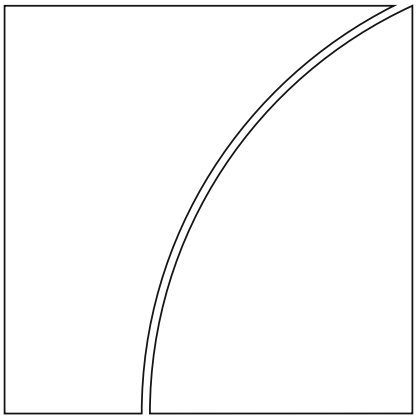

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Consumer preferences for a digital euro: insights from a discrete choice experiment in Austria

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This paper examines consumers' intended adoption of a digital euro in Austria using a discrete choice experiment. We estimate a mixed logit model to quantify the role of key attributes such as privacy, offline functionality, security against financial loss, monetary incentives, and payment form factors. Our findings indicate that security and financial incentives are the strongest drivers of adoption, while respondents do not report strong preferences among the privacy options that are laid out in the experiment. We identify significant heterogeneity in adoption likelihood across socio-demographic groups. Simulations suggest that under realistic design assumptions, approximately 45% of individuals are found to have an intention to adopt a digital euro.

Keywords: central bank digital currency (CBDC), consumer adoption, discrete choice experiment, payment preferences.

JEL classification: E42, D12, G21, C35.

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1. Introduction

How will consumers respond to the introduction of a digital euro? Which features will encourage or discourage its adoption? These are the central questions that this paper addresses through an empirical investigation based on a discrete choice experiment.

The European Central Bank (ECB) aims to introduce a *digital euro*, a secure, widely accepted digital payment method that complements cash. While the technical implementation is within the ECB's domain, widespread consumer adoption is essential for its success. Achieving this requires a robust understanding of consumer preferences and the design features most influential in driving adoption.

Our research informs policymakers by empirically assessing consumer preferences. Although consultative processes, focus groups, and surveys have provided some insights, there remains a significant gap in robust, representative evidence on consumer demand for a digital euro. This paper contributes to our understanding of consumers' payment preferences, which is crucial for the ECB's goal of ensuring the digital euro meets user needs. Our findings can also inform the European Commission's legislative efforts to establish a legal framework for the digital euro, ensuring that it complements existing payment methods and meets consumer needs.[1]

We address these questions through a discrete choice experiment (DCE) embedded within a survey conducted among a representative sample of 1,421 Austrian residents aged 16 and above. The design of the experiment enables us to evaluate trade-offs and interdependencies among various potential features of a digital euro.

Main findings Our choice experiment yields several insights with direct policy relevance:

1. **Monetary incentives drive adoption**: Consumers respond significantly to monetary incentives. The probability of choosing a digital euro increases by *8 percentage points* if it offers *EUR 10 in monthly cost savings* (e.g., via reduced fees or merchant discounts).

2. **Security concerns are paramount**: *Concerns about theft or loss* have the strongest influence on adoption. Reducing potential losses from a full loss (like a stolen wallet) to a capped loss of EUR 250 increases the likelihood of choosing a digital euro by 12 percentage points. This underscores consumers' *strong preference for security* in digital payment options.

[1] See `https://finance.ec.europa.eu/publications/digital-euro-package_en`

3. **Privacy preferences are context-dependent**: Without remuneration, consumers, on average, are *indifferent between two privacy models*—one where banks can access personal and transaction data, and one offering full privacy. Monetary incentives increase adoption under both models, with the effect being one-third lower under limited privacy. This suggests that consumers are willing to trade some privacy in exchange for financial benefits.

4. **Offline functionality has limited impact**: Enabling offline use (as opposed to a purely online option) offers modest benefits, *increasing* adoption likelihood by 4 percentage points.

Additional findings on heterogeneity across consumer groups In line with our pre-registration,[2] we examine heterogeneity across consumer groups, yielding additional insights:

- **Privacy preferences are not uniform**: Privacy-sensitive consumers, approximately one-third of the sample, are found to have a lower adoption intention than privacy-insensitive consumers. Moreover, privacy-sensitive consumers derive greater utility from enhanced privacy than from cost savings. Conversely, the remaining two-thirds of respondents prioritise cost savings over privacy. This finding adds nuance to the dominance of privacy in public discourse.

- **Sociodemographic differences in adoption**: Younger individuals, those with higher education, greater trust in the central bank, and higher financial risk tolerance are more likely to adopt a digital euro. For example, a 20-year-old is 18 percentage points more likely to adopt than a 50-year-old. Trust in the central bank increases adoption likelihood by 15 percentage points.

- **Satisfaction with current payment methods influences preferences**: Consumers who face barriers when using their preferred payment methods are 13 percentage points more likely to adopt a digital euro, indicating that unmet payment needs drive interest in a digital euro.

Our experimental design was tailored to enhance comprehensibility. Respondents were given the option to refuse participation in the experiment. Approximately 20% of the target population of the survey chose not to participate. These non-participants tended to be older, less educated, more reliant on cash, less tech-savvy, more concerned about

[2] The study was pre-registered at AsPredicted.org (AsPredicted #180811).

data privacy, less trusting of the central bank, and less informed about the digital euro. We demonstrate that, under plausible assumptions, the observed *attribute-specific effects* (e.g., privacy, security, offline functionality) are robust to selection effects and can be generalised to the broader population.

Why discrete choice experiments improve upon existing methods To assess consumer choices, we employ a discrete choice experiment (DCE), a well-established method in empirical economics and market research. This approach, first developed by McFadden (1974), has been widely used in various fields, including transportation, health, energy, housing, and marketing (e.g. Louviere et al. 2010, Späti et al. 2022, Jonker et al. 2020), and has recently been applied to the study of CBDC (Choi et al. 2025a, Fairweather et al. 2024). Our contribution lies in applying this method to understand consumer preferences for the digital euro, inquiring about consumer preferences for realistic design features.

In our experiment, survey participants were presented with 10 different choice scenarios, each requiring them to choose between two versions of a digital euro or to choose neither and stay with the status quo. The choices were characterised by five key attributes: the physical form of the payment instrument, the level of personal data protection, the risk in case of loss or theft, online/offline functionality, and cost savings relative to existing payment methods. Importantly, these attributes broadly align with the design decisions currently being discussed by the ECB and the legislative proposals by the European Commission.[3]

We are the first to conduct a DCE to find empirical evidence about consumer preferences for a digital euro. The other approaches that have been used so far are a legal consultation process, focus groups and surveys. In comparison, DCEs have some unique advantages which make them a useful addition to existing approaches.

A DCE uniquely simulates real-world decision-making by presenting consumers with controlled trade-offs between attributes (e.g., privacy, fees, accessibility) and infers their underlying preferences from their choices rather than direct questioning. We see our efforts as complementary to the work on consumer preferences that has been done before. While legal consultations ensure regulatory alignment, a DCE provides empirical validation of consumer needs. While focus groups uncover consumer narratives, a DCE quantifies and generalises these narratives into structured insights. While surveys collect broad attitudinal data, a DCE measures behavioural choices under realistic conditions.

[3] See European Central Bank (2024) and European Commission (2023).

Thus, rather than replacing other approaches, a DCE complements them by adding a structured, quantitative lens to consumer decision-making, ensuring that policy decisions are informed by empirical evidence rather than solely opinions and qualitative insights

Related research Our paper contributes to two strands of the literature. First, we add to research on consumers' adoption of new payment instruments, with a particular focus on central bank digital currency (CBDC). Our key contribution is the use of a discrete choice experiment, a methodology well-suited for analysing the hypothetical adoption of a yet-to-be-introduced payment instrument. This approach allows us to identify critical determinants of CBDC adoption and to assess their relative importance.

Second, we contribute to the literature on transaction data privacy and its role in consumer payment choices. We provide empirical evidence that privacy concerned consumers respond to CBDC models with different degrees of privacy and that these responses vary in the presence of monetary incentives.

Choice experiments on CBDC adoption Our study is most closely related to Choi et al. (2025a) and Fairweather et al. (2024), which present choice experiments conducted in South Korea and Australia, respectively. These papers inform our design and analysis but differ in key aspects.

In Choi et al. (2025a) respondents select between two generic payment instrument attribute bundles, from which demand for CBDC is inferred indirectly. In contrast, in our choice design respondents explicitly evaluate two digital euro variants against the status quo. This design clarifies the interpretation of choices by ensuring that a rejection of both digital euro variants implies a preference for existing payment instruments. Moreover, we reduce the number of attributes from nine to five, improving comprehensibility while aligning with ongoing policy discussions.

Fairweather et al. (2024) analyse consumer valuation of security and privacy for CBDC accounts relative to commercial bank accounts. Their experiment focuses on three attributes: account costs, security (central bank vs. commercial bank), and privacy. In contrast, we present respondents with two digital euro variants and a status quo option. In contrast to Choi et al. (2025a) and Fairweather et al. (2024), we estimate mixed logit models to account for preference heterogeneity, allowing for more realistic substitution patterns.

Two recent papers conduct experimental survey approaches in relation to a digital euro (but do not employ discrete choice experiments). van der Horst and van Gent

(2025) conduct a survey experiment regarding an offline digital euro and find that about two thirds of the Dutch survey participants would be willing to use an offline digital euro. Even relatively low holding limits would not deter consumers from using a digital euro. Some detailed findings from this study are similar to the findings in our paper: privacy concerns are not overly important and a non-negligible share prefers a card over a payment app. Georgarakos et al. (2025) have implemented several smaller experiments within the ECB's Consumer Expectations Survey. One experiment shows that the provision of concise information about the key features of CBDC increases expected adoption. Another experiment varies the holding limit of CBDC and found little effect on the composition of liquid asset holdings.

Empirical studies on payment instrument adoption Our study also builds on the broader empirical literature on consumer adoption of payment instruments, which has traditionally relied on survey data (Shy 2023, Bagnall et al. 2016). More recent research leverages administrative data (Bachas et al. 2021, Brown et al. 2022). These studies consistently highlight the role of sociodemographic factors in payment adoption, which informs our heterogeneity analysis. However, neither survey nor administrative data is well-suited to analyse the potential adoption of a payment instrument that has not yet been introduced. Our stated choice experiment provides a way to overcome this limitation.

Regarding survey-based evidence on CBDC adoption, Bijlsma et al. (2021) examine the factors influencing demand for an account-based CBDC in the Netherlands. They find that respondents' knowledge of CBDC, trust in financial institutions, and monetary incentives are key determinants. Survey evidence from Austria and Slovakia supports these findings: Cupak et al. (2024) highlights the role of central bank trust, while Abramova et al. (2023) and Cupak et al. (2024) find lower demand among cash-preferring consumers. Survey-based studies provide useful complementary insights but remain limited by reliance on stated attitudes rather than choice behaviour. Recent contributions, based on structural economic models, use results from surveys to indirectly assess CBDC demand (e.g. Li 2023, Huynh et al. 2024, Engert et al. 2024, Nocciola and Zamora-Pérez 2024). For example, results on respondents' valuations of payment attributes of existing payment instruments are used to infer the potential demand for CBDC.

The Bank of Canada has conducted a consumer value proposition study on a hypothetical digital Canadian dollar, drawing insights from public consultations, surveys,

and a consumer study involving actual prototypes (Warren et al. 2024). Similar to our findings, offline functionality and the ability to make anonymous payments were not among the top design priorities for consumers.

Transaction data privacy in payment choices Our second contribution is to research on the role of transaction data privacy in payment instrument demand (see Acquisti et al. 2016, Kahn et al. 2000, Garratt and van Oordt 2021). Public consultation by the ECB in 2020 (European Central Bank 2021) suggested that privacy was considered the most important feature of a digital euro by both citizens and professionals. However, such consultations are non-representative and primarily capture the views of engaged stakeholders. Understanding the potential demand for a digital euro requires an empirical assessment of how a representative sample of consumers value privacy under *realistic, technologically feasible* privacy models.

Prior studies have empirically examined the role of privacy in CBDC adoption.[4] Abramova et al. (2023) show that some consumers prioritise security over privacy. Choi et al. (2025b) using a survey experiment in South Korea, vary the level of privacy across three experimental groups. Their findings indicate that privacy preferences depend on transaction type (privacy-sensitive vs. non-sensitive) and payment channel. This highlights the context-dependent nature of privacy concerns.

Our approach advances this literature by estimating the effect of two privacy models on digital euro adoption. Unlike prior research relying on stated attitudes, we measure stated preferences through concrete choices. While our experiment does not explicitly model contextual privacy considerations, it provides an average valuation of transaction data privacy across consumers. Our results offer insights into how privacy is valued and which consumers are more likely to trade privacy for monetary compensation (see e.g., Acquisti et al. 2013, Chen et al. 2021, Armantier et al. 2024). This contributes to a more nuanced understanding of privacy preferences in the context of digital payments.

[4] This paper focuses on the valuation of privacy from the perspective of consumers engaging in transactions. While the broader societal implications of privacy are undoubtedly important, they lie beyond the scope of this study. For discussions on the societal dimension, see, for example, Auer et al. (2025) and Uhlig et al. (2023).

2. The policy challenge: quantifying key design trade-offs

To answer how consumers will respond to the introduction of a digital euro, we design a discrete choice experiment (DCE) embedded in a survey. The overall aim of a choice experiment is to estimate the economic value of different characteristics or features of a good. This estimate is based on stated preferences in concrete choice situations and can therefore be applied even to goods that do not yet have an active market (Louviere et al. 2010).

In our choice experiment, survey respondents are presented with 10 choice tasks, each requiring them to choose between two hypothetical versions of a digital euro or to opt out (i.e., to stay with the status quo). Each choice option is defined by five key attributes (see Table 1): security, privacy, monetary incentives, on-/offline functionality, and form factor.

The questionnaire, containing the exact wording of each attribute and how it is explained to interviewees, is available as a supplement.[5]

2.1. DCE attributes and policy debate

The selected attributes closely reflect the policy discussions at the ECB and the European Commission regarding the design of a digital euro.

