive. The switching rates are around 1.3% per month with some seasonal variation (see Figure B.1 for the monthly switching rates). A back-of-the-envelope calculation estimates that consumers are missing out on 1.65 billion DKK in savings or 0.06% of Danish 2022 GDP therefore incentivize consumers not to pay more than necessary in mark-up to suppliers.

⁶I use average prices rather than marginal prices as several studies have found that this is what consumers respond to (Ito et al. 2023).

⁷The invasion of the Ukraine in February 2022 accelerated the increase of electricity prices through a gas shortage, which led to record prices compared to previous years. For my study this means that I am likely to estimate upper bound effects - if consumers do not react when the prices are this high prices are so salient, then there is no reason to believe they should be more likely to react when the prices are lower.

⁸Because of competition and privacy laws the suppliers in my administrative data are anonymized, which means that I cannot connect the prices to my switching data and thus cannot calculate savings for each individual. To convince the reader that the majority of consumers have a too expensive contract, I compare the prices of the market leader to an equivalent contract from a competitor in Section 4.1.

(see section B.1).

3 Survey Experiment

To measure the causal effect of attention on switching, I conduct a survey experiment with a representative sample of the Danish population in which I collect detailed information about their knowledge, beliefs and preferences and their intentions to switch electricity suppliers. I then match the survey data using unique social security numbers to nationwide household smart meter data including electricity suppliers and consumption data to measure switching. Finally, I add demographic information from the Danish register data to test for heterogeneous effects.

3.1 Administrative data

I use two main data sources from Statistics Denmark. The first source is smart meter data, available since 2021 and provided by Energinet, the Danish grid operator, for which Statistics Denmark has added address identifiers, so that the data can be linked with individuals. This data mainly contains smart meter IDs, an address identifier, monthly electricity consumption and which supplier the smart meter is connected to in each month.⁹ I construct a panel data set for 2021 and 2022 and construct switching dummies that indicate whether there was a change in suppliers in the following month. The second data source provides me with demographic information about the individuals, such as level of education, income, household size and type of housing. Using the social security numbers (assigned at birth or when legally registering in the country), I can link these background data to my survey responses.

3.2 Survey data

I conducted a large-scale survey experiment in May 2022. I sent survey invitations to a representative sample of 103,046 respondents, registered with a social security number in Denmark, randomly selected by Statistics Denmark. The respondents were 25 to 65 years of age at the time of the survey. This number corresponds to 3% of the Danish working age population. I chose this age range to maximize the chances of surveying individuals who could choose their electricity contracts themselves (i.e. not students or elderly living

⁹The administrative data only records the provider, not the contract at the provider since this is company data. I will thus not be able to see whether individuals switch to a different contract within a provider.

in shared housing). Respondents could be native Danes or foreigners residing legally in the country (the survey was in Danish).

My survey method uses an official channel of communication of the Danish public authorities with citizens. The invitations were sent through the secure website “Digital Post”, which is used to receive and read mail from public authorities. By law, all citizens older than 15 have to have and regularly check an electronic mailbox where they receive information from public institutions, their employer or banks. The use of this official channel of communication, together with the University of Copenhagen stamp, likely increased the credibility of my survey and experiment, which sets the setting apart from lower stakes survey environments. It also allows me to access a population that has not self-selected in market research panels or online platforms. Unlike panel-based studies (Campos-Mercade et al. 2021, Dechezleprêtre et al. 2025, Haaland et al. 2023, Chopra et al. forthcoming), my design draws from a random population sample, enhancing external validity, as there is substantial evidence that panel and market-research participants differ from the general population, especially when it comes to price-sensitivity and hence might “overreact” to savings information (Lusk & Brooks 2011, Hopkins & Gorton 2024) which could bias the results.¹⁰ My survey opt-in rate is 20% which is comparable to similar surveys through this channel. To incentivize the respondents, they were told that those who completed the entire survey would be entered into a lottery for 30 gift cards with a value of 1000 DKK (\$140) or 3 gift cards with a value of 2500 DKK (\$345) each. The survey was programmed with QuestionPro.

3.3 Survey Outline

The survey consists of eight blocks of questions. I ask them a number of questions about their household, their electricity contracts, whether they are responsible for setting up the contract, their beliefs about energy consumption and expenses, and how much they think they could save by switching and how long it would take them to switch. This information allows me to control for their knowledge and beliefs about the costs and benefits from switching. I ask them for their reasons and what factors matter to them for the switching decision. I then ask them a couple of questions about their perception of the market, such as how many contracts they can choose from and their expectations about how the electricity price will develop in the coming months. Finally, I ask them a series of personality questions using the Falk et al. (2023) module. Individuals who cannot switch suppliers (N=592) and

¹⁰While there is self-selection into answering my survey, I have background and outcome data on the full sample and use population weights to reweigh my sample based on gender, age, marital status, education level, income quartile and region.

those who have switched in the past six months (N=1191) are channeled into different survey arms. An English translation of the survey is available in Appendix E.

Experiment After the survey part was completed, the participants were randomized into three groups.

Control group: The control group is asked whether they are planning to switch providers in the next three months and how sure they are about their answer. If they say that they are planning to switch, I then ask them in what time interval they plan to switch, from the day of the survey up until 2-3 months after the survey. If they answer that they do not plan to switch in the next 3 months, then I ask them whether they plan to switch in a later time interval or never. The survey ends with the final page (see the end of this section).

Information treatment: In the information treatment, the participants are shown an information page telling them that switching providers takes five minutes and that it is legal and free of charge to change providers after six months.¹¹ Then, according to their house size, region and whether a green contract is a must, they are shown average savings for a household their type.

Since there are four housing sizes, two regions and green and non-green contracts, there are 16 possible saving amounts. Savings were calculated in the following way. I received the average electricity prices per kWh for April 2022 for four consumption levels (2000, 3000, 4000 and 6000 per year¹²) and the two Danish regions from the Danish Energy Agency. I then calculated the average price for the four household sizes for 6 months. Then I calculated the average savings for each of these groups by subtracting the expected costs of the current cheapest offer on elpris.dk for each group. The calculation was done two days before the launch of the survey to make the savings as accurate as possible. Expected savings ranged from 806 DKK (108€) and 2399 DKK (321€) per 6 months. Furthermore, the page showed a three-step guide on how to switch providers and that a link to elpris.dk would be provided at the end of the survey. They were also told how I had calculated the savings from the provided information. Then the questions were identical to the questions in the control group.

Broker treatment: The broker treatment started out with the same page as the information treatment. On a second page, respondents were then informed that if they did not

¹¹The information treatment was inspired by the policy simulation by Hortaçsu et al. (2017). They estimate that the following information intervention: “The State of Texas has created a website www.powertochoose.com where you can see all the options available to you. It’s quick. It’s easy to use. And you can switch your retailer at no cost to you in 15 minutes or less.” would lead 50-70% of consumers to search and switch.

¹²These consumption level correspond to the default housing categories presented on the elpris.dk website. Unless individuals know their exact consumption, they can choose their house or apartment size and are presented with the corresponding offer.

want to switch providers themselves, they could use a broker called GoSwitch. GoSwitch is a company that charges a small monthly fee (29DKK / \$4) and in exchange switches consumers into the cheapest electricity contracts on the market every six months. This eliminates all switching costs for consumers and eliminates the risk to be moved into an expensive contract after a cheap introductory period. To bring the switching costs as close to zero as possible, we offered to pay for the first month of GoSwitch for respondents through a link in the survey. They were free to cancel the service at any time. So they could have used the service to be switched once to the cheapest provider. The participants were informed that Copenhagen University was not affiliated with GoSwitch and that no personal information was shared with the broker. In the Broker treatment, there is also a link to GoSwitch.dk, to make use of the coupon. I then asked the identical questions to the control and information group. Figures D.3a and D.3b in the Appendix show screenshots of the treatment screens.

Final page The survey ends with the chance to provide comments and a link to Elpris.dk, the official government electricity contract comparison website, also mentioned in the treatments. I track whether individuals click on the link to the website. They were also informed that if they were selected to win a gift card for participation, this would be sent to them by the end of the month.

3.4 Creating the analysis sample

After merging the survey and the administrative data, I have 102,761 individuals whom I have sent the survey and a passive control group of 101,149 who have not received any communication. As preregistered in the AER trial registry (AEARCTR-0009352), I drop respondents who drive an electric car, heat with electricity or have solar panels (N=5505), as they might have special electricity contracts that prohibit them from switching to the cheapest offer. I drop individuals who are in the passive control group and in the same household as someone in the survey sample (N=5603) to avoid double counting a switch. I keep everyone who reached the treatment assignment part of the survey. This gives me a final sample of 9,047 observations for my survey data (Survey Sample) and 7,790 observations for the switching analysis (Switching Sample). I use population weights to reweigh my sample. All results also hold without reweighing.

53.64% of the survey sample lives in East Denmark and the rest in the West. My sample is perfectly split by gender - 49.60% of the sample are women. Around 39.71% state that they have a variable price subscription, 31.68% have a fixed price and the rest do not know. 13.70% say that they have signed up for a flex price subscription (this means that they have

switched after January 2020). Around a quarter of participants say that have a contract that is at least partially green energy (26.17%). The largest group of respondents live in a house larger than 130sqm (37.84%) and 22.55% in a house smaller than 130sqm. Then comes the small apartment with less than 80sqm (20.66%), and more than 80sqm (18.96%). 53% set up their electricity contract themselves, 18% say it was someone in their household, 25% report that they took over the contract from a previous resident and 4% do not remember who made their contract.

4 The effect of information and switching cost reduction on switching

I compare switching in each of the two treatment conditions, Information and Broker, to the switching in the control condition using a linear probability model as preregistered.¹³ My "switch" variable is calculated based on whether I observe the household having a new supplier in June, July or August, which means that they have switched in May, June or July. It is possible that I would already observe the new supplier in May, if they switched immediately, but usually, a switch is only registered by the end of the month.

I regress my outcome variable y_i on a set of treatment dummies and control variables:

$$y_i = \beta_0 + \beta_1(Info)_i + \beta_2(Broker)_i + \beta_3X_i + e_i \quad (1)$$

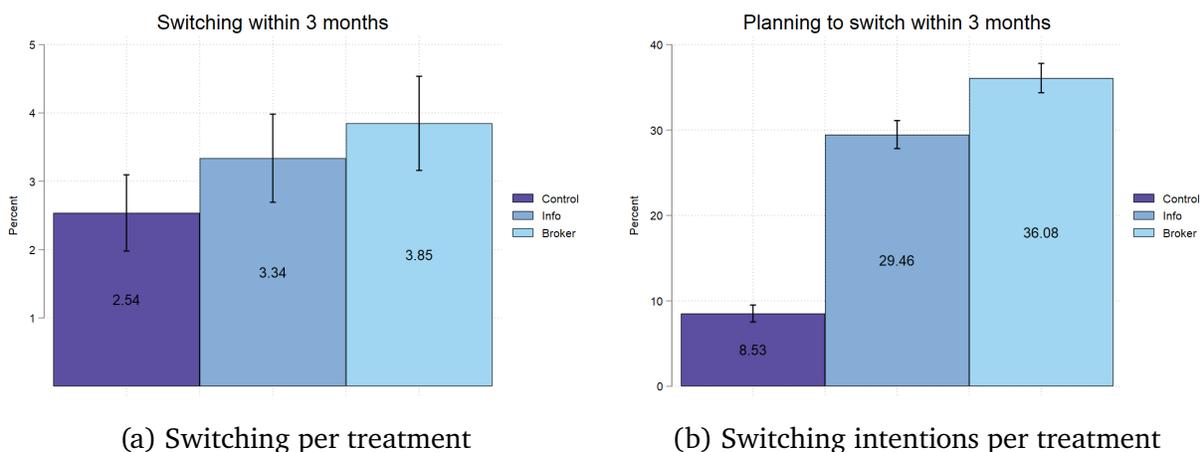
where y_i is switching within three months, $(Info)_i$ and $(Broker)_i$ are treatment indicators and have a value of 1 if participant i is treated and a value of 0 otherwise, X_i is a vector of control variables (consisting of house size category, average electricity consumption in 2022, household size, region dummies (east/west), current contract type (fixed, variable, flex, green), market expectations, gender dummy, age dummies (10 years each), employment status, income percentile and education level), and e_i is an individual specific error robust to heteroscedasticity. Unless stated otherwise, all regressions in the paper are extensions of (1). For some regressions, deviating from the pre-analysis plan, I also control for expected savings and expected time it takes to switch, as these vary substantially between individuals (see section C.1.2 in Appendix C for more details on beliefs).

