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# Estimating the Demand for a Digital Euro: A Survey Approach for France, Germany and Italy\*

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**Abstract:** This paper analyses the extensive and intensive margins of demand for a retail digital euro. We conducted a representative survey in France, Germany and Italy in November–December 2023. We find that 52–62% of respondents are willing to hold a digital euro, depending on the interest rate spread, with a higher share in Italy than in France or Germany. Design features (cash-like vs deposit-like) appear to play only a very limited role. Average demand depends on the hypothetical interest rate spread relative to current accounts and ranges from EUR 700 to EUR 1,100, implying an aggregate demand of 1.5–2.5% of GDP. Willingness to hold a digital euro is associated with socio-demographic factors, trust in the ECB and the EU, digitalisation and payment behaviour. Negative interest rate spreads relative to current accounts reduce willingness to hold the digital euro more strongly than positive spreads increase it. Behavioural characteristics tend to be correlated with the likelihood of adoption, whereas economic factors, particularly income and interest rates, are mainly related to the level of demand. This distinction becomes more pronounced when conditioning on positive demand, suggesting that socio-demographic factors primarily influence participation decisions rather than quantities demanded.

**JEL:** E41, E42, E51, E58.

**Keywords:** CBDC demand, Digital euro, ECB, Household survey, Monetary policy.

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\*The survey was preregistered, and the underlying hypotheses were described in the AEA RCT registry on 20 October 2023 (RCT ID AEARCTR-0012329: Attitudes Towards and Demand for a Digital Euro: A Representative Survey in France, Germany, and Italy; <https://www.socialscienceregistry.org/trials/12329>).

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# 1 Introduction

As technology evolves, payment systems evolve accordingly. From barter economies to the use of coins and banknotes, and later to credit cards, technological innovation has continuously shaped financial and payment systems. In recent years, ongoing digitalisation has paved the way for digital payment solutions. The value of cash transactions at the Point-of-Sale (PoS) declined to 39% in the euro area in 2024 (European Central Bank, 2024). Since the decline in cash usage is accompanied by the growing popularity of digital and privately issued means of payment, digitalisation contributes to an increasing privatisation of the payment system. The COVID-19 pandemic further accelerated the shift towards privately issued means of payment (e.g., Crouzet et al., 2023; Jonker et al., 2022; Saka et al., 2021; Zhao and Bacao, 2021). As younger individuals are more likely to use mobile and other digital means of payment (European Central Bank, 2024), this raises the question of whether the disappearance of cash at the PoS is ultimately only a matter of time. If this trend continues, households and businesses may gradually lose the ability to settle transactions in risk-free central bank money, as network effects could make cash holdings increasingly costly and inconvenient (European Central Bank, 2020).

Against this background, the European Central Bank (ECB) is investigating the introduction of a central bank digital currency (CBDC), the *digital euro*. A digital euro is a “representation of a sovereign currency issued by and as a liability of a jurisdiction’s central bank” (Kiff et al., 2020, p. 9) that is “recorded in digital form as a complement to cash and central bank deposits [...] for use in retail transactions available to the general public” (European Central Bank, 2020, p. 6).<sup>1</sup> A CBDC would therefore allow households and businesses to continue using central bank money in an increasingly digitalised payment environment. The macroeconomic consequences of introducing a new currency may be substantial for both financial stability and monetary policy.<sup>2</sup> In particular, the scale and composition of demand for a digital euro are likely to determine its effects on bank funding, monetary transmission and financial intermediation. Since only four jurisdictions (the Bahamas, the Eastern Caribbean Currency Union, Jamaica and Nigeria) have introduced a CBDC to date, there is considerable uncertainty about the outcome if a digital euro is implemented.

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<sup>1</sup>The idea of permitting the general public to hold accounts at the central bank is far from new. Fisher (1935) proposes increasing reserve requirements to 100%. He argues that such a system would eliminate bank runs, reduce bank failures and interest-bearing government debt, stabilise inflation rates and simplify both the monetary and banking system. To reduce reliance on deposit insurance for financial institutions, Tobin (1985, 1987) suggests the concept of *deposited currency* that combines the convenience of deposits with the safety of cash by allowing the general public to hold deposit accounts at the central bank or accounts indirectly managed through financial intermediaries. The arguments made by Fisher (1935) and Tobin (1985, 1987) closely resemble key elements of the contemporary debate on CBDCs.

<sup>2</sup>See also the review of the literature in the following section.