Ensuring the safety of holdings in a digital euro is a core concern for policymakers. The ECB's digital euro progress report emphasises that users should not face excessive risks from theft or loss, particularly if offline functionality is introduced.[6] By including varying levels of loss protection, our experiment aligns with the ECB's considerations regarding consumer trust and financial stability.

The ECB's public consultation on the digital euro found that privacy is the most frequently cited concern among citizens and merchants (European Central Bank 2021). The European Commission's Digital Euro Package[7] also acknowledges privacy concerns and proposes safeguards for data protection.[8] By testing consumer preferences for differ-

[5] Since cost savings are important for the interpretation of our results, we present the respective formulation here: "Use of the digital euro is free of charge. However, there could be savings, e.g., because there are no more card fees or because retailers grant you a discount. Assume that the monthly savings amount to ...".

[6] See European Central Bank (2024).

[7] See `https://finance.ec.europa.eu/publications/digital-euro-package_en`.

[8] The Proposal for a Regulation of the European Parliament and of the Council on the establishment of the digital euro by the European Commission contains 37 instances of the term "privacy" (European

Table 1: Attributes and levels in the choice experiment

Attribute	**Levels**	**Rationale**
Security	• No refund - as with the loss of a wallet • Partial refund - maximum loss of EUR 250 • Full refund - no risk of loss	Addresses risk aversion and consumer concerns over financial loss.
Privacy	• personal data and payments *can only be tracked by your bank* • Personal data and payments information *cannot be tracked by anyone*	Reflects public concerns over financial surveillance.
Cost savings (relative to existing payment instruments)	• EUR 10/month savings • EUR 5/month savings • No savings	Tests willingness to adopt in exchange for financial benefits.
On-/offline	• Only with *an existing* internet connection • Even *without* an internet connection	Evaluates demand for resilience in accessibility.
Form factor	• Physical card • Smartphone app	Examines usability preferences.

ent privacy models, our experiment provides empirical evidence on whether consumers would trade off privacy against monetary incentives and how strong such preferences are.

Policymakers face the question of whether the digital euro should be purely neutral in cost or whether incentives (e.g., fee reductions or merchant discounts) could play a role in adoption. Our experiment quantifies how financial incentives influence consumers' willingness to adopt a digital euro.

Offline usability has been a key topic in ECB working papers on digital euro design. The ability to use a digital euro without an internet connection is framed as a way to improve resilience and inclusion, particularly for areas with unstable connectivity. However, it comes with technical and security trade-offs. Our experiment assesses how much weight consumers place on this feature when making adoption decisions.

The ECB and the European Commission have not yet finalised how a digital euro would be accessed, with discussions on whether it should function like a standalone card, a smartphone app, or both. Our experiment provides insights into whether consumers prefer one access method over another.

2.2. DCE attributes and academic debate

While the attributes chosen for our experiment closely align with the policy discussion of the ECB and the European Commission, they are also supported by existing academic research. Economic theory and behavioural research suggest that each of these attributes plays a significant role in consumer payment choices.

There is a large academic literature confirming that security matters for risk-averse consumers. Consumers tend to be risk-averse when choosing financial instruments (Kahnemann 2011). Ensuring protection against loss or theft can reduce perceived risks and increase adoption.

With respect to privacy, prior research shows that while consumers value privacy, they

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Commission 2023). This reflects the central role of data protection in the design of the digital euro. Two illustrative examples underscore this emphasis:

In Article 25, the proposal states: "The European Central Bank should implement appropriate technical and organisational measures, including state-of-the-art security and privacy-preserving measures, to ensure that the identity of individual digital euro users cannot be linked with the information in the single access point by entities other than payment service providers whose client or potential customer is the digital euro user" (European Commission 2023).

In Article 71, it further notes: "The digital euro should be available offline, with a level of privacy vis-à-vis payment service providers which is comparable to withdrawals of banknotes at automatic teller machines" (European Commission 2023).

often trade it for tangible benefits (Acquisti et al. 2013, Chen et al. 2021, Armantier et al. 2024). Our experiment reveals the extent to which consumers are willing to make such a trade-off and how this willingness varies across individuals.

Economic models suggest that consumers weigh benefits and costs when choosing among payment options (Shy 2023), thus confirming the conjecture that monetary incentives affect adoption probability. If a digital euro offers cost savings, adoption is likely to be higher, but the magnitude of the effect is an empirical question.

Research on payment habits shows that accessibility is a key determinant of adoption (Bagnall et al. 2016). If a digital euro can be used offline, it may appeal to consumers who currently rely on cash for its universal acceptance.

The way a payment instrument is presented (card vs. app) affects convenience, particularly for different demographic groups. Older consumers, for example, may favour a card-based solution, whereas younger users may prefer app-based payments (Cupak et al. 2024, Warren et al. 2024). The literature therefore confirms that form factor influences usability and consumer habits.

By systematically varying these different attributes in our experiment, we provide direct empirical evidence on the trade-offs consumers make when considering digital euro adoption. These findings are critical for policymakers aiming to design a digital euro that meets user needs while ensuring broad adoption.

3. Measuring preferences for a hypothetical payment instrument

Measuring consumer preferences for a hypothetical payment instrument such as the digital euro presents methodological challenges. Unlike existing payment methods, a digital euro is not yet available, requiring an approach that captures preferences in a structured and decision-relevant way.

3.1. DCE implementation

To address this, we implemented a discrete choice experiment (DCE) embedded in a survey with 1,421 randomly selected Austrian residents aged 16 and older. The survey was conducted between March 3^{rd} and May 31^{st} 2024 using both computer-assisted personal interviews (CAPI, 89%) and computer-assisted web interviews (CAWI, 11%).

The questionnaire started with warm-up questions on payment habits and preferences.

It then moved to an initial awareness check, where respondents were asked whether they had previously heard about the digital euro. Then a professionally produced 2-minute video explained key aspects of the digital euro, including how payments could be conducted and its relationship to existing payment methods. We also included a pre-experimental interest assessment. Respondents were asked to indicate their general interest in the introduction of a digital euro.

The sequence of questions and actions taken in the experiment is symbolised in a flowchart (Figure 1). First, it is explained that the introduction of the digital euro has not been decided yet and that we are interested in the preferences of interviewees. Interviewers present a showcard and explain the five attributes and the attribute levels.

Next, respondents are randomly assigned to one of three blocks with each containing 10 choice sets. Each choice set is presented on a showcard and interviewees choose either "Digital euro variant 1", "Digital euro variant 2" or neither of them (status quo). This defines the dependent variable in the estimations.

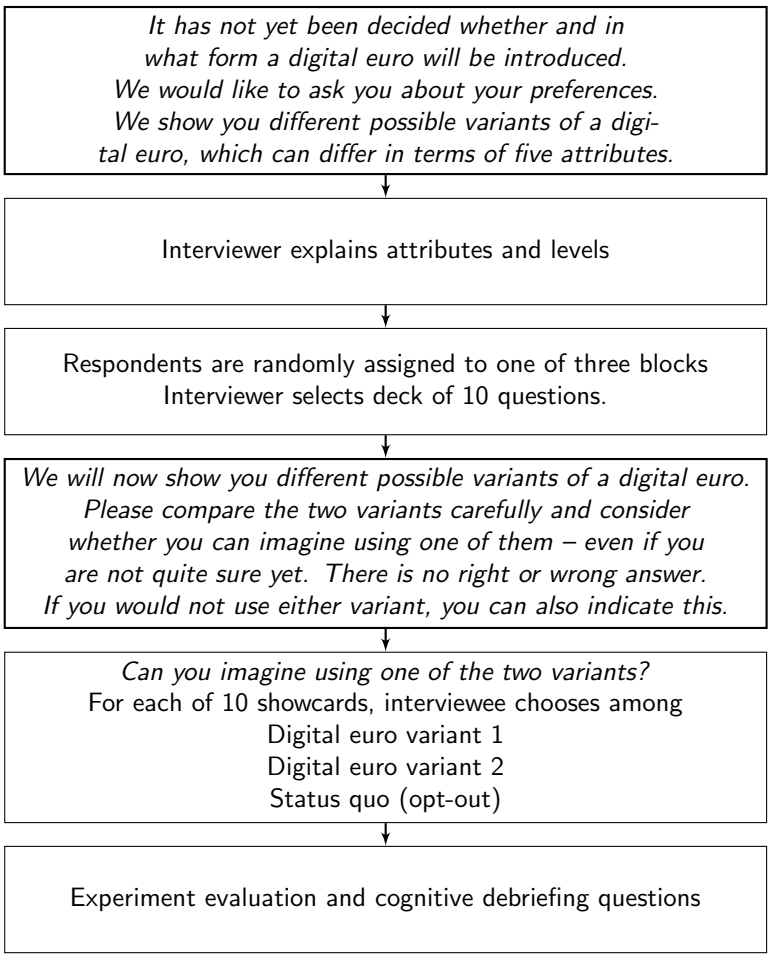
After completion of all choice sets, we ask evaluation and cognitive debriefing questions. In the case of computer-assisted web interviews, the explanation and the choice experiment have been implemented on-screen without an interviewer intervention.

3.2. Experimental design

The five specified attributes with their respective levels define 72 variants of a digital euro, implying 2,556 different possibilities for pairwise comparison. To keep the interview situation manageable in face-to-face computer-assisted personal interviews (CAPI), where interviewers work with printed showcards, and simultaneously avoid testing respondents' patience, we utilise a blocked fractional factorial design consisting of three blocks of 10 choice tasks. Each respondent is randomly assigned to one of the blocks. Within blocks the order of the choice sets and the order of the alternatives within the choice sets are kept fixed. Thus, interviewers only need to carry three stacks of showcards, each containing 10 cards for the choice tasks.

The specific choice sets were generated using the `dcm.design` function from the R-package `choicesDes` (Horne 2022), which employs a modified Federov algorithm to generate D-efficient, balanced (equal representation of attribute levels), and blocked choice sets from a full-factorial candidate set (for a general discussion, see Bliemer and Rose 2024). None of the choice sets contains a dominant variant.

Figure 1: Flowchart of experiment



3.3. Observed choice behaviour

Figure 2 illustrates respondents' choice behaviour categories based on their experiment responses. We define individuals who refrained participation in the experiment as *Defier* – for them we do not observe experimental data. Respondents who choose to opt out in all 10 choice tasks are labelled *Never taker*. If individuals opt out in 6 to 9 choice tasks, we classify them as *Rarely taker*. *Sometimes taker* opt-out in only 1 to 5 tasks, i.e. in the majority of tasks a digital euro variant is chosen, and *Always taker* choose the digital euro in all 10 choice tasks.

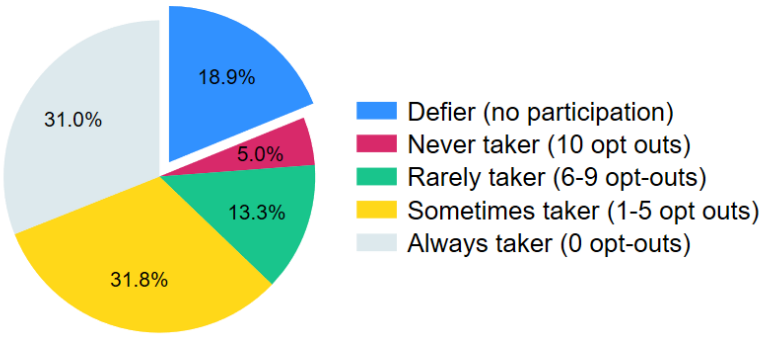


Figure 2: Choice behaviour. The figure shows choice behaviour at the respondent level (in percent). Results are weighted and refer to population shares.

These shares are visualised in Figure 2. Always taker and Sometimes taker have a combined share of 62.8% of the population. This share seems rather high. First, we think that the video was very important because it showed how a digital euro can be used for payments, how it relates to existing digital payment instruments and it addresses potential concerns, like privacy.[9] Second, the central question was framed as follows "*Please compare [the variants] carefully and consider whether you can imagine using one of them – even if you are not entirely sure yet*". Thus, interviewees could indicate their interest in a potential use. Therefore, we interpret the outcome from our experiment as an intention to adopt and respective results should be treated as an upper bound.

The behaviour of "Defier" and "Never taker" could be driven by a genuine lack of

[9] Georgarakos et al. (2025) conduct an information experiment. The presentation of a short video increases the likelihood of CBDC adoption by 12 percentage points.

demand for (or interest in) a digital euro, which we aim to measure. Alternatively, the answering behaviour could reflect a general disinterest in the survey. The evidence presented in Appendix B is consistent with defying and never taking being closely related to a lack of interest in a digital euro. Hence, we will argue that about 24% of the population have no apparent demand for a digital euro.

For Defiers we have no information on how they would have chosen had they participated in the experiment – and the results in Table B.1 in Appendix B clearly indicate that participation in the experiment is not random. This strongly cautions against simply extending the experimental findings to the entire population. To derive conclusions for all survey participants we apply two options.

First, we correct for non-participation by applying inverse probability weights. We model participation in the experiment and predict the probability of participation. Inverting and scaling these probabilities corrects for the missing data—those with low participation probabilities are given more weight to mimic the likely behaviour of Defier. The key assumption is that the logit model which determines participation is correctly specified and that there are no other (unobserved) variables driving participation.

Figure 3 plots marginal effects from the logit model of participation that we use to compute inverse probability weights. In general, the logit model has a rather good fit and confirms the importance of the individual variables mentioned above.[10]

The second approach is to assume that Defiers would always have chosen opt-out if they participated in the experiment, i.e., they would have behaved like Never takers. This is a strong but reasonable assumption, given Defiers' lack of interest in the topic. The assumption upholds that non-participation is driven by utility considerations in relation to a digital euro and not by other considerations, like survey fatigue, dissatisfaction with the interviewer, etc.[11] The problem of missing data is solved by ex post simulating a random assignment of experiment tasks to Defiers.

Our preferred approach is inverse probability weighting. However, we will occasionally also report results from the second approach. Reassuringly, many of our results regarding

[10] Note that we also included variables like "No answer regarding income" or the share of don't know answers. These variables were insignificant, indicating that participation is not driven by survey fatigue, dissatisfaction with the interview, etc. A table of results is shown in the Supplement.