Randomization into treatments worked perfectly as the balance table, Table A.3, in the appendix shows. Figure 1a shows the raw averages of switching between the treatments. The information treatment increases switching by 0.8 percentage points, that is an increase

¹³Using a probit model gives very similar results.

of 31% percent compared to the control group. The effect is significant at the 10% level. The broker treatment leads to a statistically significant larger effect of 1.3 percentage points and 52%. The treatments are not significantly different to each other.

Figure 1: Switching and switching intentions



As Table 1 shows, the size of the estimates is generally robust to the inclusion of various control variables. The marginally significant information effect becomes insignificant. The estimate for the broker treatment stays significant at the 1% level. I also find that my control variables are mostly not predictive of switching. The only robust findings are that the oldest category of respondents (55-65 years old) are less likely to switch than the youngest category (25-35) and that those in a larger apartment compared to a smaller apartment are more likely to switch. However, there is no difference between a small apartment and a small house.

Interestingly, for those who say that green energy is a must, the information treatment has a large and significant (5% significance level) effect on switching. They are 1.9 percentage points more likely to switch than those who say green is a must in the control treatment. For this group, there is no effect of the broker treatment, as the broker would switch households into the cheapest providers regardless of whether they supply green or gray energy.

Taken together, it is possible to increase switching by providing information at least for a subset of the population and by using a broker, but the overall effects are small and generally comparable to a typical nudge (DellaVigna & Linos 2022). Increasing attention to the relevant factors in the decision situation does not increase switching in a significant way. It is also interesting to note that demographics, contract characteristics and market

Table 1: Switching within 3 months of the survey

	(1) Switched	(2) Switched	(3) Switched	(4) Switched	(5) Switched Green
Info	0.008* (0.005)	0.007 (0.005)	0.007 (0.005)	0.007 (0.005)	0.019** (0.008)
Broker	0.013*** (0.005)	0.013*** (0.005)	0.013*** (0.005)	0.013*** (0.005)	0.010 (0.008)
Apartment big		0.015** (0.007)	0.015** (0.007)	0.015** (0.007)	0.014 (0.011)
House small		0.007 (0.007)	0.007 (0.007)	0.007 (0.007)	-0.000 (0.011)
House big		0.011 (0.007)	0.010 (0.007)	0.010 (0.007)	0.009 (0.012)
Household size		-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.003)
West DK		0.007* (0.004)	0.007 (0.004)	0.007* (0.004)	0.007 (0.007)
Female		-0.005 (0.004)	-0.004 (0.004)	-0.003 (0.004)	-0.008 (0.007)
Age 36-45		-0.003 (0.007)	-0.003 (0.007)	-0.002 (0.007)	0.014 (0.013)
Age 46-55		-0.005 (0.007)	-0.004 (0.007)	-0.003 (0.007)	-0.001 (0.011)
Age 56-65		-0.019*** (0.007)	-0.019*** (0.007)	-0.018*** (0.007)	-0.001 (0.012)
Employed		0.001 (0.007)	0.001 (0.007)	0.001 (0.007)	0.019* (0.010)
Income		-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.003* (0.002)
Education		0.000** (0.000)	0.000** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Avg Consumption			-0.000 (0.000)	-0.000 (0.000)	0.000 (0.000)
Fixed Price			0.000 (0.005)	-0.000 (0.005)	-0.001 (0.008)
Don't know contract			-0.008 (0.005)	-0.007 (0.005)	0.000 (0.009)
Flex Contract			0.003 (0.007)	0.003 (0.007)	0.008 (0.011)
Green Contract			0.003 (0.005)	0.002 (0.005)	0.000 (0.007)
Market Exp				-0.002 (0.001)	-0.002 (0.003)
Expected Savings				0.000** (0.000)	0.000* (0.000)
Expected Switch Time				-0.003*** (0.001)	-0.002 (0.002)
Constant	0.025*** (0.003)	0.023** (0.009)	0.023** (0.010)	0.034*** (0.013)	0.008 (0.020)
Observations	7791	7762	7761	7724	2641
R ²	0.001	0.005	0.005	0.007	0.012

The table shows estimations of LPMs with robust standard errors and population weights. The outcome is a dummy variable equal to 1 if the respondent switched suppliers within the three months following the survey. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

expectations have no measurable impact on switching.¹⁴ This points to the decision to switch to be more complex than a simple cost-benefit calculation of comparing potential savings with search and switching costs. The results also provide evidence in contrast to the literature estimating that low-income or low SES households are less likely to switch (Ek & Söderholm 2008, Ziegler 2020, Schleich et al. 2019, Heiss et al. 2023). I can further rule out that those who are better informed about their consumption or are more knowledgeable about the market are more likely to switch (see Appendix sections C.1.3 and C.1.4).

4.1 Should my survey respondents have switched?

Ideally, I would be able to identify the electricity suppliers in my smart meter data and match this data with the price data from elpris.dk. Then I could calculate the expected savings for each survey participant. Unfortunately, this is not legally possible. Instead, I look at the capital region for a case study analysis using price data from January 2024.¹⁵

In my case study, I compare flex pricing (dynamic pricing) for a house that consumes 4000 kWh per year. The final price consists of the spot price, the additional spot price fee, green contribution fees, distribution fees and taxes, which vary by region, and VAT. On top of that, there are the subscription costs and possible invoicing costs. Around 50% of the final price is fixed by the state and does not vary between suppliers. Flex pricing is usually the cheapest expected price at each supplier, so comparing this price rules out the problem of consumers optimally switching to a different contract within their supplier. I do not consider invoicing fees or late payment fees.

In the capital region, 58% of consumers are supplied by one company, which I will call company *M* for market leader. I compare their price to the price of *E* for entrant, the company with the lowest spot price fee and no subscription costs. I do not know the market share of *E*, but know that it cannot be larger than 8.5%. The two suppliers are comparable in terms of customer service and in the level of green energy they provide. All consumers could purchase energy from either company. I focus on comparing the subscription fees and the spot price fee, as the spot price is by design identical, as well as the taxes and tariffs to the state.

As Table 2 shows, there are substantial differences in the expected yearly costs for 4000kWh of energy. The difference between *M* and *E* from the subscription and spot price fee is 696 DKK (ca. 100 USD). These savings should be considered as the lower bound of

¹⁴See Figure C.3b for the distributions of beliefs about market development.

¹⁵Both contracts have also existed in May 2022. However, my historic price data do not show all the details, so I choose to use a recent comparison. *E*'s contract seems to be identical to May 2022. *M* have increased their subscription costs from 1280 øre/kWh in 2022 to 1800 øre/kWh in 2024.

Table 2: Electricity Contracts Comparison - January 2024

	<i>M</i>	<i>E</i>
Approximate market share	58%	max 8.5%
Monthly Subscription	1800 øre	0 øre
Spot price fee	12,57 øre/kWh	0,63 øre/kWh
<i>M</i> – <i>E</i> for 4000kWh	696 DKK	-

savings.¹⁶ At the time of the survey, less than 13.70% percent of all respondents were on a flex price subscription and switching from fixed price to flex price would lead to larger savings. In addition, market leaders do not charge the highest prices on the market.

Using this case study, I can calculate how many respondents should have switched. In my analysis sample, I have 502 respondents in my info treatment, 493 in my broker treatment and 479 in control who state that they are customers of *M* and who live in the capital region. So even with the very conservative assumption that only consumers in the capital region switch and that there is only switching from *M* to *E*, I should observe switching for around 995 consumers after they receive information about average savings and how to switch, if their switching costs are below 696kr. That is not accounting for the possibility that there are more expensive contracts than *M*, which there are, and that there is no switching from suppliers that are cheaper than *M*, but more expensive than *E*. Furthermore, for some individuals, it could be optimal to use the 6-month introduction contracts, which are usually even cheaper than *E*.

In line with my general results, I find that only 16 (info) and 22 (broker) respondents switch away from *M* in the three months following the survey, compared to 11 who switch in the control group. Although technically, broker treatment leads to an increase in 100% switching, the overall number is low. Only 3.8% of those who could have saved at least 696kr by switching, make the switch. I take this as strong evidence that consumers are leaving money on the table despite being attentive to the choice situation and the relevant parameters.

4.2 Intent to treat effects from the survey

Since there is selection into the survey, I also estimate the intent-to-treat effect, which is the increase in attention to the decision situation through receiving a survey on switching in the following three months. I use regression (1), but instead of controlling for treatments, I use a survey dummy and I only use control variables that I get from the administrative

¹⁶A study by a Danish consumer association estimated that while many consumers can save around 800 DKK (114 USD), some can save up to 2000 DKK per year (286 USD) by switching (Nielsen 2023).

data (average electricity consumption in 2022, household size, gender dummy, age dummies, employment status (employed/self-employed vs. unemployed), income percentile and education level).

Table 3 shows a cleanly estimated zero effect of receiving the survey on switching. I find that older age groups and employed or self-employed individuals are significantly less likely to switch. There are no effects of income percentile, education level, gender or average electricity consumption ($N = 163,407$).¹⁷ The invitation to the survey did not mention switching electricity suppliers. It invited recipients to participate in a "Research project on consumer behavior in the electricity market" with the aim to inform policy making through better understanding consumer decision making. Thus, the invitation drew attention to the electricity market, but did not aim to "treat" individuals. I can be sure that every recipient read at least the headline of the invitation, as it is required by Danish law to read letters that are sent to the digital mailbox. Nevertheless, this attention intervention did not have any effect on switching providing further evidence that attention is not sufficient for switching.

Taken together, my results show that increasing attention through a detailed information intervention has a small, marginally significant effect. Reducing switching costs is more effective and increases switching by around 50%.

5 Do consumers want to stay with their provider?

The small effect sizes raise the question whether consumers want to switch. Abaluck & Adams-Prassl (2021) argue "whether people choose the same products year after year because they like those options or because they do not know what else exists has first-order consequences for welfare". Compared to the prior literature that needed to rely on assumptions about attention, I know whether individuals were attentive to the choice set and can observe both the decision to switch and the actual behavior and can thus directly show whether there is inertia because people like their supplier.

In my survey, I ask participants whether they are planning to switch in the next three months. Figure 1b shows the pure treatment effect without any controls ($N=9,047$). In the control group 8.5% of individuals plan to switch providers within the next three months. The information treatment increases the intentions to switch to 29.5% (21 percentage points), a 247% increase in switching intentions. The impact of the broker treatment is even larger with an increase to 36% of respondents reporting the plan to switch (27.5 percentage points), a 324% increase in switching intentions compared to the control.

¹⁷This sample is slightly lower than the full sample, as I cannot match smart meter data to all observations.