To address this uncertainty, this paper analyses the willingness to hold a (retail) digital euro and its potential demand within the European Economic and Monetary Union (EMU). We conducted a representative survey in the three largest EMU economies (France, Germany and Italy). The survey was completed in November–December 2023 by 2,021 participants from France, 1,909 from Germany and 2,014 from Italy, totalling 5,944 respondents, who were quota-sampled on gender, age, income and regional distribution.

Our descriptive results indicate that, on average, between 52% and 62% of the participants are willing to hold a digital euro, depending on a hypothetical interest rate spread between a digital euro account and current accounts. Respondents from Italy are more likely to demand a digital euro (62–70%) than respondents from France (51–61%) and Germany (45–59%). Average demand ranges between EUR 700 and EUR 1,100, with interest rate spreads of –50 bps to +50 bps as lower and upper bounds relative to current accounts, respectively. This implies an aggregate demand for France, Germany and Italy ranging between EUR 150 bn and EUR 235 bn, corresponding to 1.5%–2.5% of the combined GDP of the three countries.

In addition, we find that the willingness to express a positive demand for a digital euro (as opposed to no demand or being undecided) depends more strongly on socio-demographic characteristics than on key economic variables. In the pooled EMU sample, demand is more prevalent among younger and male respondents, individuals with greater trust in the ECB and the EU, higher levels of digitalisation and subjective knowledge about the digital euro, as well as those with higher income, a migration background and a preference for non-cash payment methods. Individuals with higher trust in commercial banks, those who abstain from voting and those with higher education and financial literacy are less likely to express demand. Financial incentives also matter, with an asymmetric effect: negative interest rate spreads relative to current accounts decrease the willingness to hold the digital euro more strongly than positive spreads increase it. Design features (cash-like vs deposit-like) appear to play only a very limited role.

Comparing the extensive and the intensive margin (that is, omitting undecided individuals) reveals both common and distinct patterns. While socio-economic and attitudinal variables such as age, financial literacy, trust in the ECB, the European Union (EU) and commercial banks, digitalisation and payment behaviour are consistently relevant across both margins with the same signs, important differences emerge with respect to economic factors. Interest rate spreads (with the same asymmetric pattern) and, in particular, income are more strongly associated with the level of demand than with the adoption decision, indicating higher price and income sensitivity along the intensive margin. Moreover, the relevance of migration and education is lower for the intensive margin, and non-voting status and subjective knowledge are statis-

tically insignificant. This distinction becomes even more pronounced when focusing exclusively on respondents with positive demand. While the interest rate spread and particularly income remain relevant, some socio-demographic and attitudinal variables – such as age, education and trust in commercial banks – lose explanatory power, suggesting that they are primarily related to participation rather than conditional demand. Overall, these results suggest that economic factors are more strongly associated with the level of demand than with adoption, whereas behavioural and socio-demographic characteristics play a more prominent role in the adoption decision.

This paper makes three contributions. First, it provides, to the best of our knowledge, the first representative consumer survey on the willingness to adopt and the demand for a digital euro in the three largest EMU economies and the first digital euro survey for France and Italy.<sup>3</sup> As these three EMU economies together account for roughly 60% of EMU GDP, our results provide a conservative benchmark for potential EMU-wide demand for a digital euro, although smaller countries could in principle exhibit different adoption patterns. Second, it quantifies both the extensive and intensive margins of demand using a large, rich survey of about 6,000 respondents and an experimental variation in interest rate spreads between digital euro accounts and current accounts. Third, it examines how socio-demographic and economic factors differentially relate to adoption versus the level of holdings.

Our paper is most closely related to Bijlsma et al. (2024). Although Bijlsma et al. (2024) assess the willingness to open a digital euro current account, they do not consider interest rate spreads between digital euro accounts and current accounts. As Choi et al. (2025) show, financial incentives play an important role in the choice of payment instruments.<sup>4</sup> In this respect, our paper extends the literature by jointly analysing the extensive and intensive margins of digital-euro demand in a representative three-country setting and by combining experimental remuneration spreads and CBDC design features with a broad set of socio-demographic variables.

The remainder of this paper is structured as follows. Section 2 reviews the related literature and illustrates why it is important to estimate the hypothetical demand for a digital euro. Section 3 introduces the dataset and the econometric methodology. Section 4 presents the results: descriptive statistics, including demand curves, and regression results for the extensive and intensive margins. Section 5 concludes with some policy implications.

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<sup>3</sup>It should be noted that Georgarakos et al. (2025) investigate the seven largest economies in the EMU. However, they only provide aggregate survey data and results for all seven countries so that country-specific differences are neglected. Bidder et al. (2024) survey Germany, but with a focus on holding limits and financial stability. Analysing socio-demographic variables to explain the extensive and intensive margin of a digital euro is not their primary interest.