[11] We consider this assumption reasonable for two reasons: First, we observe that among the 449 respondents who initially stated that they are not at all interested in a digital euro, 158 were probed and could be convinced to nevertheless participate in the experiment. Among these "probed defiers" only 3% believe that a digital euro generates overall benefits for them and 71% are Never taker or Rarely taker. Second, a close association between beliefs about whether a digital euro provides personal benefits and choice behaviour can also be observed for Never takers. Among Never takers, 0% state that a digital euro is beneficial (see Table B.1).

marginal effects are qualitatively similar across the two approaches. To compare: In our preferred approach, Defiers are probabilistically distributed across all types ("Always taker", "Sometimes taker", "Rarely taker" and "Never taker"). In the latter approach, all Defiers are assigned as "Never takers". Therefore, expected adoption is lower in the latter approach (i.e., the alternative-specific constant is larger).

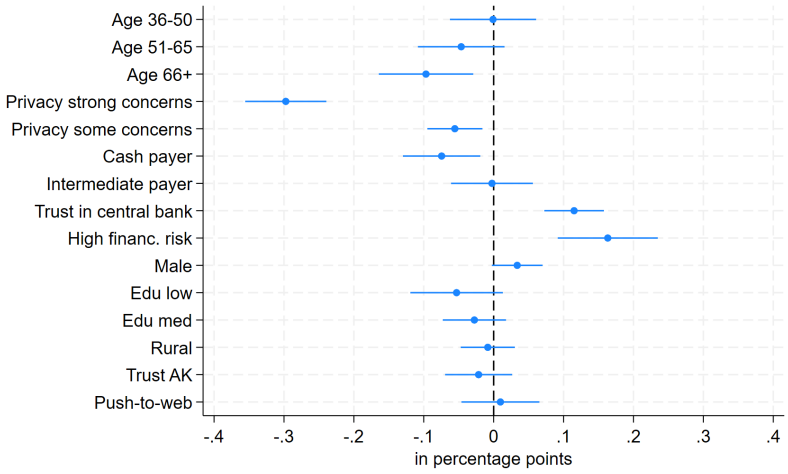


Figure 3: Participation in the experiment. The figure shows average marginal effects in percentage points and the corresponding 95% confidence intervals. Results are derived from a logit model. The dependent variable is a dummy variable indicating participation in the experiment.

4. What drives consumer adoption?

4.1. Estimation approach

To quantify the relative importance of different digital euro attributes, we estimate a mixed logit model (Train 2009). The key advantage of this approach is that it allows preference parameters to vary across respondents rather than assuming everyone has identical preferences.

Each respondent faces a choice among three options:

1. DE1: A first variant of the digital euro
2. DE2: A second variant of the digital euro
3. SQ (Status Quo): The option of not adopting the digital euro

For respondent i, the utility associated with choosing alternative $j = 1, 2$ is given by:

$$U_{ij} = \beta_i' x_{ij} + \epsilon_{ij} \tag{1}$$

where:

- x_{ij} represents the attributes of the digital euro (e.g., security, privacy, financial incentives, offline functionality, and form factor).
- β_i' are individual-specific preference parameters, capturing how strongly each respondent values these attributes.
- ϵ_{ij} is an error term following an extreme value distribution, capturing unobserved factors that influence choices.

The utility of the status quo (SQ) alternative is slightly different because it has no associated attributes like the digital euro variants. Instead, it is given by:

$$U_{i,SQ} = \alpha_i ASC_{SQ} + \epsilon_{i,SQ} \tag{2}$$

where:

- ASC_{SQ} is a dummy variable for the status quo alternative and
- α_i represents consumer 's valuation (or utility) of the status quo relative to the digital euro baseline specifications (the constant terms in the utility functions for the digital euro variants are normalised to 0).[12]

In our model, only differences in utility between alternatives matter, and the overall scale of utility is arbitrary. This means that we can estimate how much more (or less) attractive a digital euro is compared to the status quo, but not absolute utility levels. All effects are measured relative to the status quo.

To account for differences in preferences across individuals, we assume that the parameters:

$$\boldsymbol{\beta_i} = (\alpha_i, \beta_i')$$

[12] Note that α_i reflects any difference between the status quo and the digital euro including a larger valuation of the status quo or any kind of adoption costs. Empirically, we cannot discriminate between them.

are *iid* over respondents from the probability distribution $F(\boldsymbol{\beta}|\Omega)$ with density $f(\boldsymbol{\beta}|\Omega)$, where Ω is a vector of parameters of this distribution, such as the mean and the variance. In practical terms, this means that:

- Some respondents may place, for example, high importance on privacy, while others may care more about cost savings.
- We estimate both the average effect of each attribute and how much preferences vary across individuals.
- We assume that preferences for different attributes are uncorrelated, i.e. $F(\boldsymbol{\beta}|\Omega)$ is specified as a product of independent marginals.[13] We assume a normal distribution for "ASC Status quo", "Card", and "Privacy" and a lognormal distribution for "Also offline", "Loss none", "Loss limited", and "Monthly savings".[14]

Individuals know their own preferences and make choices accordingly, choosing alternative j over k if:

$$U_{ij} > U_{ik}, \quad \forall k \neq j.$$

However, as researchers, we only observe the choices respondents make, not their underlying utility functions. Our goal is to estimate the *mean and variance* (Ω) of the preference distribution $F(\boldsymbol{\beta}|\Omega)$ based on the observed choices.

We estimate the model using Stata's `mixlogit` package (Hole 2007) and cross-check the results using the R package `Apollo` (Hess and Palma 2019, Hess and Palma 2025) (in each case using at least 1,500 integration points). All data and code are available in the replication package.[15]

As the point estimates are not directly interpretable in terms of adoption probabilities, we compute marginal effects – i.e., the estimated change in the probability of choosing the

[13] While allowing for covariance would enable modelling more complex preference structures (e.g., individuals who strongly value both privacy and security), doing so adds considerable estimation complexity and is often only weakly identified in survey data with limited repeated choices per respondent.

[14] We assume a lognormal distribution for all variables for which we expect that all individuals have a positive coefficient. Regarding privacy, one could presume that all individuals strictly prefer more privacy over less privacy. This must not necessarily be the case as some respondents could value the social effects of privacy while other, for example, might perceive that full anonymity could also have detrimental effects (e.g. regarding tax evasion or other illicit activity).

[15] In the pre-registration, we stated that we will exclude Never takers, as we expected their share to be relatively large. As Never takers make up only a rather small share, we decided to include them in the estimations. In unreported robustness tests we excluded Never takers and find that the results regarding attribute importance are qualitatively similar.

status quo given a specific change in an explanatory variable. These marginal effects are simulated and averaged over all choice tasks (or individuals).[16] This approach provides a more intuitive interpretation of how changes in digital euro attributes affect adoption likelihood.

To ensure robustness, standard errors are clustered to account for the fact that each individual makes multiple choices.

4.2. Key findings: Which attributes do consumers value most?

Table 2 shows results from a baseline model with random coefficients. The model contains the choice specific variables (the attributes) as well as one alternative specific constant which measures the status quo option ("ASC Status quo").

Column 1 shows unweighted results, which are, as argued, plagued by non-participation bias. Column 2 and 3 correct for sample selection effects: Column 2 applies inverse probability weights and column 3 upholds that all Defiers would always choose opt-out. The difference between the models can be seen in sizeable differences in the ASC Status quo coefficients. Regarding the attribute effects, we note that most variables are statistically significant, confirming that the observed relationships are unlikely to be due to chance. Apart from the alternative specific constant, we find only relatively minor differences in estimation results across the three models, which is reassuring.[17]

In the following, we focus on the column 2 results, which is our preferred specification. Specifically, we discuss marginal effects implied by the point estimates.

Key findings

1. **Security is the strongest driver of adoption**: Reducing potential losses from full loss to a *capped loss of EUR 250* increases digital euro adoption likelihood by 12 percentage points, while *full loss protection* increases adoption by 23 percentage points.

2. **Monetary incentives significantly increase adoption**: Cost savings of EUR 5 per month increase the likelihood of digital euro adoption by 4 percentage points, while EUR 10 per month lead to a 8 percentage point increase.

[16] Note that we have not computed confidence intervals for these marginal effects.

[17] The reader might notice that the number of persons in column 2 is lower than in column 1. The reason is that some observations are lost when computing the probability weights.

Table 2: Baseline model: accounting for non-participation

	Unweighted	Weighted	Unweighted incl. Defiers
	(1)	(2)	(3)
Mean			
ASC Status quo	2.901***	3.183***	4.684***
	(0.227)	(0.248)	(0.285)
Privacy	0.137**	0.153**	0.139**
	(0.066)	(0.072)	(0.065)
Card	0.859***	1.105***	0.845***
	(0.112)	(0.131)	(0.112)
Also offline	-2.257***	-2.063***	-2.386***
	(0.327)	(0.302)	(0.303)
Loss none	1.174***	1.136***	1.142***
	(0.046)	(0.051)	(0.046)
Loss limited	0.562***	0.536***	0.580***
	(0.054)	(0.064)	(0.063)
Monthly savings	-2.594***	-2.870***	-2.748***
	(0.188)	(0.158)	(0.112)
SD			
ASC Status quo	5.008***	4.922***	6.886***
	(0.223)	(0.234)	(0.293)
Privacy	0.985***	1.019***	0.943***
	(0.118)	(0.131)	(0.135)
Card	2.743***	2.818***	2.961***
	(0.136)	(0.166)	(0.167)
Also offline	2.000***	1.972***	2.124***
	(0.201)	(0.151)	(0.132)
Loss none	0.682***	0.683***	0.666***
	(0.040)	(0.057)	(0.044)
Loss limited	0.329***	0.335***	0.253
	(0.047)	(0.076)	(0.157)
Monthly savings	1.221***	1.465***	1.330***
	(0.244)	(0.110)	(0.059)
LogL	-7998.93	-7388.42	-8455.73
N	11300	10730	14210
Persons	1130	1073	1421

Note: The table shows results from mixed logit models. The dependent variable is Choice, which is one for the chosen alternative and 0 otherwise. Column 1 shows results for the unweighted sample excluding Defiers. Column 2 applies inverse probability weights. Column 3 shows results for the sample including Defiers, assuming that all Defiers would behave like Never takers. "ASC Status quo" denotes the alternative-specific constant of the status quo ("opt-out") option. Standard errors adjusted for clustering at the person level are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

3. **Privacy concerns are surprisingly neutral, on average**: Contrary to public discourse suggesting strong privacy concerns, respondents *do not systematically prefer full privacy* over limited privacy. The marginal effect is close to zero.

4. **Offline functionality has limited impact**: Enabling offline transactions increases the probability of choosing the digital euro by only 4 percentage points.

5. **Form factor matters**: On average, respondents prefer a *payment card* over a *smartphone app* (the difference in adoption probability is 6 percentage points) most likely reflecting existing payment habits.

Preference heterogeneity and model superiority The results in Table 2 also reveal substantial preference heterogeneity, meaning that individuals' choices vary significantly based on their preferences. This can be seen by the significant point estimates of the parameters' standard deviations.[18]

Interpreting the alternative-specific constant The estimated mean of the alternative-specific constant (ASC) for the status quo is positive, meaning that - all else equal - individuals tend to prefer the status quo over the digital euro.[19]

Importantly, the standard deviation of the ASC coefficient is large, indicating strong heterogeneity in preferences. In the model of column 2, the point estimates suggest that 69% of individuals prefer the status quo, while 31% would opt for a digital euro.[20] Figure 4 visualises the empirical distribution of the ASC coefficients across individuals. The distribution is bimodal, with two peaks - one in the negative and one in the positive domain - suggesting that respondents are polarised in their preferences rather than being centred around a neutral stance. The share of individuals who are truly indifferent (ASC near zero) is relatively low.

Overall, our baseline results are informative about the quantitative effects of explanatory variables and about preference heterogeneity. This informs our further analysis which is organised along three dimensions: First, we will discuss expected adoption that

[18] Negative estimated standard deviations can be interpreted as positive coefficients due to their squared nature.

[19] The ASC coefficient measures the average preference for the status quo relative to a digital euro with the following baseline attributes: limited privacy, no offline functionality, full loss, zero monthly savings, and available as an app. This coefficient captures factors such as status quo bias, unobserved personal characteristics, or dissatisfaction with the survey.

[20] These numbers do not reflect predicted adoption of a digital euro. As with the constant in an OLS regression, the ASC changes with how the explanatory variables are coded.

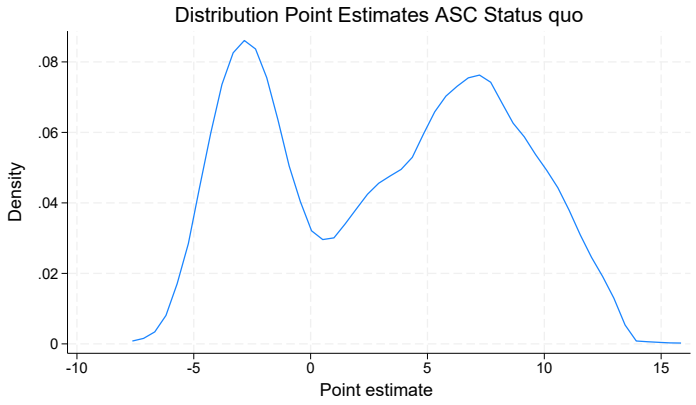


Figure 4: The figure shows the distribution of estimated individual-specific coefficients of ASC Status quo (derived from column 2 of Table 2).

follows from these results. Second, we will add individual-specific variables to understand the drivers of status quo preferences. Moreover, we will see whether the addition of individual-specific variables alter the baseline results. Third, we will conduct subsample regressions to scrutinise the heterogeneous response regarding some of the explanatory variables.

5. Expected adoption

Potential adoption is a key concern for policymakers and society. The baseline estimates allow us to simulate expected adoption rates in the broader population. Using the results from column 2 of Table 2, we derive individual-specific choice probabilities for different implementation scenarios.