Table 3: Effect of receiving the survey on switching 3 months later

	(1) Switched
Survey	0.001 (0.001)
Household size	0.001*** (0.000)
Female DST	-0.001 (0.001)
Age 36-45	-0.005*** (0.001)
Age 46-55	-0.010*** (0.001)
Age 56-65	-0.015*** (0.001)
Employed	-0.005*** (0.001)
Income	0.000 (0.000)
Education	-0.000* (0.000)
Avg Consumption kWh	-0.000*** (0.000)
Constant	0.042*** (0.002)
Observations	163,727
R^2	0.001

LPM with robust standard errors. Survey is a dummy = 1 if the person was invited to participate in the survey. Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The treatment effects are highly significant and very robust. Table 4 shows that the treatment effects are not influenced by adding controls (columns 2-4). Living in a large house, having a variable or a green contract increases the intentions to switch significantly, while individuals who live in East Denmark compared to the West, who are female and who already have a flexible price contract are less likely to state that they intend to switch in the next three months.¹⁸ As column 5 shows, there are only minor differences between those who care about green energy and the full sample. Thus, it does not seem that the amount of contracts to choose from or the exact savings is a constraint for switching intentions.

Regarding my case study of consumers in the capital region, 176 respondents in the info and 206 in the broker treatment stated that they plan to switch, compared to only 36 who planned to switch in the control group for this subgroup. That is an increase in switching intentions of 488% and 572% respectively for these groups, which is even larger than the effects for my full analysis sample. I interpret these intentions as evidence that a large share of individuals are attentive to the potential savings from switching.

Further, I asked all respondents what the likelihood is that they would use a free, transparent, and trustworthy service that would switch them to the cheapest supplier by default. Fewer than 10% of the respondents say that for them the likelihood of using such a service is below 20%. This also confirms the assumption that most people are able to switch out of the ones who say they never plan to switch. A quarter are 99-100% sure that they would use it. Even among those who say that they never plan to switch the support is fairly high as Figure 2 shows. Among those who plan to switch in the next three months, the large majority would prefer such a service. As other papers have concluded (Hortaçsu et al. 2017, Drake et al. 2022), brand preference for their current supplier or the desire to choose a supplier based on anything else than price does not seem to be a strong reason for inertia.

6 The role of behavioral frictions

The gap between intentions to switch and actual switching points to behavioral barriers to switching.¹⁹ When asked prior to the treatments why they have not switched before, 18%

¹⁸I also looked at clicking at links to elpris.dk or to GoSwitch as a behavioral proxy for switching. Clicking on a link has been often used in survey experiments to measure behavior (Haaland et al. 2023). I find that the treatments significantly increased clicking on a link, though at low levels. The analysis can be found in Appendix section C.5.

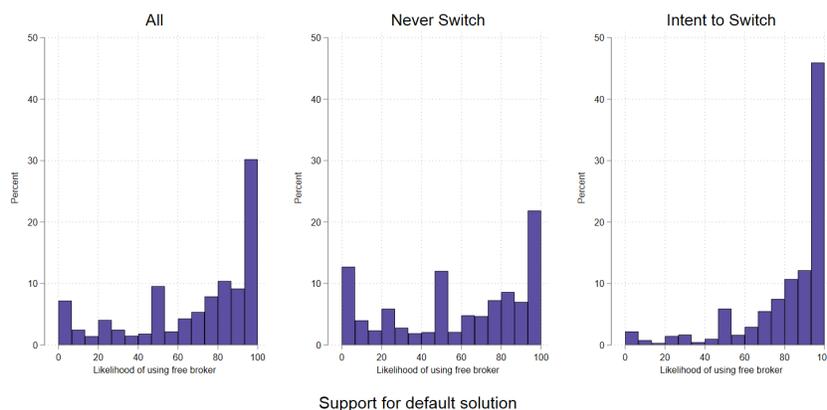
¹⁹Readers might be worried about an experimenter demand effect driving the gap. However, participants were unaware that their switching decisions could be tracked post-survey, eliminating any motivation to switch solely for the researcher's benefit. Additionally, the survey's experimental nature was not disclosed, and the specific question about switching intentions was one among many, reducing the likelihood of participants identifying it as key to me. As noted by De Quidt et al. (2019), there's limited evidence that experimenter

Table 4: Switching Intentions

	(1) Intend	(2) Intend	(3) Intend	(4) Intend	(5) Intend Green
Info	0.209*** (0.010)	0.210*** (0.010)	0.205*** (0.010)	0.205*** (0.010)	0.208*** (0.018)
Broker	0.275*** (0.010)	0.274*** (0.010)	0.279*** (0.011)	0.280*** (0.011)	0.274*** (0.019)
Apartment big		0.017 (0.015)	0.015 (0.015)	0.017 (0.015)	0.025 (0.024)
House small		0.019 (0.014)	0.016 (0.015)	0.022 (0.015)	0.017 (0.025)
House big		0.035** (0.015)	0.033** (0.016)	0.038** (0.016)	0.046* (0.027)
Household size		0.006 (0.004)	0.008* (0.005)	0.007 (0.005)	0.004 (0.008)
West DK		0.044*** (0.009)	0.042*** (0.010)	0.042*** (0.010)	0.024 (0.017)
Female		-0.035*** (0.009)	-0.030*** (0.010)	-0.033*** (0.010)	-0.045*** (0.017)
Age 36-45		-0.033** (0.015)	-0.041** (0.016)	-0.039** (0.016)	-0.013 (0.028)
Age 46-55		-0.035** (0.014)	-0.036** (0.015)	-0.031** (0.015)	-0.021 (0.026)
Age 56-65		-0.092*** (0.014)	-0.092*** (0.015)	-0.085*** (0.015)	-0.097*** (0.025)
Employed		-0.018 (0.014)	-0.021 (0.015)	-0.021 (0.015)	-0.056** (0.025)
Income		0.004* (0.002)	0.004 (0.003)	0.004 (0.003)	0.009** (0.004)
Education		0.001*** (0.000)	0.001*** (0.000)	0.001*** (0.000)	0.000 (0.000)
Avg Consumption			-0.000 (0.000)	-0.000 (0.000)	-0.000*** (0.000)
Fixed Price			-0.027** (0.012)	-0.027** (0.012)	-0.024 (0.019)
Don't know contract			-0.013 (0.012)	-0.014 (0.012)	-0.013 (0.021)
Flex Contract			-0.007 (0.015)	-0.006 (0.015)	-0.039* (0.023)
Green Contract			0.016 (0.011)	0.017 (0.011)	-0.007 (0.017)
Market Exp				-0.005 (0.003)	-0.009 (0.006)
Expected Savings				0.001*** (0.000)	0.001** (0.000)
Expected Switch Time				0.010*** (0.003)	0.016*** (0.005)
Constant	0.085*** (0.005)	0.050*** (0.019)	0.065*** (0.022)	0.036 (0.028)	0.083* (0.048)
Observations	9047	9015	7761	7724	2641
R ²	0.075	0.090	0.092	0.097	0.105

The table shows estimations of LPMs with robust standard errors and population weights. The outcome is a dummy variable equal to 1 if the respondent planned to switch suppliers within the three months following the survey. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure 2: What is the likelihood that you would use a smart default to the cheapest contract?



of my respondents give an explanation in line with procrastination. They report that they have either planned to switch and forgotten, not yet gotten around to it, or are waiting for a better offer. Another, 18% say that they are afraid of getting cheated. 36% give "rational" reasons such as not being able to save enough or not knowing how to switch. Finally, 28% report "other" as a reason for not switching (see Figure C.4 for details). These answers point to both present-bias as well as lack of trust in the market as behavioral reasons for not switching and show that "behavioral" reasons are mentioned as often as "rational" reasons. In the following, I provide further evidence of the effect of present-bias and a lack of trust on switching.

Present-bias Once consumers have an electricity contract, they are not prompted to switch - the existing contract acts as a default. As a number of papers have shown, defaults are very persistent (Blumenstock et al. 2018, Brot-Goldberg et al. 2023, Bernheim & Taubinsky 2018). In a theoretical model closely related to my market setting, (Heidhues et al. 2021) show that naively present-biased consumers will never switch suppliers as they keep waiting for a better offer to come along, believing they will switch then and staying with a too high starting offer. This procrastination of switching can lead to forgetting to switch at all if consumers do not have perfect memory. To understand whether the planned timing of a switch mediates switching, I analyze whether the time they plan to switch (between "today" and "over one year from now") predicts switching.

I find that the earlier they say they will switch, the more likely they are to switch (see Table 5 column 1). This relationship is even stronger for those who say they will switch immediately (column 2). Those who say that they will switch today are 22.5 percentage points more likely to switch than those who plan to switch between 3 and 6 months. I demand effects significantly drive experimental results.

Table 5: Planned timing of switch and switching

	(1) Switched	(2) Switched	(3) Switch Today
Info	-0.011 (0.008)	0.003 (0.007)	0.017*** (0.003)
Broker	0.004 (0.008)	0.016** (0.008)	0.019*** (0.004)
Switch Earlier	0.013*** (0.002)		
Switch Today		0.226*** (0.059)	
Controls	Yes	Yes	Yes
Observations	4342	4342	4342
R2	0.026	0.025	0.009

The table shows estimations of LPMs with robust standard errors with population weights. The outcome variables are dummies equal to 1 if the respondent switched suppliers within the three months (column 1 and 2) or if they planned to switch on the day of the survey (column 3). Controls are all variables from regression 1 including beliefs about expected switching time and savings. Regressions exclude respondents who never plan to switch. Switch Earlier is a categorical variable that is lower in value if respondents plan to switch earlier. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

control for everything in regression (1) as well as beliefs about switching time and expected savings.²⁰

The treatments causally affect the timing of planned switching (column 3). Being in the information or the broker treatment increases the intention to switch immediately (today) by 1.7 percentage points or 1.9 percentage points, respectively, compared to a baseline of around 0.1 percent in the control group (Figure C.5 shows the distributions). This difference is similar to the main effect I find from the treatments on switching. Hence, it seems that this acceleration of switching caused by treatments explains most of the treatment effect. The reason why treatments accelerate switching is not clear. Changes in knowledge, beliefs, or even trust in the market should be more long-term. The most plausible explanation is that the survey acts as a prompt or deadline for those who had already planned to switch. In fact, people who said they had previously delayed switching, were 2.4 percentage points ($p < 0.001$) more likely to switch than those who mentioned other reasons (see Table C.3 in Appendix C). Using self-reported personality traits (Falk et al. 2023), I moreover find that individuals who in the survey report that they are less likely to procrastinate are significantly more likely to have switched providers in the last six months (see Table 6 column 2). One step higher on the scale (where 10 is very likely to "put things off I planned to do"), corresponds to a 0.3 percentage point decrease in the probability of having switched. For comparison, this is slightly less than half of the point estimate I find for the effect of the information treatment on switching. There is no significant effect of a self-reported tendency to procrastinate on switching after the survey. Self-reported patience does not predict switching or having switched.

Trust and Risk-Preferences Almost one fifth (18%) of the respondents say that they are concerned about getting cheated when switching suppliers. They might believe they need to pay double or that they will not be receiving electricity if a company goes bankrupt. As the Danish market is heavily regulated these fears are largely unfounded. The electricity retail companies only act as brokers and do not deliver electricity. This is done by the regional distribution companies which are independent from the sellers. Bankruptcy of electricity companies is very uncommon in Denmark and would also not result in electricity being cut off. Further, of those who have switched 95% say that they are neutral or happy with their new provider. Hence, the perception of risk as a barrier to switching could be related to the personality of the respondents rather than the actual risk of the market.²¹

²⁰Given that those who say they will switch after 2 months might not show up in my dummy variable of having switched within 3 months, I run a second regression checking whether they have switched during 6 months following the survey and the results are very similar.