<sup>4</sup>Bijlsma et al. (2024) consider interest rate spread only to investigate the role of a digital euro as a store of value.

## 2 Related Literature

Most of the literature examines how CBDC introduction affects financial stability and bank disintermediation, often building on Diamond and Dybvig (1983). A central theme is that CBDCs may intensify deposit outflows and increase bank run incentives in times of stress because they provide a safe alternative to bank deposits (Fernández-Villaverde et al., 2021; Keister and Monnet, 2022; Kim and Kwon, 2023; Schilling et al., 2024; Williamson, 2022). At the same time, the effects depend strongly on design features and policy arrangements: some contributions show that CBDCs can be neutral or stabilising under certain conditions, for example through central bank intermediation, improved information efficiency or appropriate design principles (Bidder et al., 2024; Brunnermeier and Niepelt, 2019; Keister and Monnet, 2022; Kumhof and Noone, 2021). Overall, the literature highlights a trade-off: while CBDCs can improve efficiency and financial inclusion, they may also amplify disintermediation and bank run risk in times of stress, suggesting the importance of design choices such as holding limits or interest rate policies (Bidder et al., 2024).<sup>5</sup>

A successful CBDC introduction requires sufficiently large substitution away from bank deposits or cash towards CBDC. Assuming the former implies that CBDC induces disintermediation by increasing the demand for central bank money (Bank of England, 2020; Bidder et al., 2024), whereas assuming the latter it should be more or less neutral. It is therefore interesting to quantify CBDC demand under normal conditions and identify its macroeconomic implications. Barrdear and Kumhof (2022) estimate that a CBDC amounting to 30% of GDP would raise GDP by approximately 3% through lower real interest rates, reduced distortionary taxes and lower transaction costs. Extending the same analysis to an open economy, Kumhof et al. (2023) find an increase of GDP by 6%. Gross and Letizia (2023) show that CBDC demand depends on its design. For the euro area, they estimate CBDC adoption rates ranging from 1–20%, where the lower (upper) bound corresponds to a cash-like (deposit-like) CBDC. An interest-bearing cash-like CBDC largely displaces cash demand, whereas a deposit-like CBDC crowds out both deposits and cash. They further estimate that CBDC adoption could reduce bank deposits in the euro area by as much as EUR 2.8 tn. Huynh et al. (2020), Lambert et al. (2024), Li (2023) and Nocciola and Zamora-Pérez (2024) use survey-based payment data to estimate CBDC demand. Overall, the evidence suggests substantial heterogeneity, with adoption rates varying widely depending on design features. In particular, demand tends to be lower for cash-like CBDCs and higher for deposit-like designs, while policy tools such as holding limits can significantly constrain adoption.

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<sup>5</sup>More research on the effect of a CBDC introduction on financial stability and bank disintermediation is, for instance, provided by Ahnert et al. (2023), Andolfatto (2020) and Chiu et al. (2023).

However, modelling CBDC demand requires strong assumptions and resulting estimates vary substantially depending on the underlying definitions. To address these limitations, a growing literature relies on surveys and discrete choice experiments. For instance, a non-representative survey conducted in Germany by Deutsche Bundesbank (2021) shows that only 13% of respondents support the introduction of a digital euro, whereas 60% could imagine using it in the future. On behalf of the ECB, Kantar Public (2022) conducted a non-representative survey in 19 EMU countries and find that the majority had not previously heard about the potential introduction of a digital euro. These surveys primarily aim to identify the key design features of a CBDC. Their findings suggest, *inter alia*, that simplicity, privacy, safety and universal accessibility are essential. While Kim et al. (2025) find no significant differences across design options, Choi et al. (2023) and Fairweather et al. (2024) demonstrate that different privacy design options affect the adoption of CBDCs. Choi et al. (2023) show that privacy-related information affects CBDC demand, although evidence on its importance is mixed: while Fairweather et al. (2024) find that users value data privacy particularly highly, Elsinger et al. (2025) report that security features and financial incentives are more relevant. Consistent with the latter finding, Choi et al. (2025) identify financial incentives as the key driver of adoption, alongside some non-monetary characteristics (e.g., the issuer of a payment method or whether a CBDC is issued via cards or smartphone apps). Finally, Georgarakos et al. (2025) highlight the importance of central bank communication, showing that providing information can significantly increase adoption.