Adoption under different digital euro designs Since adoption rates depend on the specific attributes of the digital euro, we simulate take-up under two contrasting scenarios:

1. A realistic implementation: Reflecting what is most likely in an initial CBDC rollout, we assume: No monetary incentives, unlimited financial loss in case of theft or loss, limited privacy, offline functionality enabled, available as a payment card.

2. An idealised, highly attractive implementation: Optimised based on our estimates, we assume: EUR 10 monthly savings incentive, full financial loss protection (zero

liability), full privacy, offline functionality enabled, available as a payment card.

Although we consider the idealised implementation unrealistic, the result provides us with an impression of the heterogeneity caused by different features of a digital euro.

Expected adoption Under a realistic implementation, the average probability of choosing the digital euro is 45%.[21] Under an idealised (and unrealistic) implementation, predicted adoption rises to 74%.

This means that 45% of individuals in our sample would derive greater utility from a realistically designed digital euro compared to the status quo. For reference, the estimated take-up rate including Defiers (column 3 of Table 2) is 37%. In this case, expected adoption is lower because we assume that all Defiers would always choose the status quo if they participated in the experiment.

Qualifications We note that these estimates represent an upper bound. First, the choice probabilities must be interpreted in the context of the experiment and the framing of the questions. Specifically, respondents were encouraged to consider using a digital euro, even if they were not quite sure (see Figure 1). Second, our experiment does not explicitly consider adoption costs - implicitly these costs are contained in the individual-specific ASC. Pecuniary or non-pecuniary adoption costs will have a detrimental effect on adoption (cf. Nocciola and Zamora-Pérez 2024). Although our results refer to intended adoption and use we cannot quantify the intensity of use.

5.1. Individual-specific variables

A well-documented finding in the payments literature is that the likelihood of adopting a new payment technology depends on socio-economic characteristics such as age, income, or education (Shy 2023, Bagnall et al. 2016). Additionally, adoption can be affected by unmet payments needs. In this subsection, we examine whether these factors also influence potential adoption of a digital euro.

5.1.1. The role of socio-demographic variables and trust

Table 3 presents two variants of a specification incorporating individual-specific factors. These variables are interacted with the alternative-specific constant for the status quo,

[21] This finding is similar to results from an ECB survey which has also been conducted in spring 2024 (Georgarakos et al. 2025). The ECB survey finds an adoption rate of 45%, derived from a direct question about whether respondents would adopt a digital euro.

meaning that a positive coefficient indicates a higher likelihood of choosing the status quo. The two specifications again refer to our two approaches of handling the missing data: inverse probability weighting and assuming that Defiers behave like Never takers.

We include the following baseline socio-demographic variables: Age, education, rural vs. urban residence.[22] Since a substantial share of respondents did not provide income data, we use education as a proxy for income. As outlined in our pre-registration, we extended the list of covariates by trust in the central bank, risk preferences and privacy concerns. In line with the literature we expect higher status quo preference among: Older individuals, lower-educated individuals, cash users, respondents with low tech-affinity, persons with low trust in the central bank and individuals with privacy concerns about digital payments to have higher status quo preferences.

Key findings Importantly, the inclusion of individual-specific variables does not qualitatively affect the estimates for choice-specific variables. In the following, we focus on the role of individual-specific characteristics. The marginal effects are based on the weighted specification (column 1 of Table 3) and may reflect both the value of the status quo or adoption costs.

1. **Adoption decreases with age**. The probability of choosing the digital euro decreases by 6–7 percentage points for every additional 10 years of age. A 20-year-old is 18 percentage points more likely to choose the digital euro than a 50-year-old.

2. **Higher educated are more likely to adopt**. Higher-educated (higher-income) respondents are 14 percentage points more likely to adopt a digital euro than those with lower education.

3. **Trust in the central bank fosters CBDC adoption.** A person who trusts the central bank is 15 percentage points more likely to choose a digital euro. We find that trust in banks is insignificant, suggesting that trust in the issuer of money matters more than trust in banks as payment facilitators.[23]

4. **Risk attitudes matter.** A high financial risk tolerance (willingness to take substantial financial risks for potential high returns) is associated with higher adoption preferences. Risk-loving individuals which make up for 21% of the population are 28 percentage points more likely to choose the digital euro. Since our model selection is not grounded in a theoretical framework, we treat the role of risk attitudes

[22] Gender was included but was never significant. To ease estimation, we drop it.
[23] Trust in the Chamber of Labour (Trust AK) is included as a control for general trusting behaviour.

Table 3: Individual-Specific Variables and Status Quo Preference (selected results)

	Weighted	Unweighted incl. Defiers
	(1)	(2)
Mean		
ASC Status quo	4.807***	6.423***
	(0.795)	(0.780)
ASC SQ * Age	0.103***	0.136***
	(0.012)	(0.012)
ASC SQ * Edu low	2.256***	2.740***
	(0.781)	(0.621)
ASC SQ * Edu med	0.594	0.922**
	(0.400)	(0.394)
ASC SQ * Rural	0.623*	0.440
	(0.320)	(0.451)
ASC SQ * Trust CB	-2.432***	-3.714***
	(0.646)	(0.701)
ASC SQ * Trust banks	0.131	-0.469
	(0.459)	(0.504)
ASC SQ * Trust AK	0.137	0.507
	(0.663)	(0.431)
ASC SQ * Cash payer	0.333	0.755*
	(0.524)	(0.443)
ASC SQ * Interm payer	-0.133	-0.104
	(0.562)	(0.460)
ASC SQ * Privacy strong concerns	0.642	3.575***
	(0.520)	(0.536)
ASC SQ * Privacy some concerns	-0.356	0.101
	(0.433)	(0.361)
ASC SQ * Risk high	-4.877***	-6.322***
	(0.433)	(0.610)
Privacy	0.140**	0.137**
	(0.070)	(0.068)
Card	1.100***	0.798***
	(0.132)	(0.110)
Also offline	-2.179***	-2.428***
	(0.355)	(0.285)
Loss none	1.168***	1.181***
	(0.050)	(0.046)
Loss limited	0.536***	0.593***
	(0.060)	(0.057)
Monthly savings	-2.772***	-2.696***
	(0.138)	(0.117)
LogL	-7118.04	-7624.76
N	10720	13360
Persons	1072	1336

Note: The table shows selected results from mixed logit models. The full table is shown in the Supplement. The dependent variable is Choice, which is one for the chosen alternative and 0 otherwise. Column 1 shows results with inverse probability weights. Column 2 shows results for the sample including Defiers, assuming that all Defiers would behave like Never takers. "ASC Status quo" denotes the alternative-specific constant of the status quo ("opt-out") option. Standard errors adjusted for clustering at the person level are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

as an empirical fact. The importance could be driven by correlations with unobserved variables, e.g. like tech savviness which is correlated with financial risk preferences.[24]

5. **No difference in payment behaviour**. Interestingly, we find no significant difference between cash payers and card payers. Also, privacy concerns are found to be insignificant.[25]

Heterogeneity of preferences Figure 5 presents density plots of the simulated distribution of the probability of choosing a digital euro with a realistic implementation (as defined above) for selected socio-economic variables. This provides an impression of the heterogeneity across individuals within a sociodemographic group as well as the difference between groups. Age, education, risk preferences and trust in the central bank are important factors contributing to preference heterogeneity and the bimodal shape of status quo preferences.

5.1.2. Unmet payment needs

One potential driver of the demand for CBDC is the inability to always make payments in line with one's preferences. For instance, this may affect a card-savvy consumer who is only able to pay with cash, or vice versa. It may also apply to specific payment situations, such as high-value transactions or person-to-person payments. In contrast, acceptance of the digital euro would be universal, as stipulated in the European Commission's proposal, and survey participants were informed of this feature.

The survey elicited information about the perceived non-acceptance of payment instruments for various types of transactions. Specifically, we asked how often respondents can pay according to their preferences and define dummy variables which are 0 if respondents can "always" pay how they like and 1 if they answer "most of the time", "rarely" or "never". In addition, we define a composite measure summarising all domestic spending categories ("Non-acceptance"). This indicator is 1 if a person cannot always pay how she prefers, which applies to 61% of respondents (weighted). To test whether

[24] A previous survey wave contained an explicit question about tech savviness. Among persons with high financial risk tolerance, 33% declare themselves as highly interested in new devices or applications. Among risk averse persons, the respective share is 7%.

[25] Note that the interpretation of the variable "ASC SQ * Privacy strong concerns" differs from "Privacy". The former is individual-specific and the latter is choice-specific. The former measures a tendency of a person to choose the status quo, independent from the digital euro variants shown to him. The latter measures whether a digital euro variant with a specific privacy model affects the likelihood of the status quo, independent from any individual-specific effects.

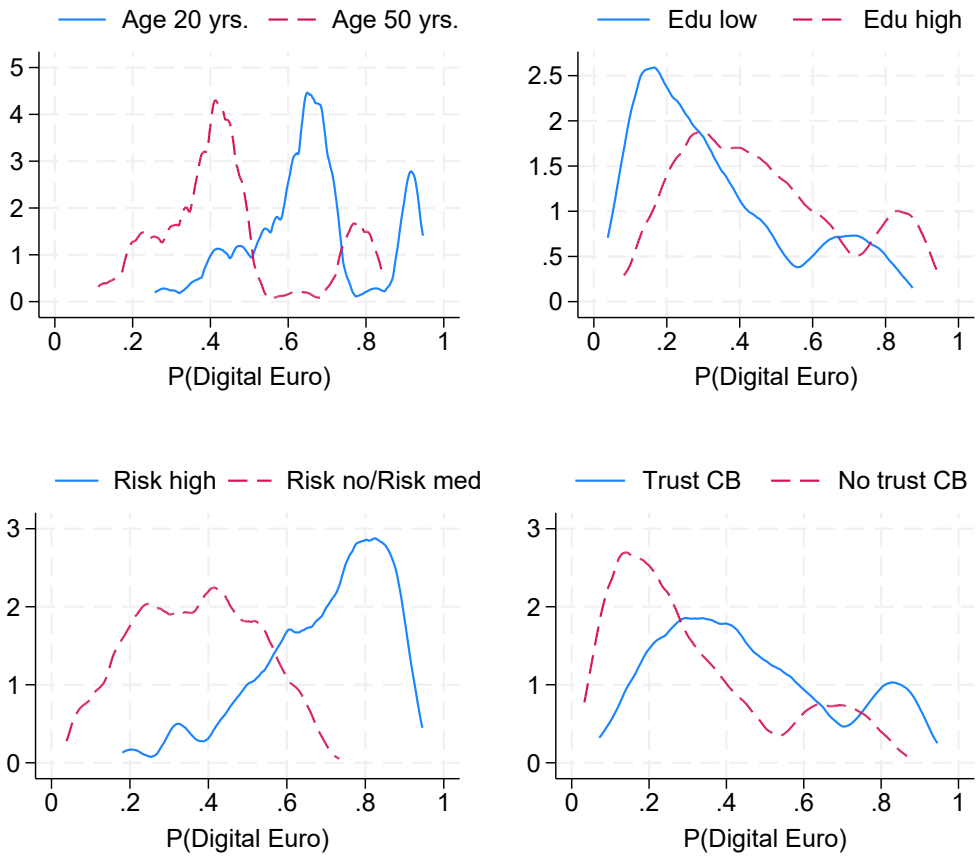


Figure 5: The figure shows the distribution of the probability of choosing a realistic implementation of a digital euro for selected socio-demographic variables. The graphs are based on column 1 of Table 3.

perceived non-acceptance affects choice probabilities, we add perceived non-acceptance to the previous model. Selected results are summarised in Table 4.[26]. The column 1 results imply that perceived non-acceptance increases intentions to adopt CBDC by 13 percentage points.

In columns 2 to 7, we decompose perceived non-acceptance into individual payment situations. Perceived non-acceptance for daily transactions and for small-value transactions exert no significant effect. We find significant effects for high-value transactions (above 2,000 euro, 11 percentage points), catering (food and beverage services, 10 percentage points), person-to-person payments (9 percentage points), and payments on the internet (5 percentage points).

Overall, these findings seem plausible. For daily expenditures it is almost always possible to pay with both cash and card, accordingly respondents report the lowest level of perceived non-acceptance for this category. The highest shares of respondents with unmet payment needs are found for high-value payments, food and beverage services and internet payments.

Despite their plausibility, caution is warranted regarding the individual spending categories. We note that the significance can vary with the addition or omission of individual-specific variables, which can be attributed to correlation among behavioural variables. In contrast, the finding regarding the overall measure of perceived non-acceptance is robustly significant across different specifications.

6. Differences across consumer groups

So far we have included individual-specific variables to understand the drivers of status quo preferences. In a next step, we will conduct regressions for subsamples to scrutinise the heterogeneous response regarding some of the explanatory variables.

6.1. A closer look at the role of privacy

Our previous findings suggest that a stronger or weaker privacy model has only a minor impact on choice probabilities (as indicated by the variable Privacy). At the same time, survey-based studies and public consultations highlight the importance consumers place on privacy concerns. In this section, we delve deeper into this issue by examining whether

[26] Full results are presented in the Supplement. Adding perceived non-acceptance does not affect our findings regarding the socio-demographic variables, qualitatively

Table 4: Individual-Specific Variables and Perceived Non-Acceptance (selected results)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ASC SQ * Non-acceptance	-2.030***						
	(0.490)						
ASC SQ * Daily		0.613					
		(0.476)					
ASC SQ * Small-value			-0.808*				
			(0.489)				
ASC SQ * High-value				-2.020***			
				(0.385)			
ASC SQ * Catering					-1.599***		
					(0.344)		
ASC SQ * P2P						-1.296***	
						(0.479)	
ASC SQ * Internet							-0.757**
							(0.382)
LogL	-7102.71	-7114.61	-7105.40	-7064.40	-7105.69	-7110.87	-7112.92
N	10720	10710	10710	10680	10710	10710	10710
Persons	1072	1071	1071	1068	1071	1071	1071

Note: The table shows selected results from mixed logit models applying inverse probability weights. The point estimates denote the mean of perceived non-acceptance interacted with ASC SQ. The first column shows overall perceived non-acceptance. Columns 2–7 show results for specific spending categories. In each column the shown variable is added to the model in column 1 of Table 3. The full table is shown in the Supplement. Standard errors adjusted for clustering at the person level are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

the effect of privacy depends on monthly cost savings, and whether its role differs across subsamples with different levels of privacy concerns.