²¹Recent research by Karle et al. (2023) identifies loss aversion as a potential cause of inertia. They argue that reducing the difficulty of switching may not necessarily encourage it, especially if there is uncertainty

Table 6: Personality Traits

	(1) Switched	(2) Switched in past 6 months	(3) Owns stocks
Procrastinates	0.001 (0.001)	-0.003** (0.001)	-0.001 (0.002)
Trusting	0.002* (0.001)	0.003** (0.001)	-0.005** (0.002)
Risk-Seeking	0.004*** (0.001)	0.003 (0.002)	0.022*** (0.002)
Patient	-0.001 (0.001)	0.000 (0.002)	0.003 (0.003)
Controls	Yes	Yes	Yes
Observations	7400	8366	7310
R^2	0.008	0.052	0.090

The table shows estimations of LPMs with robust standard errors and population weights. The outcome variables are dummies equal to 1 if the respondent switched suppliers within the three months (column 1), switched six months prior to the survey (column 2), owns stocks (column 3). Personality traits are measured on a scale from 1-10. Controls are all variables from regression 1, excluding treatment variables to allow comparison with those who have switched. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In fact, I find that being more trusting and more risk-seeking positively predicts both switching and having switched in the previous six months (see Table 6). One value higher on the trust scale corresponds to a 0.2 percentage point increase in switching following the survey (column 1) and a 0.3 percentage point higher chance of having switched in the six months prior to the survey (column 2). Results are significant on the 10- and 5% level, respectively. The effect size is similar to the effect of trust on owning stocks (column 3), although in the opposite direction. The results further show that being more risk-seeking also predicts switching. One step higher on the risk scale (with 10 being most risk-seeking) significantly increases switching by 0.4 pp. Unsurprisingly, this effect is smaller than the effect of risk aversion on owning stocks, which is 2.2 pp.

Further evidence for trust and risk preferences playing a role in switching comes from stated preferences on what matters when considering a new electricity supplier: those who state that they never plan to switch say that one of their top three reasons for choosing a supplier is that the supplier is well-known. Those who do switch care significantly less about having a well-known supplier compared to a low price (see Table C.4 in Appendix section C.4 for a detailed analysis).

Taken together, it appears that two key sets of behavioral frictions predict (not) switching to a similar extent: 1) the tendency to procrastinate and 2) risk-preferences and trust.

7 Policy Recommendations

The majority of literature on inertia in electricity and health care markets formulates explicit policy recommendations to increase attention through information interventions and to decrease transactional and informational switching costs. My study shows that even in the optimal case where switching takes less than 10 minutes for most consumers and where consumers are fully attentive to the decision situation and their choice set, switching rates remain at around 1% per month, leaving up to 1.65 billion DKK on the table, corresponding to ca. 0.06% of Danish GDP (see section B.1 for the calculation).

In the market I study, it seems unclear how policy makers could significantly decrease switching costs further. Considering the significant price of electricity contracts, a minimal time investment is necessary to review the contract to prevent accidental switching. The idea of 'one-click' contract signing, akin to e-book purchases or app installations, seems irresponsible for such transactions.

about the new firm's prices and quality. Their theoretical model suggests that loss-averse consumers might avoid seeking information if they anticipate that switching could decrease their utility compared to the current situation. As search for information is not endogenous in my experiment, I cannot test this hypothesis.

Instead, my results suggest that policy makers should consider more radical changes in the market. One possible solution could be mandating active choice. Heiss et al. (2021) explore the impact of mandating active choice, finding that such enforcement can significantly influence switching rates, potentially more than eliminating switching costs. However, the potential downsides of active choice, as cautioned by Handel & Schwartzstein (2018), include increased processing costs and potential welfare losses for consumers. If consumers are loss-averse and/or present-biased then mandating active choice could have dire consequences for some and would require a huge bureaucratic process to follow up on all the non-switchers, as well as penalize those who haven't switched, akin to a fine for not submitting a tax return. Sending frequent reminders to switch, similar to the information intervention, could lead to high annoyance costs and opting out (as shown in Damgaard & Gravert (2018)). In situations where active choice has been successful, such as choosing a retirement plan before starting a new job, those implementing the active choice had close contact and control over the ones having to make the choice.

This dilemma raises a fundamental question. Why should consumers actively choose? The argument for active choice versus defaults is convincing when policymakers might not understand consumer preferences enough to set 'smart defaults' (Handel & Kolstad 2015). This could be because consumer preferences are very heterogeneous, when it is unclear what dimensions of the outcome are most important to consumers, or when there is the possibility that policy makers cannot be trusted to act in consumers' best interest (Sunstein 2017). For example, Abaluck & Adams-Prassl (2021) propose smart defaults in Medicare D, but caution that it might be difficult to find optimal contracts for individuals, as policy makers do not know people's medical status.

Hourly smart meter data would (fairly easily) allow policy makers to calculate household consumption profiles and assign cost-minimizing contracts. Since my study indicates a clear consumer preference for low prices and very little brand or "feature" preferences, it seems unlikely that a smart default like this would go against consumer preferences. However, consumers could easily opt-out of a default, if they want. The preference for having someone else choose for them is also confirmed by the relative popularity of the broker.²² If individualized contracts are not possible, then defaults could be set by postal code or municipality. In such a managed competition (as suggested by Heidhues et al. (2021)) consumers could initially be assigned to the cheapest provider, with the option to switch later if desired. Municipalities purchase electricity on behalf of residents and default households into the cheapest contracts.²³ Another option would be to introduce a

²²Page1 (2018) documents that many consumers delegate financial decisions to a broker and finds that much of this delegation is driven by an aversion to feel responsible for a bad choice.

²³In Ohio in the US, municipalities have been buying electricity on behalf of their residents unless they want

free, non-profit broker to which households could sign up or opt out.

In Denmark, there is a switching club called Elforbundet.dk (electricity association). The club states on its website that it has 23,000 members (0,008% of Danish households). Every year in November there is an auction where suppliers can offer to deliver electricity to all the members of the club for the following year. Currently (January 2024), the members pay zero subscription fees and a comparably small spot price fee for receiving the hourly spot price from the energy exchange, thus essentially achieving marginal pricing. Up until 2014, Denmark had a last resort supplier, which had to supply electricity to households if households did not opt-in to a contract. This was abolished in 2014 to increase consumer activity - with little success as my study shows. The implications for market competition would need to be further studied and go beyond the scope of this paper.

The benefit of "smart defaults", resulting from collective switching, could also accelerate the adoption of dynamic pricing contracts which are necessary to set incentives to adjust energy consumption based on price mechanisms and which usually are the cheapest option for consumers. In 2022, only about 13% of the consumers were on these contracts. A significant increase in the response to electricity demand could generate substantial efficiency gains in the Danish electricity grid. As Fowlie et al. (2021) have shown, even those defaulted into dynamic pricing compared to those who opted in voluntarily show a reaction in electricity consumption in response to higher prices.

If "smart defaults" are not feasible, policy should focus on emphasizing the low risk of switching and understanding the lack of trust in the market. Communication strategies however, will mostly affect intentions to act.²⁴

My findings and resulting policy recommendations differ from the majority of recent articles investigating consumer inertia in the health insurance and utility markets (Wadams Price & Zhu 2016, Hortaçsu et al. 2017, Heiss et al. 2021, 2023, Drake et al. 2022, Bischof et al. 2022, Dressler & Weiergraeber 2023). These papers conclude that increasing attention will significantly alleviate consumer inertia, reduce inequalities, increase consumer welfare, and increase competition. Although I cannot rule out that Danish consumers are fundamentally different from British, Belgian, Swiss, and American consumers, it seems unlikely that the differences would be so substantial. Instead, I argue that "attention" is often used as a catch-all and hence does not translate to simple policy recommendations such as sending flyers or providing information on governmental websites. More work is needed to understand the role of preferences and behavioral frictions in consumer inertia.

to choose themselves. Most households stayed on assigned contracts and had lower average prices compared to many other regions in the US (Joskow 2003).

²⁴Gertler et al. (2025) find in a study with firms that announcing a reminder and following through with it increases the uptake of a lower merchant fee and argue that the announcement increases trust in the sender.

8 Conclusion

This paper provides experimental evidence that increasing consumer attention alone does not eliminate inertia in liberalized utility markets. While targeted savings information and reduced switching frictions can moderately increase switching, overall rates remain low relative to potential savings. By combining a randomized survey experiment with third-party administrative switching data, I am able to jointly measure decision inputs and revealed behavior, offering a clean estimate of the causal effects of attention and switching cost reduction. The results highlight the importance of behavioral frictions—particularly procrastination, distrust, and risk aversion—in shaping consumer choices. These findings suggest that while informational interventions can improve engagement, fostering active market participation and competition may require complementary policies, such as smart defaults, automatic switching mechanisms, or other forms of active choice architecture.

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Appendix

A Selection, Attrition and Balance

A.1 Selection into the survey based on observables and population weighing

Using the administrative data, I can analyze selection into the survey. I have background characteristics of the full population, the passive control group, respondents who chose not to participate, those who participated and those who have switched providers in the past 6 months. Summary statistics are shown in Table A.1. Overall, my sample is of slightly higher socio-economic status than the general population and slightly older. In terms of gender, it is representative, as well as in geographic location. Nevertheless, I re-weigh my survey sample using population weights to make it representative of the full population. All regressions in the paper are with population weights.

A.2 Attrition from the survey

Out of the 103,046 people invited from the population 23,040 clicked on the personal link in the invitation. 22,260 provided consent and 21,668 stayed in the main survey, while 592 were funneled into a side survey, as they cannot change their electricity provider. Figure A.1 shows at which point in the survey respondents drop out. By far the biggest drop happens when I ask individuals about how much they pay for electricity and how much they consume. When I ask them about features of their electricity contract I still have 20,953 observations, which reduces to 16,095 after asking about monthly electricity costs and to 14,712 when asking about monthly consumption. Even though I wrote that it was not important to know this information and that their best guess would be sufficient, I lose a quarter of my sample. There is another small bump in drop outs when I ask them to rank what they cared about when choosing providers. Because they were supposed to drag and drop responses, it is likely that a few dropped out due to technical difficulties. After that the drop out is linear and most likely reflects running out of time.

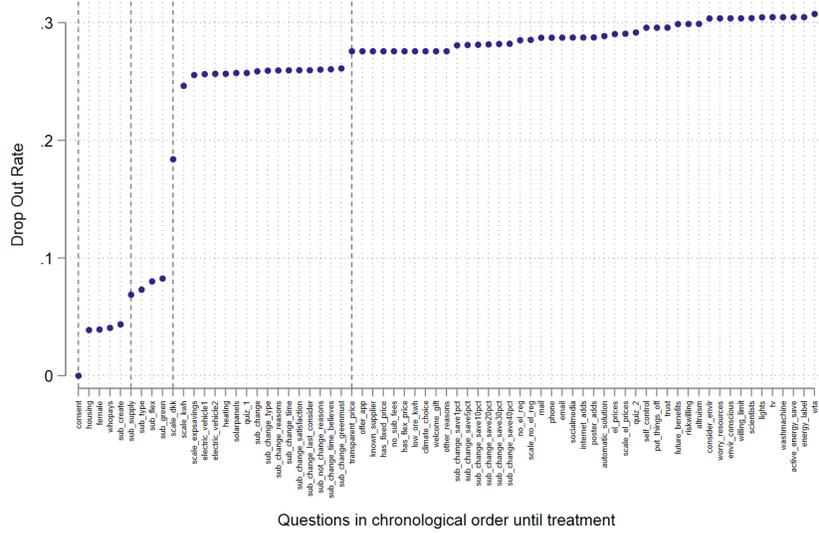
A.3 Selection into the survey and switching rates

I look at switching rates based on selection into the survey. Table A.2 shows switching rates for different types during the months May to July for the year of the survey, 2022, and for the previous year, 2021. There is no significant difference between the switching rates

Table A.1: Main survey: Summary Statistics

	Full popula- tion	Passive Control	Didn't do Survey	Survey	Have Switched
Female	0.49	0.49	0.49	0.50	0.47
Age	44.62	44.46	44.23	48.00	44.94
Married	0.48	0.47	0.47	0.51	0.47
<u>Income position</u>					
Bottom 10 pct.	0.10	0.10	0.10	0.06	0.07
20-50 pct.	0.40	0.40	0.41	0.34	0.36
50-90 pct.	0.40	0.40	0.39	0.48	0.47
Top 10 pct.	0.10	0.10	0.10	0.12	0.11
<u>Education</u>					
Primary edu.	0.17	0.17	0.18	0.11	0.12
Upper secondary edu.	0.07	0.08	0.07	0.07	0.07
Vocational edu.	0.33	0.32	0.33	0.33	0.34
Short cycle higher edu.	0.06	0.06	0.06	0.07	0.07
Bachelor programs	0.22	0.22	0.21	0.25	0.22
Master + PhD programs	0.15	0.15	0.15	0.18	0.19
<u>Socio Economic Status</u>					
Self-employed	0.04	0.04	0.05	0.03	0.04
Employee	0.71	0.71	0.71	0.76	0.73
Unemployed	0.02	0.02	0.02	0.02	0.02
Not in work force	0.19	0.19	0.19	0.16	0.19
Others	0.04	0.04	0.04	0.02	0.02
<u>Regions</u>					
Copenhagen	0.10	0.10	0.10	0.09	0.09
Sealand	0.23	0.22	0.23	0.23	0.22
Southern Denmark	0.20	0.20	0.20	0.22	0.24
Middle Jutland	0.33	0.33	0.33	0.34	0.32
North Jutland	0.14	0.14	0.14	0.13	0.14
Observations	203,910	101,149	86,426	9,047	1,191

Figure A.1: Drop out rates over time of the survey



in the passive control group and those who did not open the survey. It is interesting to see that those who did self-select into the survey had slightly lower switching rates in the same period the year before than the passive control group, which would also explain the lower switching rates in the survey control group compared to the passive control. The difference is not significant, though, in a χ^2 test ($p=0.15$). The information treatment brings these individuals to the level of the passive control group ($p=0.87$) and only the broker treatment has a significant higher switching rate compared to the passive control ($p=0.01$). The numbers in this table do not exactly match the numbers in Figure 1a, as I do not drop individuals who have an electric car, solar cells or heat pumps, as I do not have this information for those not in the survey. The last column shows that those who have switched in the past 6 months are also significantly more likely to have switched in the same period the year before and are significantly more likely to switch again after the survey.

Table A.2: Switching rates in 2021 and 2022 for 3 month period

	Passive	Did not open	Did not consent	Dropped out	Control	Information	Broker	Had Switched
May - July 2021	3.16	3.09	3.42	2.90	2.88	2.76	2.48	7.77
May - July 2022	3.12	3.08	2.17	2.73	2.70	3.16	3.95	8.37
N	85038	66782	644	5378	3779	3666	3668	1840

A.4 Balance Table

The randomization into treatments worked perfectly. There is only one marginally significant difference, that is most likely due to chance.

Table A.3: Balance Table

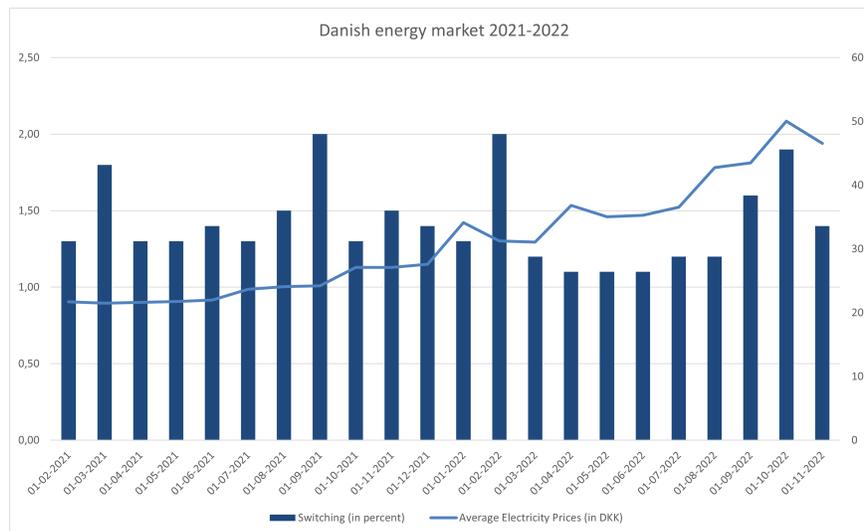
Variable	(1) Control Group	(2) Info	(3) Broker	(4) Diff C-I	(5) Diff C-B
WestDK	0.459 (0.498)	0.463 (0.499)	0.468 (0.499)	0.004 (0.774)	0.009 (0.475)
Female	0.499 (0.500)	0.504 (0.500)	0.485 (0.500)	0.005 (0.697)	-0.014 (0.268)
Age 36-45	0.193 (0.395)	0.200 (0.400)	0.201 (0.401)	0.007 (0.486)	0.009 (0.397)
Age 46-55	0.296 (0.457)	0.287 (0.452)	0.289 (0.454)	-0.010 (0.405)	-0.007 (0.556)
Age 56-65	0.320 (0.467)	0.327 (0.469)	0.323 (0.468)	0.007 (0.565)	0.003 (0.784)
Employed	0.797 (0.402)	0.798 (0.401)	0.793 (0.405)	0.001 (0.898)	-0.004 (0.709)
Income Percentile	6.119 (2.763)	6.163 (2.727)	6.159 (2.749)	0.044 (0.529)	0.041 (0.565)
Education	42.566 (20.297)	42.465 (20.357)	42.194 (20.539)	-0.100 (0.848)	-0.371 (0.480)
Small Apartment	0.216 (0.411)	0.198 (0.398)	0.206 (0.405)	-0.018* (0.088)	-0.010 (0.362)
Large Apartment	0.183 (0.386)	0.195 (0.396)	0.191 (0.393)	0.013 (0.212)	0.008 (0.399)
Small House	0.226 (0.418)	0.233 (0.423)	0.217 (0.413)	0.008 (0.482)	-0.008 (0.435)
Large House	0.376 (0.484)	0.374 (0.484)	0.385 (0.487)	-0.002 (0.847)	0.009 (0.449)
Observations	3,061	2,987	2,999	6,048	6,060

The table shows the survey sample (N=9047). Randomization into treatments happened right before the treatments were shown in the survey to minimize differential attrition.

B Institutional Background

Figure B.1 presents consumer behavior on the Danish electricity market between February 2021 to November 2022. The blue bars show the monthly switching rates of consumers in percent. The blue line shows the average monthly electricity prices for consumers including all tariffs and taxes in øre (100 øre = 1 DKK). Despite rising electricity prices, switching has been stable.

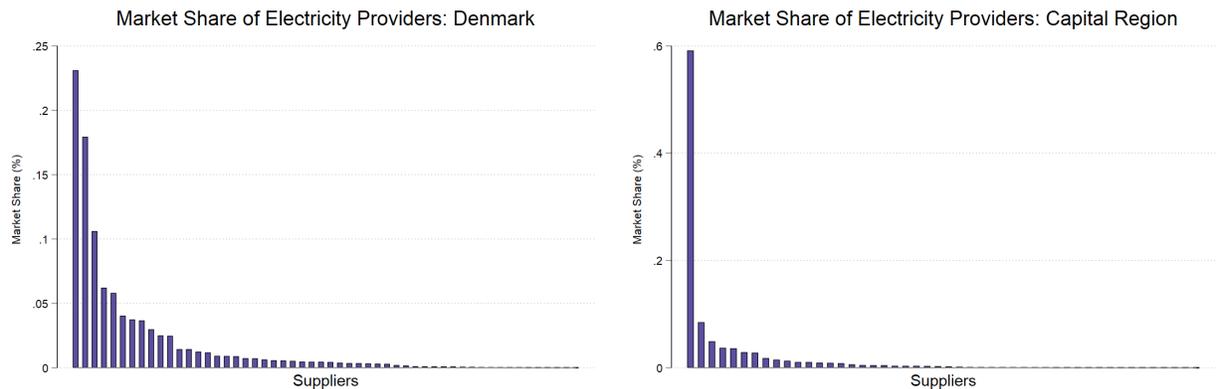
Figure B.1: Average amount of switching per month



The left Y-axis shows switching rates in percent. The right Y-axis shows the average price of electricity per kWh in Danish øre. The switching rates are calculated by the author using administrative data from Energinet. The data only shows switching between suppliers not within a supplier. The average prices are taken from the official statistic by the Danish regulator calculated from Energinet and Elpris.dk.

For a long time, the Danish electricity sector, similar to most electricity sectors in the world, lacked competitive incentives due to monopoly conditions. Electricity companies owned all links in the electricity value chain, from generation to transmission and to the final distribution to consumers. However, as a part of a general liberalization trend in Europe and following demands from the EU, a large reform of 1999 started to liberalize the sector. The reform entailed that neither consumers nor suppliers had any ties to specific electricity plants and that electricity companies no longer had monopoly status within certain geographically areas. All consumers thus became free to buy electricity from any commercial electricity supplier on the free electricity market. In 2005, Energinet was established to distribute electricity across the country and across Danish borders. Energinet is solely responsible for running the transmission network and the electricity system in Denmark. Their core service is ensuring a balance between consumption and production such that the electricity grid always maintains the electrical voltage. On the wholesale market, producers

Figure B.2: Market share of electricity providers in Denmark among private households



(a) Market share of electricity providers in Denmark in January 2022 (b) Market share of electricity providers in capital region in January 2022

Notes: The market share is calculated from a random sample of (a) 211920 (b) 76948 private households. I have dropped suppliers from the graph for whom I have less than 10 households in my sample. Capital region is defined as postcodes 1 and 2.

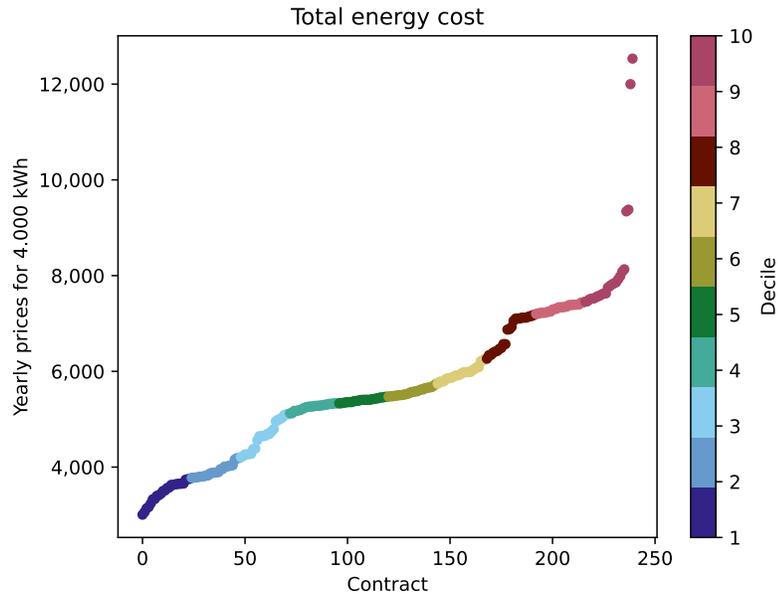
offer their electricity via balance managers on the electricity stock exchange (NEMO) and balance managers buy it on behalf of the electricity suppliers, who then sell the electricity to consumers. To increase transparency, since 2016, consumers receive one electricity bill that includes all costs of electricity, tariffs and fees. The smart meter data I am using in this paper comes directly from Energinet.

By 2020, all European member states were required to implement smart metering for at least 80% of all consumers to allow for flexible/dynamic pricing (i.e., the price varies by hour). Denmark started the transition to national coverage of smart meters in 2014 and finalized the installation during 2020. There are no official numbers available how many households have switched to flexible pricing, but unless consumers actively switched, they are still on the old non-dynamic contracts. In my sample, the share is around 13% of respondents who are on flexible pricing. In April 2022, the Danish market had around 50 retail electricity companies and around 250 contracts. These numbers vary slightly by region. While there is some product differentiation between the firms in terms of apps, customer service and purchasing of green certificates for selling "green energy", there can be no differences in the reliability of power transmission or the actual energy mix.