We first introduce an interaction effect between Privacy and Monthly savings. The left panel of Figure 6 visualises the simulated marginal effects.

Three key insights emerge:

1. Adoption likelihood increases with monthly cost savings, regardless of whether a weaker form or stronger form of privacy is offered to respondents.

2. In the absence of monetary incentives, consumers are indifferent between the two specific privacy models used in the experiment – their likelihood of choosing the digital euro is similar.

3. Only with increasing monthly savings, a full privacy digital euro has a slightly higher adoption rate – for instance, at EUR 10 per month, adoption is 4 percentage points higher for the stronger privacy model. This difference is statistically significant.

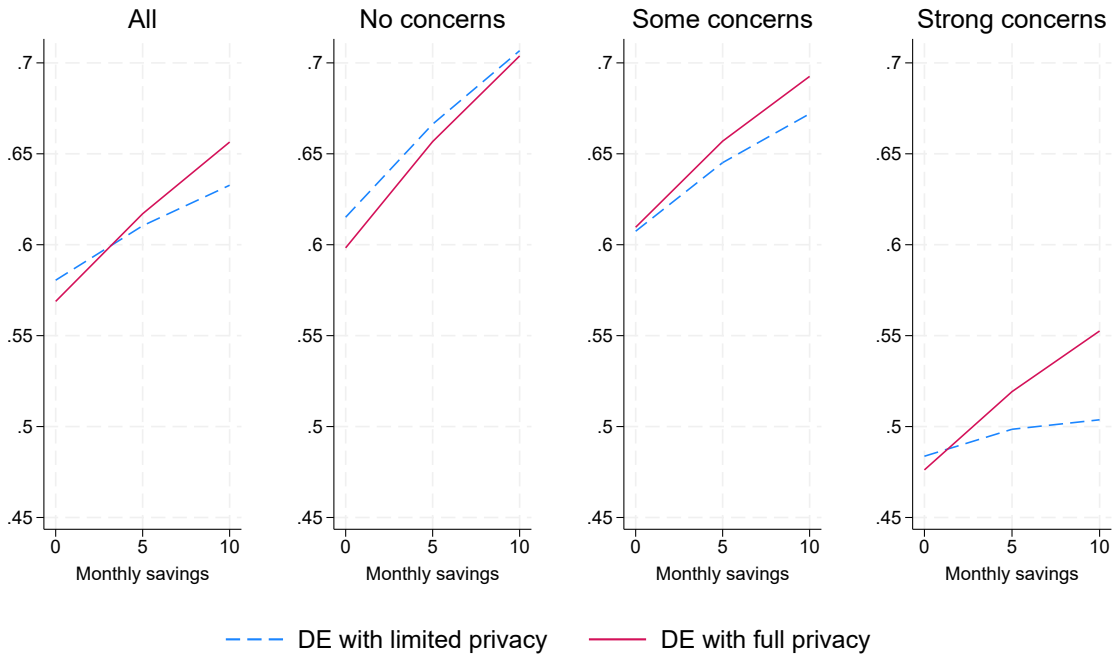


Figure 6: The figure shows the predicted probabilities of choosing a digital euro variant, depending on the assumed privacy model and monthly savings. The left panel shows results for the full sample. The other panels show results for splitting the sample into respondents who state no privacy concerns, some concerns or strong concerns regarding a digital euro. The table of estimation results is available in the Supplement.

This analysis highlights that monetary incentives are valued significantly more than differences in privacy levels.

Heterogeneity across privacy concern levels In a second approach we split the sample according to the degree of privacy concerns. Applying survey weights, 30% of respondents express strong privacy concerns about a digital euro, 33% some concerns and 37% little or no concerns. Given that 63% of the population express at least some level of concern, privacy is an important issue. However, does it influence actual choice behaviour?

To inquire into this question, we estimate the model separately for each group. The simulated choice probabilities are shown in panels 2 to 4 of Figure 6.

We find that approval increases with monetary savings across all three subsamples when full privacy is offered. This aligns with expectations and indicates that respondents understood the experiment: if a CBDC ensures full privacy, privacy concerns should not influence decisions. Under limited privacy, however, behaviour differs significantly across groups. Individuals with strong privacy concerns are not responsive to monetary incentives, whereas those with some concerns or no concerns do not distinguish between full and limited privacy.

While caution is warranted due to the smaller sample sizes, the results, overall, suggest:

1. For individuals with no or only some privacy concerns (70% of respondents), monetary incentives drive adoption, with privacy levels as defined in the experiment playing little to no role.

2. For highly privacy-concerned individuals (30% of respondents), adoption does not respond to monetary incentives under limited privacy—privacy considerations outweigh financial benefits.

6.2. The role of payment behaviour

Finally, we examine whether the intention to adopt a digital euro depends on current payment patterns. To do this, we classify respondents into three groups based on their self-reported payment behaviour and estimate a separate model for each group: Cash payers (predominantly use cash), Intermediate payers (use cash and non-cash in about equal proportion) and Card payers (rarely use cash).

Figure 7 plots the simulated probability of choosing a realistic implementation of a digital euro for cash payers and card payers (the corresponding table is available in the

Supplement). One key pattern emerges: Cash payers have rather dispersed preferences. A considerable share of cash payers have a low adoption likelihood. The adoption likelihood is also lower than for card payer. However, there is also a share of cash payer with a rather high propensity to adopt.

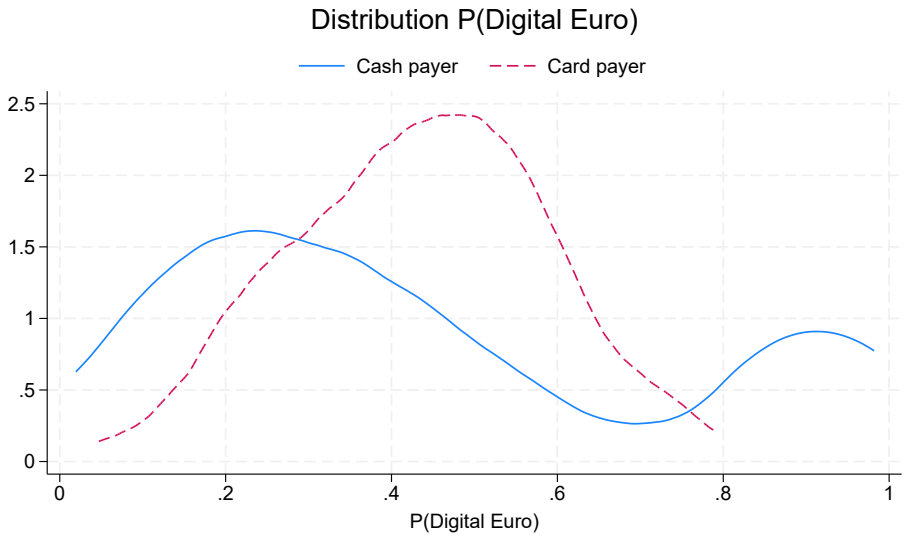


Figure 7: The figure shows the probability of choosing a realistic implementation of a digital euro for cash payers and card payers.

Overall, we find that the mean probability of adoption is 44% for cash payers and 43% for card payers. The relatively large mean for cash payers can be explained by the bimodal shape of the respective distribution.[27] The adoption likelihood is 41% for intermediate payers. Overall, we conclude that payment behaviour does, on average, not affect expected adoption.

One may question why a share of cash payers exhibits a high likelihood of adoption—about one-third has a probability of larger than 70%. We have descriptively compared cash payers with an adoption probability above and below 70%, respectively. Cash payers with a high likelihood of adoption are: younger, more risk-tolerant and tech affine. They also tend to have a lower cash preference, are more likely to report perceived non-acceptance and express a stronger need for a digital euro, compared to those with an adoption probability below 70%. Notably, 80% of this group believe that a digital euro provides benefits, while only 21% of cash payers with a lower adoption probability share this view. These findings suggest that the distributional shape is not a statistical

[27] The median adoption probability is 35% for cash payer and 44% for card payer.

curiosity, but rather reflects a high demand for a digital euro by a subgroup of cash payers.

7. Robustness

7.1. Accounting for survey satisfaction

Our experiment required respondents to complete ten choice tasks, with a median completion time of 2 minutes and 20 seconds. Since comparing multiple digital euro variants along several dimensions may have been cognitively demanding, some respondents might have found the task challenging, introducing potential biases.

To assess this, we included a post-experiment survey question on survey satisfaction. Respondents were asked how difficult they found the choices, with responses recorded on a four-point scale: "very", "rather", "rather not" and "not at all". Notably, 53% of respondents indicated that ranking choices was "very" or "rather" difficult. In a second question, 64% felt that there were too many choices. In contrast, 84% stated that the choices were easy to understand.

To test whether survey dissatisfaction affects our findings, we include these variables in our baseline models (results are shown in the Supplement). In the baseline model, both variables are statistically significant, meaning that survey dissatisfaction influences the likelihood of choosing a digital euro. In the model with individual-specific variables, the two survey satisfaction controls are only weakly statistically significant. However, importantly, in neither specification does the inclusion of these controls change the qualitative implications of our main findings.

7.2. Restricting the estimation sample

Another potential concern is that some respondents provided inconsistent answers. We provide robustness tests by implementing restrictions on the sample (shown in the Supplement). We exclude respondents who always chose a digital euro but reported disliking it ("problematic" responses). We exclude surveys conducted by interviewers with a high share ($\geq 90\%$) of problematic responses, as we find a high concentration of potentially problematic interviews among a few interviewers. Finally, we omit respondents who completed the experiment in less than one minute, as they likely did not carefully consider their choices.

Overall, results remain qualitatively unchanged across specifications—with one exception regarding privacy. Its coefficient increases significantly, in one specification it doubles. The marginal effect of privacy increases from 0.8 percentage points in the baseline model to 1.5 percentage points in one specification. This increase is notable, yet privacy continues to exhibit the lowest average marginal effect among all choice specific variables.

8. Policy implications: What should policymakers take away?

Our findings provide valuable insights for policymakers designing and implementing a digital euro. The introduction of a CBDC is a complex endeavour that requires careful consideration of consumer preferences and behavioural responses. Based on our empirical evidence, we outline several key implications for policy:

1. Expected adoption is not negligible Our simulations indicate that, under a realistic design, around 45% of consumers intend to adopt a digital euro. This suggests that while a digital euro would not immediately become the dominant payment method, it could play a significant role in the payments landscape. Policymakers should interpret this as a strong indication of consumer interest, warranting further investment in user-friendly and attractive design choices.

2. Security and financial incentives drive adoption The most influential factors for adoption are the mitigation of financial risks (e.g., protection against loss and fraud) and financial incentives (e.g., cost savings or cashback mechanisms). Policymakers should consider how to balance security features with usability, ensuring that the digital euro offers meaningful advantages over existing payment options.

3. Privacy concerns exist but do not significantly deter adoption Although privacy debates are central in public discourse, our findings suggest that privacy considerations alone do not strongly drive adoption decisions. Consumers appear willing to accept limited privacy if other features, such as security and financial incentives, are compelling. Nevertheless, transparency and clear communication regarding data protection will be crucial for public trust. Also, we note that this assessment is based solely on results

from the experiment which reflects the private value of privacy to respondents. It does not consider the social value of privacy.

4. Offline functionality has limited influence on adoption Enabling offline payments was found to have a relatively minor effect on adoption. While some consumer segments may value this feature, it is not a decisive factor. Policymakers should therefore weigh the costs and technical challenges of implementing offline capabilities against the relatively modest benefits.

5. Adoption similar by payment behaviour Intended adoption is, on average, similar among card and cash payers. We observe substantial variation in adoption probabilities among cash payers. Within this group, potential adopters tend to be younger, more tech-savvy, higher educated, and less satisfied with acceptance levels.

6. Trust in the issuer matters Trust in the central bank is a significant determinant of adoption. This highlights the importance of communication and engagement strategies to reinforce confidence in the digital euro as a safe, reliable, and accessible payment option.

Taken together, these insights suggest that the success of a digital euro will depend on careful design choices that align with consumer preferences. While technical feasibility is a necessary condition, user acceptance will ultimately determine its effectiveness as a widely adopted payment instrument.

9. Conclusion

We present results from a discrete choice experiment conducted among a representative sample of the Austrian population. This approach has helped to answer key questions about a yet-to-be-introduced payment instrument, such as: Which factors influence adoption decisions? How high is the expected adoption rate? Who is likely to choose a digital euro? The answers provided by this study are informative for CBDC design and offer guidance on information and communication efforts.

Our results regarding predicted uptake provide a snapshot of potential adoption in Austria, but they do not necessarily extend to other countries or across time. Preferences and behaviours may shift with time, technological advancements, and policy incentives, and improved information on the digital euro. Also our results regarding po-

tential adoption do not consider strategic interactions and market reactions that might evolve over time, e.g. the strategic reaction of incumbent payment service providers, or of merchants who stop accepting some digital payment instruments as their use declines (cf. Frost et al. 2025). Austria's payment habits, trust in institutions, and digital infrastructure may also influence the results. One broader policy takeaway supported by our evidence is that even in a cash-intensive country like Austria, expected adoption rates are found to be non-negligible.

Further research should consider other countries in the euro area. A larger sample size would allow for finer sample splits and the incorporation of information experiments which would be helpful for assessing how specific formulations of experimental questions influence results. The results from multiple countries would enable the assessment of cross-country differences. Additionally, it would be interesting to analyse whether other attributes are valued by consumers, such as the contribution of a digital euro to the autonomy of the euro area in the field of retail payments. The similarity of some of our key findings regarding the importance of attributes with those found for Canada (Warren et al. 2024) or the Netherlands (van der Horst and van Gent 2025) suggest that the results found for Austria may extend to other countries.