B.1 Back of the envelope analysis of saving potential

To provide the reader with an intuition about the money left on the table and the potential welfare gains for the entire population, I conduct a back-of-the-envelope estimate of the

Figure B.3: Distribution of contract prices in April 2022



Contract prices have been scraped from elpris.dk the Danish governmental price comparison website,

savings. I use the estimate from my case study in section 4.1, which estimates savings of 0.174 DKK/kWh by switching from the incumbent to a cheaper competitor with the same type of flex price contract. As discussed, this is a conservative estimate as it neither looks at the most expensive nor the cheapest contracts and it only considers differences in flexible price contracts, not fixed price contracts, which are more expensive on average.

Denmark has 2.19 million dwellings. I apply the typical annual electricity use for each housing type (2 000 kWh for small apartments (18% of dwellings according to my survey), 3 000 kWh for large apartments (17% of dwellings), 4 000 kWh for small houses (23% of dwellings) and 6 000 kWh for large houses (42% of dwellings)) and multiply this by the potential savings of 0.174 DKK /kWh. This calculation yields modest per-dwelling gains of 348 DKK, 522 DKK, 696 DKK and 1 044 DKK, respectively, which, however, aggregate to ca. 1.65 billion DKK across the entire housing stock. Bench-marking these savings against Denmark's 2022 nominal GDP of 2 844 billion DKK, the fully-realized saving would amount to about 0.06% of national output.

C Supplementary analyses

C.1 What are consumers knowledge and beliefs about the electricity market?

To understand whether the information intervention could have an effect on consumer behavior, it is important to measure the ex-ante knowledge of consumers about their electricity contracts, their knowledge about the market and their beliefs about the amount of money they can save by switching and how long it takes to switch.

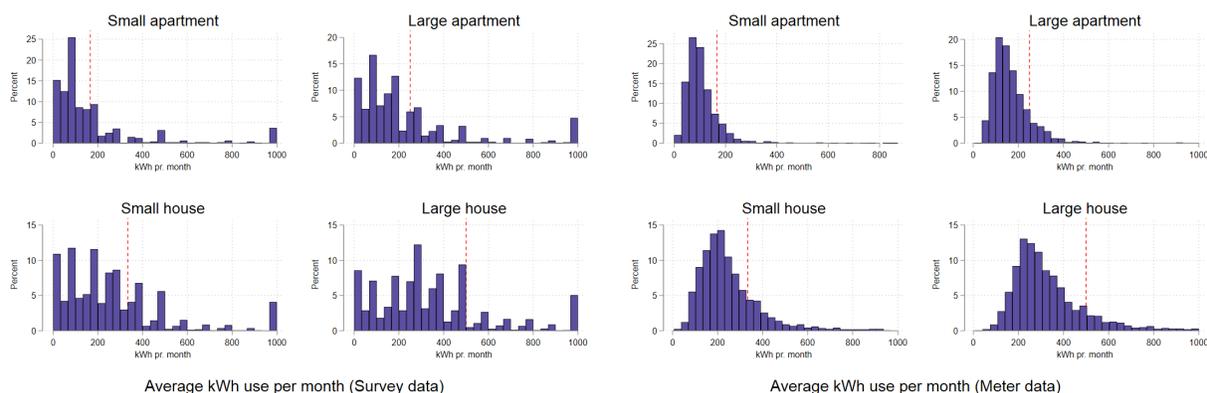
C.1.1 Are people informed about their electricity consumption?

I asked survey participants to estimate how many kWh they consume in a month on average and can compare this to their actual meter data. There is some seasonal variation in usage (as evident from Figure B.1), but smaller households do use less electricity on average and even for large households, the variations is usually between ca. 200kWh per month. As Figure C.1 shows, stated consumption (Panel A) and actual consumption (Panel B) are similar, but on average individuals assume that they use more electricity than they actually do. We see that the meter data is, as expected, closer to a normal distribution, while the survey data has rounding spikes. The graphs are truncated at 1000kWh for the ease of exposition, as some consumers have unreasonable high beliefs.

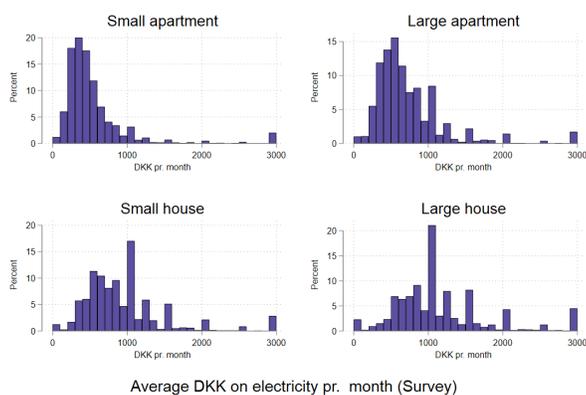
I find that 31% of my sample's guesses are within +/- 50 kWh of their meter data and 46% are within +/-100 kWh. When asked how sure they are about their answer 39% say they are less than 10% sure about their answer while ca. 21% say that they are more than 90% sure of their answer. The average is 42% sure. 44% of those who say they are more than 90% sure of their answer, I classify as being within +/- 50kWh of their meter data. This question is also the place in the survey, where we see the largest drop out rates (see Figure A.1). While I cannot test this formally, it seems likely that those, who have less knowledge about their electricity consumption are more likely to drop out here, which would bias the sample towards those with more knowledge. In sum, there is a wide variation in knowledge about personal electricity consumption in the population and my sample.

I further elicited how much they pay for electricity per month. Since I do not know what they really pay (this is company data and not available in the data from Energinet), I cannot do the same comparison. Here, only 8% say that they are less than 10% sure how much they pay and more than 25% say they are more than 90% sure how much they pay. The average is also higher than for the kWh data (67% vs. 42%). This difference indicates that many consumers know their monthly expenses, but not how these costs result from their

Figure C.1: Knowledge of electricity consumption and costs



(a) Stated consumption of electricity per month (b) Actual consumption of electricity per month



(c) Stated electricity costs per month

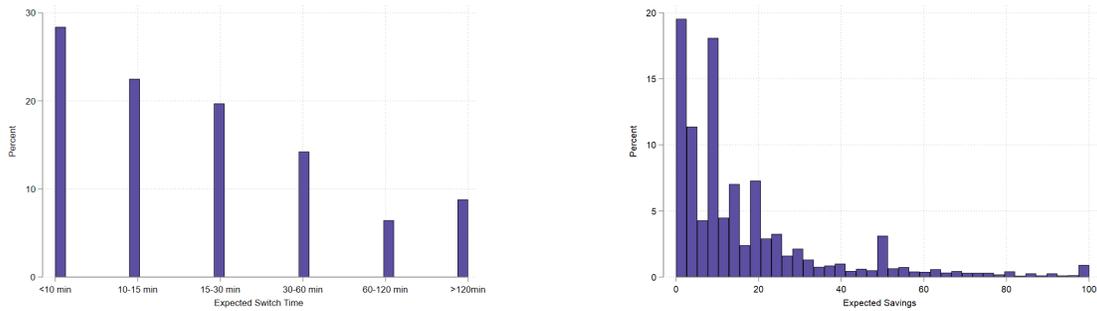
Stated consumption of electricity and stated costs come from the survey data. Actual consumption of electricity comes from the administrative data.

usage.

C.1.2 What are consumers beliefs about savings and the time it takes to switch?

Given the observed inertia, consumers have should low expectations about the savings potential from switching compared to their beliefs about switching costs. I elicited their beliefs about both. I asked respondents to guess how much they would be able to save if they switched to the cheapest provider on the market at the day of the survey (see Figure C.2b). On average, respondents believe that they can save 17% of their electricity bill. In May 2022, the time of the survey, a household using 4000kWh per year would have on average been able to save 20% of their electricity bill by switching from the average to the cheapest supplier. Thus, on average, savings expectations are correct. There is substantial variation

Figure C.2: Consumer expectations



(a) How long do you think it would take to switch suppliers? (b) How much do you think you could save in percent of your bill if you switched today?

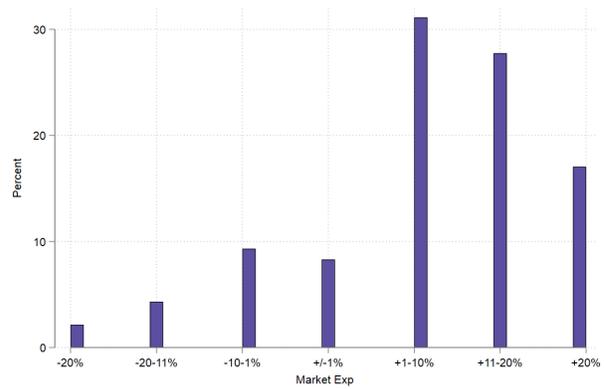
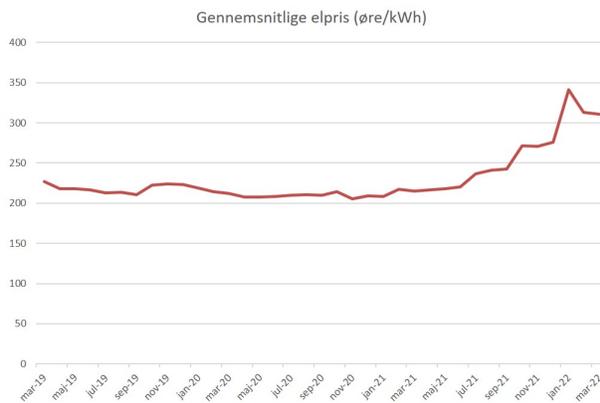
in the beliefs, with around 20% of respondents believing that they can save nothing. 25% of the respondents say that they believe they could save more than 20% of their electricity bill by switching. So there is room for an information treatment to affect beliefs in both directions. Overall, the uncertainty is again high. On average, respondents report to be 33% sure about their estimate, with more than 35% being 10% or less sure about their answer. So, even though many are in the right range of savings, the information might help confirm their beliefs. I control for their expectations in my analysis. I cannot check how much an individual could save, as I do not know which contract they are on, so for some, it could be true that they can save more than the average, as we have seen from Figure B.3. They might be on the high end of the distribution. I can be fairly certain that those who say they can save nothing are incorrect as they cannot be on an intro contract if they haven't switched in the past six months.

How long do individuals believe it takes to switch providers? 71% of my respondents believe that it takes less than 30 minutes to switch and only 9% believe that it takes over 2 hours to switch (see Figure C.2a). Thus, the majority believe that the switching time is reasonable, even though they overestimate the time it takes compared to the actual time it takes to switch, which is 5 minutes. There is room for around a third of the participants to significantly revise their beliefs downward with the treatment.

C.1.3 Being better informed does not predict switching

Section C.1.1 showed that there was substantial variation in the beliefs about how much electricity respondents consume each month. So the question is, are those who are better informed about their consumption more responsive to the treatments and thus more likely to switch? I classify those, who are within +/- 50kWh of their true consumption as very

Figure C.3: Price development and consumer expectations



(a) Price development presented in the survey

(b) Consumer expectations about price development in the following six months

informed and interact this dummy with the treatments. Then I estimate equation (1) including these dummies and interactions (see Table C.1 columns 1 and 2). I find that highly informed individuals in the control group are less likely to plan to switch, but do not differ in switching. Interaction effects between being informed and the treatments are precisely zero, meaning that the treatments do not have a different effect on those who are informed about their consumption and those who are not. As a second proxy for being informed, I use the two quizzes from the survey. If they answered both correctly, I classify them as being informed. While I find that those who got the quiz correct and are in the information treatment are significantly more likely to plan to switch, there are no significant effects on switching (see Table C.1 columns 3 and 4).

C.1.4 How do participants expect the market to develop?

Another important belief when deciding whether to switch or not is how the consumers expect prices to develop in the future. I showed participants the development of the electricity prices over the three years prior to the survey (Figure C.3a) and then asked them for their expectations about how the prices will develop over the following 6 months. Prices had been stable for around two years with a significant increase since around July 2021. Respondents could answer between "fall more than 20%" to up to "increase more than 20%". As Figure C.3b shows, the majority of respondents expect the prices to rise in the following months, with a majority expecting a price increase between 1% and 20%. Given the invasion of the Ukraine two months prior to the survey and the resulting gas shortage, consumers were correct to expect increasing prices. I control for price expectations in the analysis.

Table C.1: Informed Consumers

	(1) Switched	(2) Intend	(3) Switched	(4) Intend
Info	0.008 (0.006)	0.207*** (0.013)	0.010* (0.006)	0.186*** (0.012)
Broker	0.009 (0.006)	0.276*** (0.013)	0.011* (0.006)	0.269*** (0.013)
Very Informed	-0.009 (0.006)	-0.022* (0.012)		
Very Informed * Info	-0.001 (0.010)	-0.007 (0.022)		
Very Informed * Broker	0.011 (0.010)	0.014 (0.023)		
Quiz correct			-0.002 (0.007)	-0.016 (0.012)
Quiz Correct * Info			-0.010 (0.010)	0.063*** (0.023)
Quiz Correct * Broker			0.006 (0.011)	0.035 (0.023)
Constant	0.038*** (0.013)	0.047 (0.029)	0.035*** (0.013)	0.042 (0.028)
Controls	Yes	Yes	Yes	Yes
Observations	7724	7724	7724	7724
R^2	0.008	0.097	0.008	0.098

The table shows estimations of LPMs with robust standard errors and population weights. The outcome variables are dummies equal to 1 if the respondent switched suppliers within the three months (columns 1 and 3) or planned to switch (columns 2 and 4). Controls are all variables from regression 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

C.2 Having switched before predicts switching again

1191 respondents have answered that they have switched within the last six months prior to the survey. From them, we can learn their reasons for having switched and see whether they are different to those who have not yet switched. These individuals are not randomized into treatments, but I ask them about their experience with switching and whether they would switch again. The majority of questions are the same.

The majority of these respondents has "external" triggers for switching: 30% of those who have switched, have done so because they have moved. 17% switched because they received a marketing offer, 1% received a recommendation from a friend, and 7% were switched because their prior subscription was discontinued and 0.2% switched because of a new hybrid/electric car. Around 37% switched without an external trigger.: 28% switched because they wanted a cheaper product. Only 5% switched because they wanted a greener product, 2% because they wanted a dynamic/flex contract and 2% wanted better service. Other reasons, make up the last 8%.

65% switched to a different provider and 31% switch to a different contract at their provider. The rest state that they don't remember. Over 94% say that they feel neutral or happy about their new contract, which shows that there is very little regret.

When it comes to demographics, there are no significant differences compared to those who have not yet switched, except, as we have already seen, those who are older are less likely to switch compared to the youngest group (see Table C.2). Significant differences in types of contracts are as expected. Those who have recently switched are significantly more likely to have a dynamic/flex or a green contract, as these contracts are quite new on the market. They are also more likely to have a fixed price subscription and know what type of contract they have.

Estimating regression (1) and including those who have already switched, I find that they are, unsurprisingly, less likely to plan to switch within the next 3 months (column 2), but actually, they are still more likely to switch again within the next three months (column 3) and next 6 months (column 4). All in all, there are no meaningful demographic differences between those who have switched and those who have not switched.

C.3 Stated barriers to switching

Prior to the treatments, I ask the respondents who did not switch in the prior six months why they didn't switch earlier. Figure C.4 shows the responses to this question. 22% think that they cannot save much by switching. Close to 15% report a concern that has to do with switching costs (9% think there are too many options and 5% report that they don't

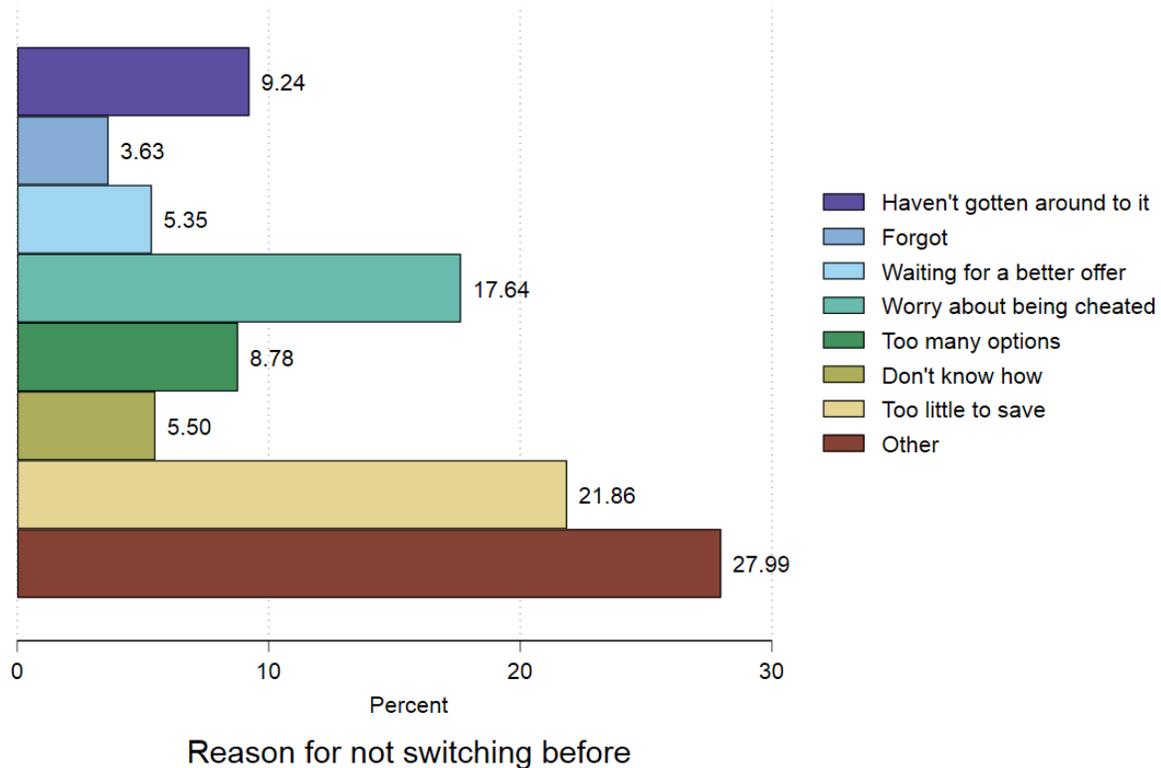
Table C.2: Have Switched

	(1) Have Switched	(2) Intend	(3) Switched	(4) Switched 6 months
Apartment big	0.028** (0.011)	0.015 (0.014)	0.013** (0.007)	0.011 (0.009)
House small	0.012 (0.011)	0.010 (0.014)	0.006 (0.007)	0.002 (0.009)
House big	0.018 (0.012)	0.028* (0.015)	0.009 (0.007)	0.002 (0.010)
Household size	0.003 (0.003)	0.007* (0.004)	-0.002 (0.002)	-0.001 (0.003)
West DK	-0.009 (0.007)	0.043*** (0.009)	0.004 (0.004)	-0.009 (0.006)
Female	-0.001 (0.007)	-0.032*** (0.009)	-0.006 (0.004)	-0.003 (0.006)
Age 36-45	-0.027** (0.012)	-0.028* (0.015)	0.002 (0.007)	0.019* (0.010)
Age 46-55	-0.061*** (0.011)	-0.024* (0.014)	0.001 (0.007)	-0.004 (0.009)
Age 56-65	-0.077*** (0.011)	-0.075*** (0.014)	-0.016** (0.007)	-0.020** (0.009)
Employed	-0.018* (0.011)	-0.019 (0.014)	0.003 (0.006)	-0.001 (0.009)
Income	0.000 (0.002)	0.004* (0.002)	-0.002 (0.001)	0.000 (0.001)
Education	-0.000 (0.000)	0.001*** (0.000)	0.000*** (0.000)	0.000 (0.000)
Avg Consumption	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000** (0.000)
Fixed Price	0.037*** (0.008)	-0.026** (0.011)	-0.001 (0.005)	-0.006 (0.007)
Don't know contract	-0.019** (0.007)	-0.012 (0.012)	-0.010* (0.005)	-0.019*** (0.007)
Flex Contract	0.079*** (0.011)	-0.005 (0.013)	-0.001 (0.006)	0.007 (0.009)
Green Contract	0.095*** (0.008)	0.017* (0.010)	0.001 (0.005)	0.018*** (0.007)
Market Exp	-0.008*** (0.002)	-0.004 (0.003)	-0.002 (0.001)	-0.003 (0.002)
Switched in past 6 months		-0.099*** (0.012)	0.050*** (0.009)	0.094*** (0.012)
Constant	0.158*** (0.019)	0.228*** (0.024)	0.044*** (0.011)	0.083*** (0.017)
Observations	9165	9165	9165	9165
R ²	0.049	0.020	0.012	0.021

The table shows estimations of LPMs with robust standard errors and population weights. The outcome variables are dummies equal to 1 if the respondent has switched in the last 6 months (column 1), intended to switch (column 2), switched within 3 (column 3) or within 6 months after the survey (column 4). Controls are all variables from regression 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

know how). Both of these concerns are addressed in my information intervention. 18% report that they have either planned to switch and forgotten, not yet gotten around to it or are waiting for a better offer. These reasons I classify as procrastination. Surprisingly, 18% say that they are afraid of getting cheated, which points to low trust in the market. Finally, 28% report "other" as a reason for not switching.

Figure C.4: Stated reasons for not switching earlier



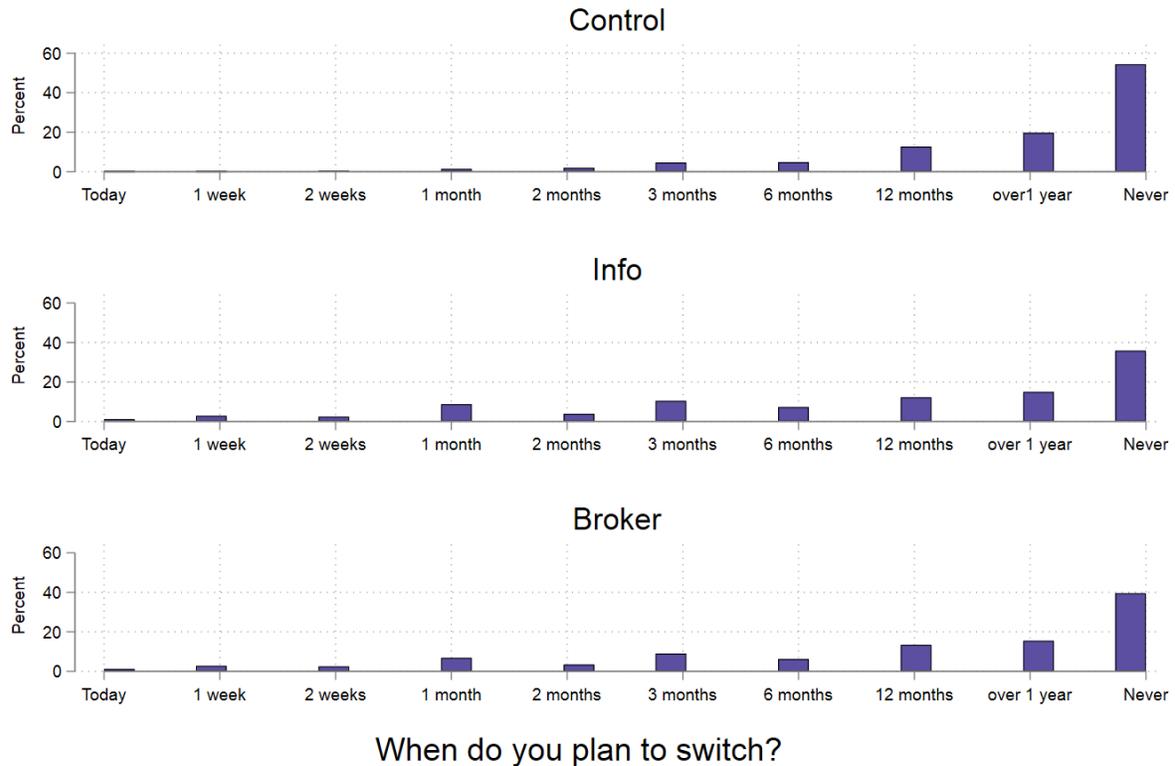
When regressing reasons for not switching on switching during the three months after the survey, I find that those who have reported that they did not switch previously because of procrastination are significantly more likely to intend to switch (33.4 percentage points) and 2.4 percentage points more likely to switch after the survey (Table C.3) compared to the ones who had "other" reasons for not switching. Those who said that they thought there was too little to save are also significantly more likely to switch in the three months after the survey. The estimate of the intention to switch when saying that they procrastinated is roughly four times as high as the estimate for not thinking that the savings are large enough. Those who said gave a reason related to switching costs and low trust in the market are not more likely to switch after the survey. In my estimation, I control for everything in regression (1) as well as beliefs about switching time and expected savings.