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A. Appendix: Data and descriptive statistics

A.1. Survey description

The data are derived from a survey commissioned by the Oesterreichische Nationalbank and conducted by IFES, a market research institute. The survey has been undertaken semi-annually and mainly focuses on economic sentiments and expectations regarding inflation, the state of the economy and the financial situation of survey respondents.

The choice experiment is embedded in the regular survey with a sample size of randomly selected 1,421 respondents with a residency in Austria. 89% of interviews were carried out via computer-assisted personal interviews at the address of respondents. About 11% of respondents were sampled for self-conducted web interviews. All interviews were carried out between 3 March and 31 May 2024.

The data set contains post-stratification survey weights which were computed taking into account design weights and non-response weights. The survey weights render the sample representative with respect to region, gender, age, education and internet use, and some combinations of these variables. The target population consists of persons with a permanent residency in Austria with an age of 16 years or older.

A definition of variables is provided in appendix A.2 and descriptive statistics are summarised in Table A.1.

A.2. Variable definition

A.2.1. Individual-level control variables

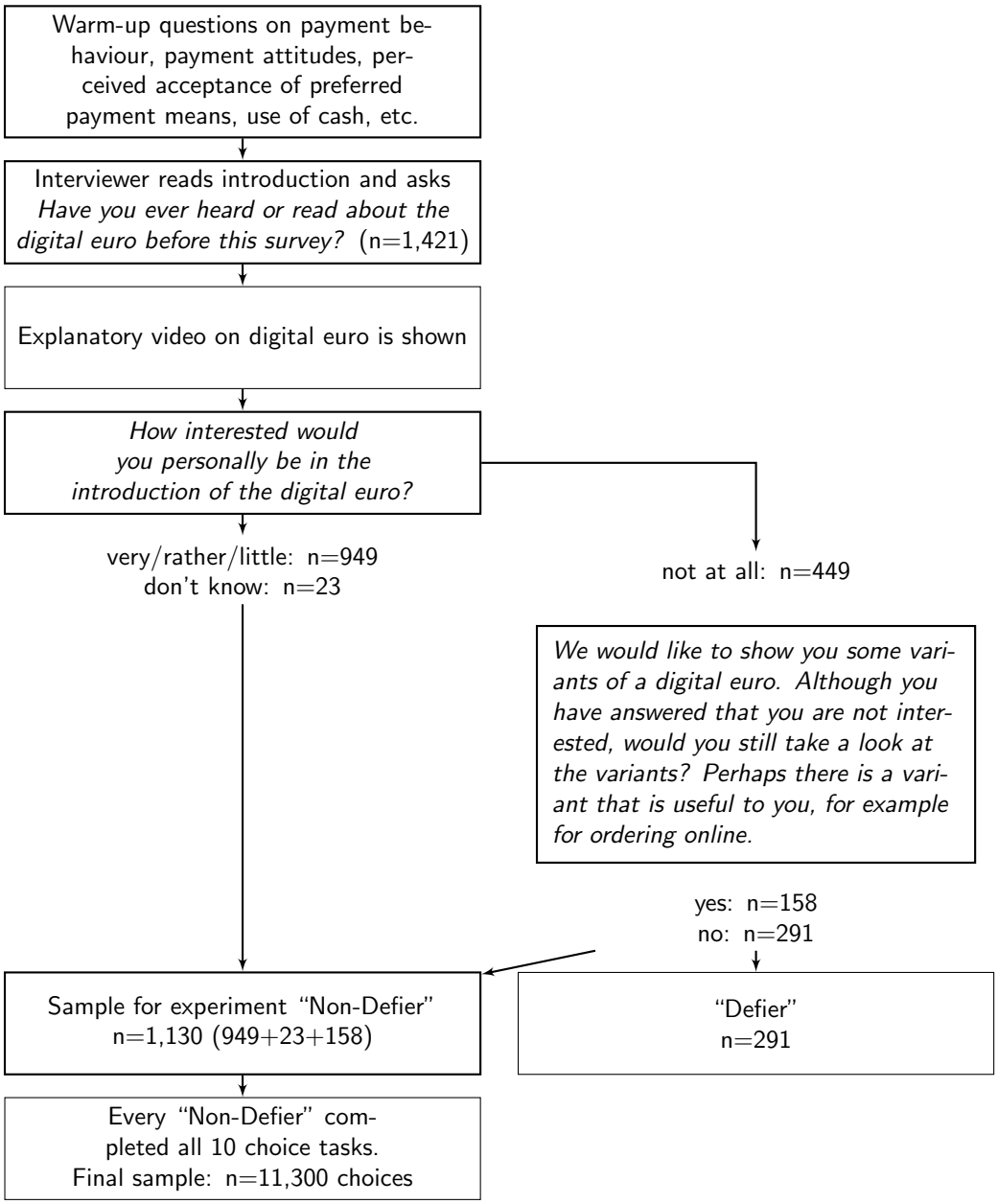
We only describe variables that are not self-explaining.

Education: *Edu high*=1 if high school or university, *Edu med*=1 if apprenticeship or middle school, *Edu low*=1 if only mandatory schooling (base category).

Good financial situation: Based on: "All in all, how would you judge the current financial situation of your household?" Dummy variable=1 if respondents answered "fin. sit. very good" or "fin. sit. good", =0 if "fin. sit. rather bad", "fin. sit. bad".

Has financial assets: Dummy variable=1 if respondent holds equity, investment funds, bonds, or other assets, 0 otherwise.

Figure A.1: Flowchart of questionnaire and construction of estimation sample



Financial risk taking: Based on: "If there are financial decisions in your household: which of the following statements best describes your attitude toward risk': a) if I can expect a substantial profit, I am willing to take substantial financial risks; b) if I can expect an above-average profit, I am willing to take above-average risks; c) if I can expect average profits, I am willing to take average financial risks; d) I do not want to take any risk." *No financial risk*=1 if respondents choose answer d), 0 otherwise. *High financial risk*=1 if respondents choose answers a) or b), 0 otherwise. *Medium financial risk*=1 if respondents choose answers c), 0 otherwise.

Payment behaviour: Derived from self-stated payment behaviour. "If you think about all your purchases, payments for services and leisure activities in a month – by value, do you spend more in cash or more cashless, i.e. with cards or cell phone?". *Cash payer*=1 if "cash only" and "more cash than cashless", 0 otherwise. *Intermediate payer*=1 if "roughly the same amount in cash and cashless", 0 otherwise. *Non-cash payer*=1 if "more cashless than cash" or "mainly cashless". 0 otherwise.

Trust in institutions: Based on "How much do you trust the following institution . . .'. a) the Oesterreichische Nationalbank (Central Bank of Austria)? b) domestic banks, c) the Chamber of Labour (AK). Dummy variables coded as 1 if "very high" and "high", 0 if "rather low" or "very low".

Heard of digital euro: Based on: "Have you ever heard or read about the digital euro before this survey? a) yes; b) no." Dummy variable=1 if respondents choose answer a), 0 otherwise. Don't know answers are omitted.

Interested in digital euro: Based on: "How interested would you personally be in the introduction of the digital euro? a) very; b) rather; c) little; d) not at all." *Interested in digital euro*=1 if respondents choose answer a) or b), 0 otherwise. Don't know answers are omitted.

Finds that digital euro provides benefits: Based on: "Do you think the digital euro will provide you with overall benefits? a) yes, for sure; b) rather sure; c) rather not; d) no, certainly not." *Digital euro provides benefits*=1 if respondents choose answer a) or b), 0 otherwise. Don't know answers are omitted.

Privacy concerns: Based on: "Overall: Do you have any concerns about the protection of your personal data in connection with the digital euro? a) yes, strong concerns; b) rather concerns; c) rather no concerns; d) no, no concerns at all, e) I don't care,

f) I don't know." *Privacy strong concerns*=1 if respondents choose answer a), 0 if respondents choose answers b) to e). *Privacy some concerns*=1 if respondents choose answer b), 0 otherwise. *Privacy no concerns*=1 if respondents choose answers c), d), or e), 0 otherwise. Don't know answers are omitted. Alternatively, we define a dummy variable *Privacy concerns*=1 if respondents have strong concerns or some concerns, 0 otherwise.

Perceived non-acceptance of preferred payment instrument: Based on "In the following payment situations, how often can you use your preferred payment method?". Answers comprise "always", "mostly", "rarely", "never", "does not apply to me" and "don't know". *Perceived non-acceptance*=1 if respondent answers "mostly", "rarely", "never" and 0 if respondent answers "always".

We define this variable for the following payment situations:

- "Small-value": based on"for small payments of 5 euro (e.g. bakery)".
- "Daily": based on "for daily grocery shopping".
- "High-value": based on "for a larger purchase, e.g., purchase of a piece of furniture worth 2,000 euro".
- "Catering": based on "for restaurants, bars, fast-food, etc.".
- "P2P": based on "for payments directly to persons (e.g. gifts of money, tips, private sales)".
- "Internet": based on "for payments on the internet".

In addition we define a dummy variable *Non-acceptance* which is 1 if a respondent states non-acceptance in at least one of the aforementioned spending categories.

Experiment evaluation and cognitive debriefing questions

"How did you feel when answering the questions? Were the choices very, rather, rather not or not at all ...? a) easy to understand; b) difficult to compare; c) difficult to rank; d) too many choices; e) It is generally unclear to me how a digital euro is supposed to work; f) I am fundamentally against a digital euro."

Dummy variables coded as 1 if "very" or "rather", 0 if "rather not" or "not at all".

A.3. Descriptive statistics

Table A.1: Descriptive statistics (unweighted)

	mean	sd	min	max	N
Panel A. Choice behaviour (individual level)					
Always taker	0.28	0.45	0.00	1.00	1421
Sometimes taker	0.30	0.46	0.00	1.00	1421
Rarely taker	0.15	0.35	0.00	1.00	1421
Never taker	0.07	0.25	0.00	1.00	1421
Defier	0.20	0.40	0.00	1.00	1421
Panel B. Socio-demographics, payment behaviour, tech-affinity, trust					
Male	0.46	0.50	0.00	1.00	1421
Age	54.14	17.16	16.00	94.00	1421
Edu low	0.11	0.31	0.00	1.00	1421
Edu med	0.53	0.50	0.00	1.00	1421
Edu high	0.36	0.48	0.00	1.00	1421
Good financial situation	0.78	0.41	0.00	1.00	1406
Has financial assets	0.31	0.46	0.00	1.00	1411
No financial risk	0.48	0.50	0.00	1.00	1421
Cash preference 50 euro	0.44	0.50	0.00	1.00	1421
Cash payer	0.48	0.50	0.00	1.00	1421
Intermediate payer	0.21	0.41	0.00	1.00	1421
Non-cash payer	0.31	0.46	0.00	1.00	1421
Privacy strong concerns	0.33	0.47	0.00	1.00	1395
Privacy some concerns	0.34	0.47	0.00	1.00	1395
Privacy no concerns	0.33	0.47	0.00	1.00	1395
Privacy concerns	0.67	0.47	0.00	1.00	1395
Trust in central bank	0.83	0.37	0.00	1.00	1384
Trust in domestic banks	0.79	0.40	0.00	1.00	1414
Trust AK	0.84	0.37	0.00	1.00	1388
Heard of digital euro	0.70	0.46	0.00	1.00	1403
Interested in digital euro	0.42	0.49	0.00	1.00	1398

Table A.1: (continued)

	mean	sd	min	max	N
Digital euro provides benefits	0.49	0.50	0.00	1.00	1075
Panel C. Perceived non-acceptance					
Non-acceptance	0.58	0.49	0.00	1.00	1421
Small-value (purchases up to 5 euro)	0.25	0.43	0.00	1.00	1420
Daily (grocery shopping)	0.17	0.38	0.00	1.00	1420
High-value (e.g. furniture 2,000 euro)	0.34	0.47	0.00	1.00	1417
Catering (restaurants, bar, fast-food)	0.35	0.48	0.00	1.00	1420
For payments to persons	0.20	0.40	0.00	1.00	1419
Internet payments	0.37	0.48	0.00	1.00	1418
Panel D. Evaluation of experiment					
Easy to understand	0.84	0.36	0.00	1.00	1126
Difficult to rank	0.53	0.50	0.00	1.00	1125
Too many tasks	0.64	0.48	0.00	1.00	1126
I am against a digital euro	0.48	0.50	0.00	1.00	1087

B. Appendix: Choice behaviour

In this section we document the differences between the various types of respondents with respect to their choice behaviour. In particular, we are interested in "Defiers" and "Never takers" as their answering behaviour could be driven by a genuine lack of demand for (or interest in) a digital euro or could reflect a general disinterest in the survey. Table B.1 provides summary statistics by observed choice behaviour. The main findings are:

- **Demographics**: *Defiers* differ markedly from *Non-Defiers*. The former are more likely to be female, older, and have lower formal education levels.
- **Financial characteristics**: *Defiers* exhibit higher financial risk aversion and fewer hold financial assets. While they report a slightly worse self-assessed financial situation than other groups, the difference is not as pronounced as for the

Table B.1: Choice behaviour by subgroups

	Always taker (N=399)	**Sometimes taker** (N=429)	**Rarely taker** (N=208)	**Never taker** (N=94)	**Defier** (N=291)
Male	0.53	0.48	0.50	0.61	0.39
Age	40.27	46.80	54.35	62.74	59.39
Education level					
Low	0.04	0.14	0.14	0.14	0.21
Medium	0.54	0.56	0.52	0.59	0.63
High	0.42	0.30	0.34	0.27	0.16
Financial indicators					
Good financial situation	0.83	0.75	0.82	0.75	0.71
Has financial assets	0.36	0.30	0.35	0.25	0.17
No financial risk	0.20	0.46	0.54	0.62	0.75
Medium financial risk	0.33	0.40	0.37	0.26	0.20
High financial risk	0.46	0.13	0.09	0.12	0.05
Payment behaviour					
Cash payer	0.39	0.29	0.40	0.68	0.73
Card payer	0.42	0.41	0.39	0.15	0.12
Privacy concerns					
Privacy strong concerns	0.20	0.17	0.18	0.59	0.73
Privacy some concerns	0.38	0.36	0.38	0.21	0.18
Privacy no concerns	0.42	0.47	0.44	0.19	0.09
Trust indicators					
Trust in central bank	0.91	0.87	0.82	0.74	0.63
Trust in domestic banks	0.86	0.81	0.77	0.78	0.64
Trust in AK	0.85	0.85	0.86	0.70	0.80
Digital euro awareness					
Heard of digital euro	0.72	0.67	0.60	0.78	0.56
Interested in digital euro	0.78	0.55	0.39	0.02	–
Finds that digital euro provides benefits	0.72	0.49	0.37	0.00	–

Note: The table summarises socio-economic characteristics by choice behaviour at the individual level. Data are weighted. For example, "Always takers" consist of 53% males and have an average age of 40.27 years. 4% of Always taker and 21% of Defier have a low educational level. Variable definitions and summary statistics are in Appendix A.3.

characteristics mentioned above.

- **Payment behaviour**: *Defiers* strongly prefer cash and are much less likely to use innovative digital payment methods.
- **Privacy concerns**: 73% of *Defiers* report strong privacy concerns regarding the digital euro, compared to only 20% of *Always Takers*.
- **Trust in institutions**: *Defiers* display lower trust in the central bank than *Always*, *Sometimes*, or *Rarely Takers*. They also have lower trust in domestic banks. This distrust extends beyond monetary institutions, as *Defiers* also show slightly lower trust in the Chamber of Labour.[28]
- **Awareness of the digital euro**: *Defiers* are significantly less informed about the digital euro compared to all other groups.
- **Self-stated interest in the digital euro**: Respondents' prior interest in the digital euro, measured prior to the experiment, is strongly correlated with choice behaviour.
- **Perceived benefits of the digital euro**: Beliefs about whether the digital euro would be personally beneficial, measured after the interview, strongly correlate with respondents' choices.

[28] We include trust in the Chamber of Labour (Trust AK), a public institution unrelated to financial services, as a control for general trusting behaviour.

Supplement: Additional material

S.1. Example of a showcard

Figure S.1 shows an example of a showcard used in the personal interviews (CAPI).

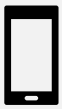
	Variant 1	Variant 2	Neither of these variants
Form			
	Smartphone app	**Smartphone app**	
Protection of personal data	**Data cannot be tracked by anyone**	**Data can only be tracked by your bank**	
Risk of loss or theft	**No refund – as with the loss of a wallet**	**Partial refund - maximum loss of 250 EURO**	
Internet connection required	**No**	**Yes**	
Elimination of other fees	**5 EURO monthly savings**	**no savings**	

Figure S.1: Example of a showcard for personal interviews

S.2. Transcript of the video shown to interviewees

The video was produced by a professional video editor with a TV-trained speaker. Its duration is 2 minutes and 25 seconds. Everything is spoken by one male speaker, except from the interviews with the two women.

Video transcript (own translation). It is THE future project of the European Central Bank – the digital euro. Have you heard of it?

Interview with an older woman on a street scene: "Yes, I've heard of it, but I haven't looked into it because the concept wasn't clear to me."

Interview with a younger woman (student) on a street scene: "I've heard of it - yes, but I don't quite understand it (laughs)".

Well then, a brief explanation: The digital euro is intended to be an evolution of cash. Wherever cash cannot be used, such as for online purchases or other cashless payment systems, the digital euro will offer an additional option in the future. Payments with the digital euro should be quick, easy, and convenient in all eurozone countries, either with a dedicated payment card or via an app on a smartphone. In addition to the usual use in stores, restaurants, vending machines, or on the internet, the digital euro can also be sent directly to other people, for example, for money gifts or private purchases. Essentially, it's like cash, but in digital form.

But aren't there already enough ways to pay digitally? True, but all current providers are foreign, profit-oriented payment service providers. Every transaction has its price: for merchants in the form of fees, for consumers through the disclosure of their data. In contrast, the digital euro is intended to be based on an independent, public European payment system - issued and guaranteed by the European Central Bank - and free of charge, with the highest possible, legally regulated privacy protection.

Interview with the older woman: "Ah, then I need to read up on it again. Then I might be in favour of it (laughs)."

Whether you want to use the digital euro as an additional option in the future is up to you. The top principle remains freedom of choice, meaning you can still decide in the future whether you prefer to pay with cash or digitally.

S.3. Additional Tables

Table S.1: Modelling Participation in the Experiment

	(1)
Average Marginal Effects	
Age 36-50	-0.001
	(0.031)
Age 51-65	-0.046
	(0.032)
Age 66+	-0.097***
	(0.034)
Edu low	-0.052
	(0.032)
Edu med	-0.028
	(0.024)
Male	0.034*
	(0.019)
Rural	-0.008
	(0.020)
Cash payer	-0.073**
	(0.028)
Intermediate payer	-0.003
	(0.033)
Trust in central bank	0.115***
	(0.022)
Trust AK	-0.022
	(0.024)
High financ. risk	0.163***
	(0.037)
Push-to-web	0.010
	(0.028)
Privacy strong concerns	-0.263***
	(0.028)
Privacy some concerns	-0.081***
	(0.031)
Mean dependent variable	0.80
Log-likelihood	-468.33
N	1337

Note: The table shows average marginal effects from a logit regression. The dependent variable is Participation in the experiment (the inverse of "Defier"). Robust standard errors are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

Table S.2: Individual-Specific Variables and Perceived Non-Acceptance (full results)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mean							
ASC Status quo	6.427***	4.768***	5.402***	6.005***	6.098***	5.568***	5.162***
	(0.986)	(0.883)	(0.849)	(0.931)	(0.791)	(1.008)	(0.726)
ASC SQ * Age	0.092***	0.111***	0.108***	0.101***	0.097***	0.102***	0.102***
	(0.012)	(0.011)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)
ASC SQ * Edu low	1.614	1.817***	1.201*	1.332**	2.073**	1.917**	1.794***
	(1.362)	(0.588)	(0.662)	(0.539)	(0.942)	(0.790)	(0.542)
ASC SQ * Edu med	0.248	0.193	0.115	0.233	0.310	0.127	0.092
	(0.459)	(0.363)	(0.422)	(0.420)	(0.361)	(0.367)	(0.359)
ASC SQ * Rural	0.793	0.710*	0.770*	0.666*	0.564	0.708**	0.797*
	(0.525)	(0.397)	(0.419)	(0.350)	(0.365)	(0.323)	(0.437)
ASC SQ * Trust CB	-2.364***	-2.598***	-2.505***	-2.102**	-2.375***	-2.723***	-2.447***
	(0.743)	(0.631)	(0.599)	(0.819)	(0.545)	(0.639)	(0.555)
ASC SQ * Trust banks	0.146	0.257	0.140	0.213	-0.016	0.157	0.150
	(0.665)	(0.499)	(0.575)	(0.824)	(0.389)	(0.384)	(0.450)
ASC SQ * Trust AK	-0.190	0.200	0.114	-0.540	-0.263	0.046	0.060
	(0.533)	(0.670)	(0.637)	(0.563)	(0.541)	(0.665)	(0.522)
ASC SQ * Cash payer	0.172	0.187	0.186	-0.049	-0.063	0.161	0.042
	(0.585)	(0.571)	(0.534)	(0.542)	(0.784)	(0.622)	(0.507)
ASC SQ * Interm payer	-0.394	-0.232	-0.225	-0.430	-0.492	-0.353	-0.191
	(0.540)	(0.638)	(0.581)	(0.490)	(0.463)	(0.555)	(0.580)
ASC SQ * Privacy strong concerns	0.194	0.959	0.526	0.951**	0.465	0.708	1.165*
	(0.625)	(0.707)	(0.527)	(0.387)	(0.845)	(0.783)	(0.667)
ASC SQ * Privacy some concerns	-0.138	-0.292	-0.405	0.023	-0.248	-0.384	-0.074
	(0.481)	(0.456)	(0.448)	(0.382)	(0.395)	(0.394)	(0.391)
ASC SQ * Risk high	-4.411***	-4.949***	-4.685***	-4.685***	-4.511***	-4.656***	-4.850***
	(0.665)	(0.498)	(0.632)	(0.530)	(0.640)	(0.488)	(0.551)
ASC SQ * Non-acceptance	-2.030***						
	(0.490)						
ASC SQ * Daily		0.613					
		(0.476)					
ASC SQ * Small-value			-0.808*				
			(0.489)				
ASC SQ * High-value				-2.020***			
				(0.385)			
ASC SQ * Catering					-1.599***		
					(0.344)		
ASC SQ * P2P						-1.296***	
						(0.479)	
ASC SQ * Internet							-0.757**
							(0.382)
Privacy	0.146**	0.147**	0.154**	0.148**	0.152**	0.148**	0.145**
	(0.070)	(0.070)	(0.070)	(0.072)	(0.070)	(0.070)	(0.070)
Card	1.141***	1.067***	1.084***	1.101***	1.097***	1.083***	1.081***
	(0.184)	(0.130)	(0.135)	(0.128)	(0.128)	(0.135)	(0.131)
Also offline	-2.176***	-2.305***	-2.272***	-2.403***	-2.280***	-2.276***	-2.313***
	(0.473)	(0.349)	(0.379)	(0.363)	(0.371)	(0.351)	(0.367)
Loss none	1.164***	1.161***	1.160***	1.155***	1.164***	1.164***	1.161***
	(0.052)	(0.049)	(0.050)	(0.049)	(0.049)	(0.049)	(0.048)

Table S.2: (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Loss limited	0.547***	0.545***	0.530***	0.540***	0.542***	0.543***	0.545***
	(0.063)	(0.062)	(0.062)	(0.061)	(0.063)	(0.063)	(0.062)
Monthly savings	-2.780***	-2.786***	-2.777***	-2.841***	-2.783***	-2.778***	-2.788***
	(0.137)	(0.146)	(0.208)	(0.155)	(0.144)	(0.145)	(0.147)
SD							
ASC Status quo	3.705***	3.764***	3.759***	3.707***	3.562***	3.674***	3.733***
	(0.246)	(0.210)	(0.246)	(0.206)	(0.182)	(0.186)	(0.215)
Privacy	1.068***	1.041***	0.984***	1.029***	1.033***	1.040***	1.024***
	(0.170)	(0.132)	(0.136)	(0.146)	(0.160)	(0.147)	(0.145)
Card	2.802***	2.825***	2.867***	2.844***	2.847***	2.815***	2.822***
	(0.229)	(0.181)	(0.183)	(0.165)	(0.180)	(0.179)	(0.173)
Also offline	1.951***	2.109***	2.003***	2.044***	2.139***	2.123***	2.140***
	(0.353)	(0.174)	(0.190)	(0.165)	(0.215)	(0.184)	(0.186)
Loss none	0.662***	0.655***	0.669***	0.664***	0.666***	0.657***	0.654***
	(0.071)	(0.054)	(0.061)	(0.042)	(0.066)	(0.059)	(0.052)
Loss limited	0.319***	0.323***	0.362***	0.366***	0.330***	0.325***	0.315***
	(0.056)	(0.069)	(0.058)	(0.060)	(0.068)	(0.063)	(0.068)
Monthly savings	1.297***	1.228***	1.249***	1.333***	1.276***	1.231***	1.230***
	(0.090)	(0.085)	(0.217)	(0.089)	(0.104)	(0.085)	(0.086)
LogL	-7102.71	-7114.61	-7105.40	-7064.40	-7105.69	-7110.87	-7112.92
N	10720	10710	10710	10680	10710	10710	10710
Persons	1072	1071	1071	1068	1071	1071	1071

Note: The table shows selected results from mixed logit models applying inverse probability weights. The dependent variable is Choice, which is one for the chosen alternative and 0 otherwise. "ASC Status quo" denotes the alternative-specific constant of the status quo ("opt-out") option. The point estimates denote the mean and standard deviation of the chosen distribution. We assume a normal distribution for: ASC Status quo, Card, Privacy. We assume a lognormal distribution for: Also offline, Loss none, Loss limited, Monthly savings. For the lognormally distributed variables, the table shows the mean and standard deviation of the logarithm of the coefficients. Standard errors adjusted for clustering at the person level are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

Table S.3: The role of privacy (full results)

	All	Subsample No privacy concers	Subsample Some concerns	Subsample Strong concerns
	(1)	(2)	(3)	(4)
Mean				
ASC Status quo	6.039***	4.606***	5.724***	8.059***
	(0.674)	(1.357)	(0.923)	(1.254)
ASC SQ * Age	0.097***	0.088***	0.099***	0.127***
	(0.011)	(0.014)	(0.017)	(0.022)
ASC SQ * Edu low	1.825**	2.700***	1.864*	0.687
	(0.778)	(0.621)	(1.114)	(0.926)
ASC SQ * Edu med	0.384	1.096**	-0.404	-0.912
	(0.487)	(0.551)	(0.684)	(0.784)
ASC SQ * Rural	0.782	0.418	0.731	1.380*
	(0.543)	(0.508)	(0.509)	(0.764)
ASC SQ * Trust CB	-2.492***	-0.250	-2.177**	-2.900***
	(0.663)	(1.177)	(0.994)	(1.007)
ASC SQ * Trust banks	0.225	-0.241	-0.703	0.914
	(0.544)	(0.639)	(0.829)	(0.711)
ASC SQ * Trust AK	-0.062	-0.492	1.358**	-1.901***
	(0.504)	(0.592)	(0.678)	(0.675)
ASC SQ * Risk high	-4.276***	-4.084***	-3.436***	-6.766***
	(0.564)	(0.892)	(0.615)	(1.227)
ASC SQ * Non-acceptance	-1.989***	-1.731***	-2.288***	-0.723
	(0.423)	(0.555)	(0.481)	(0.688)
Card	1.140***	0.442**	1.292***	1.475***
	(0.147)	(0.185)	(0.176)	(0.275)
Also offline	-2.134***	-3.809***	-2.053***	-1.244***
	(0.350)	(0.814)	(0.494)	(0.452)
Loss none	1.154***	1.306***	1.110***	1.063***
	(0.050)	(0.075)	(0.072)	(0.124)
Loss limited	0.538***	0.595***	0.528***	0.442**
	(0.062)	(0.092)	(0.087)	(0.175)
Monthly savings	-3.517***	-2.343***	-3.181***	-9.516***
	(0.348)	(0.201)	(0.499)	(3.034)
Privacy	-0.176*	-0.247	0.052	-0.167
	(0.105)	(0.164)	(0.158)	(0.204)
Privacy x Monthly savings	0.061***	0.023	0.032	0.108***
	(0.014)	(0.020)	(0.022)	(0.022)
SD				
ASC Status quo	3.685***	3.546***	3.447***	3.959***
	(0.214)	(0.290)	(0.280)	(0.532)
Privacy	1.058***	0.876***	0.940***	1.204***
	(0.145)	(0.237)	(0.161)	(0.300)
Card	2.862***	3.035***	2.584***	2.848***
	(0.204)	(0.222)	(0.210)	(0.384)
Also offline	1.955***	2.938***	1.799***	1.419***
	(0.196)	(0.416)	(0.221)	(0.191)
Loss none	0.651***	0.712***	0.549***	0.733***
	(0.057)	(0.061)	(0.066)	(0.151)
Loss limited	0.318***	0.433***	0.233**	0.463**