Table C.3: Reasons for not switching before predict switching

	(1) Switched	(2) Intend
Info	0.008 (0.005)	0.213*** (0.010)
Broker	0.011** (0.005)	0.275*** (0.011)
Procrastinated	0.024*** (0.008)	0.334*** (0.018)
High Switching Costs	0.007 (0.006)	0.166*** (0.016)
Nothing to Save	0.017*** (0.006)	0.044*** (0.012)
Lack of Trust	0.006 (0.006)	0.071*** (0.014)
Controls	Yes	Yes
Observations	7214	7214
R^2	0.010	0.156

The table shows estimations of LPMs with robust standard errors and population weights. The outcome variables are dummies equal to 1 if the respondent switched suppliers within the three months (column 1) or planned to switch (column 2). Controls are all variables from regression 1, including beliefs about switching time and savings. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Figure C.5: Planned timing of switches



C.3.1 The treatments accelerate switching

As Figure C.5 shows, the treatments have seem to accelerated the plan to switch and have reduced the amount of individuals who say that they plan to never switch from 54% in the control group to 36% and 40% in the information and broker treatments, respectively.

C.4 What do consumers care about when choosing a supplier?

I find some evidence that those who never plan to switch are more likely to say that being with a known supplier is one of their top three reasons of choosing a supplier. Some people might mistakenly believe that the incumbent will be more reliable when providing electricity. Given that there are several big and well-know suppliers in the country, they can choose from, this concern should not exclude switching to a better contract. Those who never plan to switch are less likely to care about flex pricing and climate choices and whether there are subscription fees compared to a low price per kWh (the base category) (Table C.4). Those who switch are 3.4 percentage points less likely to say that they care about a known supplier compared to low price per kWh. Those who say they will never switch are 4 per-

centage points more likely to say that they care about a known supplier compared to low price per kWh. Both estimates are significant. Generally, respondents claim that they do not care about most factors that electricity suppliers try to use to differentiate themselves, such as providing an app or having a welcome gift. Not switching also correlates with "other reason" in what they care about in a supplier, so for some, there might be some switching constraints I have not taking into consideration.

Table C.4: Reasons for not switching before

	(1) Intend	(2) Switched	(3) Never Switch
Known Supplier	-0.034*** (0.006)	-0.008*** (0.002)	0.040*** (0.008)
Transparent price	-0.003 (0.007)	-0.000 (0.003)	-0.009 (0.008)
Offer an app	0.006 (0.009)	-0.004 (0.003)	-0.009 (0.010)
Has a fixed price	0.003 (0.006)	-0.001 (0.003)	-0.001 (0.007)
No subscription fees	0.013** (0.006)	-0.001 (0.002)	-0.023*** (0.007)
Offers Flex Price	0.024** (0.010)	-0.007** (0.003)	-0.018* (0.011)
Climate Choice	0.006 (0.006)	-0.002 (0.002)	-0.014** (0.007)
Welcome gift	0.019 (0.020)	0.009 (0.011)	-0.004 (0.021)
Other reason	-0.052*** (0.013)	0.003 (0.008)	0.080*** (0.019)
Controls	Yes	Yes	Yes
Observations	5403	5403	5352
R^2	0.029	0.009	0.050

The table shows estimations of LPMs with robust standard errors and population weights. The outcome variables are dummies equal to 1 if the respondent switched suppliers within the three months (column 1), planned to switch (column 2) or stated that they would never switch (column 3). The baseline is Low Price. Controls are all variables from regression 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

C.5 The treatments affect clicking on the information links

In all three groups, I provided a link to elpris.dk on the final page, so individuals could go to the comparison website and potentially switch providers. In many survey experiments, a link click to a website with more information is used as a behavioral outcome (Haaland et al. (2023)). In the Broker treatment, there was also a link to GoSwitch. Figure ?? shows the effect of the treatments on clicking the the link to elpris.dk or clicking either of the two links. The information treatment and the broker treatment significantly increases the likelihood of clicking on the link to elpris.dk or the link to GoSwitch. We can thus conclude that the treatments had a first round behavioral effect on our switching proxy. In addition to increasing stated intentions, individuals were also more likely to take the first step towards switching. I find that 394 participants clicked on at least one link - 343 the elpris.dk link and 90 clicked the GoSwitch link.²⁵

Table C.5: Any Link

	(1) Clicked on Link	(2) Clicked on Link
Info	0.011** (0.005)	0.013** (0.005)
Broker	0.015*** (0.005)	0.015*** (0.006)
Controls		Yes
Observations	9047	7724
R^2	0.001	0.011

The table shows estimations of LPMs with robust standard errors and population weights. The outcome variable is a dummy equal to one if a respondent clicked on any link. Controls are all variables from regression 1. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

²⁵These numbers are an underestimation of the true link clicks. GoSwitch recorded 272 clicks to their site using the survey link which resulted in a final purchase of 33 subscriptions. It seems likely that the true elpris.dk clicks are also closer to 1000 clicks. The programming of the survey was not able to capture right clicks. Nevertheless, the treatment effects should be unaffected by this technical problem.

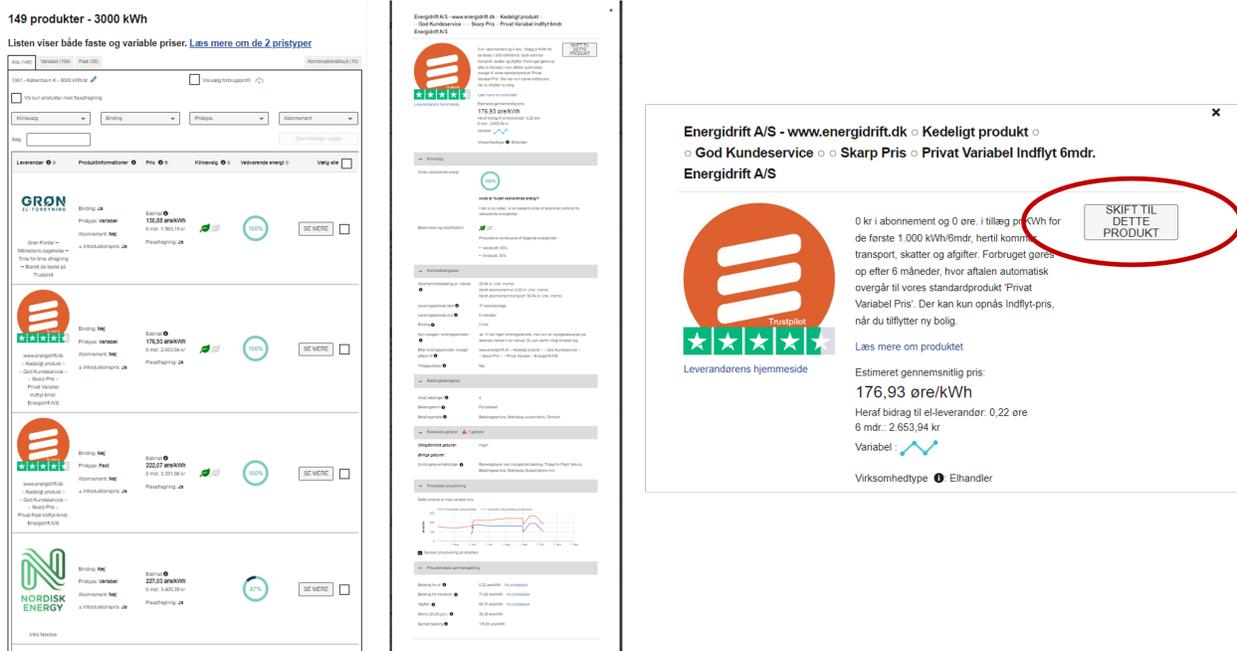
Appendix References

Haaland, I., Roth, C. & Wohlfart, J. (2023), 'Designing information provision experiments', *Journal of Economic Literature* **61**(1), 3–40.

D Screenshots

D.1

Figure D.1: Elpris.dk website interface



The picture shows the an example from elpris.dk. After clicking on "see more", the detailed screen pops up. At the top a "switch now" button leads to the supplier's sign up page.

Figure D.2: Sign-up form example

The picture shows the an example from elpris.dk. After clicking on "see more", the detailed screen pops up. At the top a "switch now" button leads to the supplier's sign up page.

Figure D.3: Survey Treatments

Information om skift af elabonnement
 Det tager ca. **5 minutter** at skifte elskab.
 Hvis du ikke har skiftet leverandør i løbet af de sidste 6 måneder, er det **gratis** at skifte.

En husstand som din kan i gennemsnit forvente
 at spare ca. **DKK**
 i løbet af de næste 6 måneder, hvis du skifter til det billigste abonnement i dag.

Sådan skifter du:

- 1) Gå ind på elpris.dk og find alle el-abonnemeter i dit postnummer
- 2) Klik på "Skift til denne el-leverandør" og udfyld relevant information
- 3) Din nye el-leverandør sender dig herefter et digitalt dokument, som du skal underskrive

Resten foretages af din nye elleverandør. Du behøver ikke at opsig dit gamle abonnement.

Der vil være et direkte link til elpris.dk til sidst i spørgeskemaundersøgelsen.

Beløbet er udregnet ved at sammenligne den gennemsnitlige abonnementspris med det billigste tilbud på elpris.dk for og din boligstørrelse. Hvis du har angivet, 100 % vedvarende energi er et krav, er det indregnet i besparelsen.

(a) Screenshot of Information Treatment

Hvis du ikke **selv** ønsker at skifte elskab, kan du abonnere på **GoSwitch** – en uafhængig service, som automatisk flytter din husstand til det billigste tilbud på markedet.
 GoSwitch koster 29 kr. om måneden, og du kan afmelde det når som helst.
 Hvis du benytter linket i slutningen af undersøgelsen, får du den første måned **gratis**.
 Det betyder, at du bliver flyttet til det billigste tilbud på markedet i øjeblikket.

Sådan virker det:

- 1 GoSwitch scanner elmarkedet og beregner din forventede besparelse.
- 2 Du tilmelder dig og giver fuldmagt til, at GoSwitch må skifte leverandør på dine vegne.
- 3 GoSwitch skifter dig til det billigste abonnement, mens du selv står for at betale regningen.
- 4 GoSwitch holder øje med elmarkedet og skifter dig løbende rundt mellem de billige el-abonnemeter.

Linket er personligt for din husstand og må ikke deles med andre.
 Københavns Universitet har ingen forbindelse med GoSwitch, og ingen personoplysninger vil blive delt med GoSwitch.

(b) Screenshot of Broker Treatment

E English Translation of Survey