Table S.3: (continued)

	All	Subsample No privacy concers	Subsample Some concerns	Subsample Strong concerns
	(1)	(2)	(3)	(4)
	(0.054)	(0.078)	(0.109)	(0.214)
Monthly savings	1.648***	1.088***	1.557***	4.767***
	(0.257)	(0.196)	(0.362)	(1.364)
LogL	-7093.35	-2934.32	-2818.92	-1401.55
N	10720	4210	4040	2470
Persons	1072	421	404	247

Note: The table shows results from mixed-logit models applying inverse probability weights. The dependent variable is Choice, which is one for the chosen alternative and 0 otherwise. Column 1 shows the full sample results. Column 2 shows the subsample of respondents who state no privacy concerns. Column 3 shows the subsample of respondents with some privacy concerns. Column 4 shows the subsample of respondents with strong privacy concerns. "ASC Status quo" denotes the alternative-specific constant of the status quo ("opt-out") option. The point estimates denote the mean and standard deviation of the chosen distribution. We assume a normal distribution for: ASC Status quo, Card, Privacy. We assume a lognormal distribution for: Also offline, Loss none, Loss limited, Monthly savings. For the lognormally distributed variables, the table shows the mean and standard deviation of the logarithm of the coefficients. Standard errors adjusted for clustering at the person level are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

Table S.4: Heterogeneity: Results by Payment Behaviour

	Subsample Cash payer	Subsample Intermediate	Subsample Card payer
	(1)	(2)	(3)
Mean			
ASC Status quo	7.550***	7.204***	3.633***
	(1.462)	(1.444)	(1.034)
ASC SQ * Age	0.120***	0.060***	0.089***
	(0.021)	(0.019)	(0.015)
ASC SQ * Edu low	1.623	-0.822	2.713***
	(1.291)	(0.675)	(0.714)
ASC SQ * Edu med	0.442	-0.080	-0.011
	(1.035)	(0.515)	(0.460)
ASC SQ * Rural	1.206**	-0.156	0.010
	(0.486)	(0.494)	(0.452)
ASC SQ * Trust CB	-2.067***	-2.997***	-0.865
	(0.654)	(0.925)	(0.780)
ASC SQ * Trust banks	0.068	1.462*	-0.661
	(0.695)	(0.779)	(0.605)
ASC SQ * Trust AK	-2.527***	0.323	0.905
	(0.973)	(0.707)	(0.797)
ASC SQ * Privacy strong concerns	0.710	0.010	1.147
	(0.584)	(1.095)	(0.712)
ASC SQ * Privacy some concerns	0.547	-1.026*	0.332
	(0.582)	(0.527)	(0.436)
ASC SQ * Risk high	-6.526***	-3.071***	-2.225***
	(0.858)	(0.882)	(0.549)
ASC SQ * Non-acceptance	-1.709***	-2.559***	-0.969*
	(0.573)	(0.571)	(0.538)
Privacy	0.118	0.148	0.224*
	(0.104)	(0.148)	(0.127)
Card	1.662***	1.185***	0.179
	(0.214)	(0.226)	(0.197)
Also offline	-1.426***	-1.801**	-4.309**
	(0.387)	(0.744)	(1.789)
Loss none	1.095***	1.261***	1.217***
	(0.080)	(0.093)	(0.078)
Loss limited	0.524***	0.734***	0.439***
	(0.091)	(0.116)	(0.128)
Monthly savings	-3.225***	-2.812***	-2.355***
	(0.287)	(0.297)	(0.168)
SD			
ASC Status quo	4.094***	2.629***	3.451***
	(0.410)	(0.283)	(0.287)
Privacy	0.839***	1.244***	1.254***
	(0.218)	(0.304)	(0.211)
Card	2.779***	2.517***	2.841***
	(0.243)	(0.325)	(0.239)
Also offline	1.524***	1.977***	2.613***
	(0.158)	(0.352)	(0.788)
Loss none	0.658***	0.654***	0.618***

Table S.4: (continued)

	Subsample Cash payer	Subsample Intermediate	Subsample Card payer
	(1)	(2)	(3)
	(0.116)	(0.073)	(0.075)
Loss limited	0.159	0.332***	0.520***
	(0.146)	(0.099)	(0.176)
Monthly savings	1.228***	1.764***	1.272***
	(0.129)	(0.176)	(0.196)
LogL	-2628.01	-1710.09	-2763.74
N	4520	2390	3810
Persons	452	239	381

Note: The table shows results from mixed-logit models applying inverse probability weights. The dependent variable is Choice, which is one for the chosen alternative and 0 otherwise. Column 1 shows the subsample of respondents who currently pay only cash or more cash than cashless. Column 2 shows the subsample of respondents with intermediate payment behaviour, i.e., who pay "roughly the same amount in cash and cashless". Column 3 shows the subsample of respondents who currently pay more cashless than cash or mainly cashless. "ASC Status quo" denotes the alternative-specific constant of the status quo ("opt-out") option. The point estimates denote the mean and standard deviation of the chosen distribution. We assume a normal distribution for: ASC Status quo, Card, Privacy. We assume a lognormal distribution for: Also offline, Loss none, Loss limited, Monthly savings. For the lognormally distributed variables, the table shows the mean and standard deviation of the logarithm of the coefficients. Standard errors adjusted for clustering at the person level are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

Table S.5: Robustness: Accounting for Survey Satisfaction

	(1)	(2)	(3)	(4)
Mean				
ASC Status quo	3.183***	3.246***	4.807***	4.593***
	(0.248)	(0.366)	(0.795)	(0.673)
ASC SQ * Diff to rank		-1.319***		-1.442*
		(0.446)		(0.792)
ASC SQ * Too many		1.142***		1.242*
		(0.383)		(0.718)
ASC SQ * Age			0.103***	0.105***
			(0.012)	(0.012)
ASC SQ * Edu low			2.256***	2.083***
			(0.781)	(0.581)
ASC SQ * Edu med			0.594	0.445
			(0.400)	(0.360)
ASC SQ * Rural			0.623*	0.564
			(0.320)	(0.349)
ASC SQ * Trust CB			-2.432***	-2.051***
			(0.646)	(0.540)
ASC SQ * Trust banks			0.131	0.131
			(0.459)	(0.485)
ASC SQ * Trust AK			0.137	-0.149
			(0.663)	(0.416)
ASC SQ * Cash payer			0.333	0.447
			(0.524)	(0.467)
ASC SQ * Interm payer			-0.133	-0.143
			(0.562)	(0.415)
ASC SQ * Privacy strong concerns			0.642	0.472
			(0.520)	(0.479)
ASC SQ * Privacy some concerns			-0.356	-0.102
			(0.433)	(0.444)
ASC SQ * Risk high			-4.877***	-4.778***
			(0.433)	(0.471)
Privacy	0.153**	0.156**	0.140**	0.134*
	(0.072)	(0.071)	(0.070)	(0.072)
Card	1.105***	1.086***	1.100***	1.114***
	(0.131)	(0.126)	(0.132)	(0.125)
Also offline	-2.063***	-2.706***	-2.179***	-1.905***
	(0.302)	(0.436)	(0.355)	(0.271)
Loss none	1.136***	1.150***	1.168***	1.167***
	(0.051)	(0.050)	(0.050)	(0.050)
Loss limited	0.536***	0.531***	0.536***	0.540***
	(0.064)	(0.064)	(0.060)	(0.063)
Monthly savings	-2.870***	-2.677***	-2.772***	-2.811***
	(0.158)	(0.116)	(0.138)	(0.177)
SD				
ASC Status quo	4.922***	5.161***	3.701***	3.783***
	(0.234)	(0.270)	(0.199)	(0.220)
Privacy	1.019***	0.919***	1.028***	1.037***
	(0.131)	(0.134)	(0.145)	(0.130)
Card	2.818***	2.842***	2.794***	2.804***

Table S.5: (continued)

	(1)	(2)	(3)	(4)
	(0.166)	(0.179)	(0.178)	(0.151)
Also offline	1.972***	2.393***	1.936***	1.655***
	(0.151)	(0.211)	(0.215)	(0.101)
Loss none	0.683***	0.691***	0.667***	0.643***
	(0.057)	(0.054)	(0.090)	(0.046)
Loss limited	0.335***	0.355***	0.359***	0.356***
	(0.076)	(0.074)	(0.052)	(0.065)
Monthly savings	1.465***	1.206***	1.278***	1.359***
	(0.110)	(0.057)	(0.109)	(0.184)
LogL	-7388.42	-7320.09	-7118.04	-7066.01
N	10730	10670	10720	10660
Persons	1073	1067	1072	1066

Note: The table shows results from mixed-logit models applying inverse probability weights. The table shows the baseline model (column 1) and the amended baseline model (column 3). In columns 2 and 4, we add survey satisfaction variables. The dependent variable is Choice, which is one for the chosen alternative and 0 otherwise. "ASC Status quo" denotes the alternative-specific constant of the status quo ("opt-out") option. The point estimates denote the mean and standard deviation of the chosen distribution. We assume a normal distribution for: ASC Status quo, Card, Privacy. We assume a log-normal distribution for: Also offline, Loss none, Loss limited, Monthly savings. For the lognormally distributed variables, the table shows the mean and standard deviation of the logarithm of the coefficients. Standard errors adjusted for clustering at the person level are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

Table S.6: Baseline Model: Accounting for Potentially Problematic Cases

	Baseline	w/o inconsistent answers	w/o problematic interviewers	w/o short duration of experiment
	(1)	(2)	(3)	(4)
Mean				
ASC Status quo	3.246***	3.188***	2.701***	2.922***
	(0.366)	(0.422)	(0.393)	(0.360)
ASC SQ * Diff to rank	-1.319***	-0.078	-0.389	-0.686
	(0.446)	(0.524)	(0.489)	(0.668)
ASC SQ * Too many	1.142***	1.977***	2.097***	1.641***
	(0.383)	(0.532)	(0.515)	(0.631)
Privacy	0.156**	0.208***	0.200***	0.246***
	(0.071)	(0.077)	(0.076)	(0.079)
Card	1.086***	1.259***	1.151***	1.221***
	(0.126)	(0.152)	(0.137)	(0.139)
Also offline	-2.706***	-2.207***	-2.854***	-2.064***
	(0.436)	(0.277)	(0.549)	(0.325)
Loss none	1.150***	1.038***	1.076***	1.023***
	(0.050)	(0.058)	(0.053)	(0.055)
Loss limited	0.531***	0.395***	0.439***	0.434***
	(0.064)	(0.083)	(0.074)	(0.077)
Monthly savings	-2.677***	-2.776***	-2.705***	-2.614***
	(0.116)	(0.152)	(0.139)	(0.146)
SD				
ASC Status quo	5.161***	3.893***	4.519***	4.401***
	(0.270)	(0.212)	(0.235)	(0.266)
Privacy	0.919***	1.075***	1.051***	1.061***
	(0.134)	(0.151)	(0.128)	(0.159)
Card	2.842***	3.074***	2.862***	2.897***
	(0.179)	(0.208)	(0.170)	(0.201)
Also offline	2.393***	2.199***	2.417***	2.023***
	(0.211)	(0.121)	(0.266)	(0.163)
Loss none	0.691***	0.670***	0.695***	0.664***
	(0.054)	(0.063)	(0.047)	(0.050)
Loss limited	0.355***	0.412***	0.391***	0.419***
	(0.074)	(0.083)	(0.084)	(0.081)
Monthly savings	1.206***	1.387***	1.280***	1.274***
	(0.057)	(0.093)	(0.073)	(0.151)
LogL	-7320.09	-6202.24	-6507.31	-6281.93
N	10670	8860	9350	8880
Persons	1067	886	935	888

Note: The table shows robustness analysis of the mixed-logit baseline model applying inverse probability weights (Table 2), accounting for inattentive respondents and problematic cases. Column 1 corresponds to the baseline sample, including survey satisfaction controls. Columns 2 – 4 show results when potentially problematic cases are omitted. In column 2, we omit cases who always chose the digital euro but state that they dislike a digital euro. In column 3, we omit all interviewers for whom more than 90% of always takers were inconsistent as defined in column 2. In column 4, we omit all respondents with an experiment duration of less than 1 minute. The dependent variable is Choice, which is one for the chosen alternative and 0 otherwise. "ASC Status quo" denotes the alternative-specific constant of the status quo ("opt-out") option. The point estimates denote the mean and standard deviation of the chosen distribution. We assume a normal distribution for: ASC Status quo, Card, Privacy. We assume a lognormal distribution for: Also offline, Loss none, Loss limited, Monthly savings. For the lognormally distributed variables, the point estimates denote the mean and standard deviation of the logarithm of the coefficients. Standard errors adjusted for clustering at the person level are reported in parentheses. Variable definitions and summary statistics are presented in the Appendix. ***, **, * denote significance at the 0.01, 0.05 and 0.10-level.

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