Regardless of the empirical approach and the specific CBDC designs considered, the emerging literature consistently finds pronounced heterogeneity in both the willingness to adopt a CBDC and the demand for it across socioeconomic groups (e.g., Abramova et al., 2022; Bidder et al., 2024; Bijlsma et al., 2024; Cupak et al., 2024; Elsinger et al., 2025; Georgarakos et al., 2025). Abramova et al. (2022) show that adoption varies strongly across consumer types, with tech-savvy individuals and cryptoasset users being more likely to adopt a CBDC than cash-oriented consumers. Similarly, Bidder et al. (2024) and Elsinger et al. (2025) highlight the importance of trust in the central bank, financial incentives and individual characteristics such as age, education and privacy preferences. Evidence from country studies confirms this heterogeneity: adoption rates and intended holdings differ substantially across countries and individuals. They tend to be associated not only with socio-demographic factors (e.g., age, education and financial literacy) but also with digitalisation affinity, payment behaviour, institutional trust in the EU and political preferences (Cupak et al., 2024; Bijlsma et al., 2024; Georgarakos et al., 2025). At the same time, while adoption intentions can be sizeable, the reallocation of funds towards CBDCs tends to remain

moderate, suggesting limited crowding-out effects on existing financial assets (Bijlsma et al., 2024; Georgarakos et al., 2025).

### 3 Data and Econometric Methodology

The population survey was conducted by Dynata on our behalf between 11 November and 6 December 2023. The sample comprises 5,944 representatively selected individuals aged 16 or older from France (2,021 participants), Germany (1,909 participants) and Italy (2,014 participants). The questionnaire consists of 43 items designed by us to address specific research questions. The survey was administered online and could be accessed from any internet-enabled digital device. Methodologically, the survey is based on quota sampling. Quotas (see Tables A1–A3 in Appendix A) were set with respect to gender, age, monthly net household income and regional distribution, and were applied to completed interviews. Assignment to the various treatment groups was random and mutually independent. An overview of all variables, including their definitions, is provided in Table A4 in Appendix A. A more detailed overview of the survey design, along with descriptive statistics, is provided in Hayo et al. (2025).

#### 3.1 Dependent Variables

Our main variable of interest is the monthly demand for the digital euro. The variable ranges from EUR 0 to more than EUR 7,000 and also includes an *I don't know* response. To ensure internal consistency, the survey instrument prevented respondents from entering a digital euro demand that exceeded their reported monthly net household income.

In a first step, all respondents were asked: *“Let’s assume that the interest rate on your digital euro account (Digi€ account) is the same as the interest rate on your current account. You have the option of dividing your monthly net household income between your current account and your Digi€ account. What would be the amount in euros that you would choose to hold as digital euros from your monthly net household income?”* In a second step, respondents were asked about their demand for the digital euro under a lower interest rate on Digi€ accounts relative to current accounts. To this end, they were randomly assigned to an interest rate spread of –50, –25 or –10 basis points (bps). In a third step, respondents were asked about their demand for digital euro under a higher interest rate on Digi€ accounts relative to current accounts. Correspondingly, they were randomly assigned to an interest rate spread of 50, 25 or 10 bps.

To measure how individual demand evolves in response to interest rate variations, we construct a panel with three observations per individual (negative spread relative

to the current account, no spread and positive spread), totalling 17,832 observations. We use two variants of demand in our analyses. For the extensive margin analysis (see Section 4.2), we employ three categories: respondents with zero demand (category: *NoDemand*), respondents with a positive demand (*Demand*) and undecided respondents (*Undecided*). For our analysis of the intensive margin (see Sections 4.3 and 4.4), we exclude all undecided respondents and employ the logarithm of digital euro demand, defined as  $\log(\text{demand} + 1)$ , as the dependent variable.

### 3.2 Econometric Methodology

**Extensive Margin – Multinomial Logit.** We first estimate a multinomial logit model to examine the extensive margin for the demand of the digital euro. The dependent variable takes the three categories: *Demand*, *Undecided* and *NoDemand*. We estimate the model separately for France, Germany and Italy, and additionally for a pooled sample including all three countries, which we denote as the ‘EMU sample’. The specification is as follows:

$$P_{ijsk} = \Pr(Y_{ijs} = k \mid X_{ijs}) = \frac{\exp(X'_{ijs}\beta_k)}{\sum_{l=1}^K \exp(X'_{ijs}\beta_l)}, \quad (1)$$

where  $Y_{ijs}$  denotes the outcome of respondent  $i$  in country  $j$  under the spread scenario  $s$  and  $k$  indexes the three outcome categories, with *Demand* serving as the reference category.  $X'_{ijs}$  denotes a set of exogenous variables (explained below).

In the pooled EMU specification, we weight observations by country population to ensure that each country contributes proportionally to its population size. Specifically, each observation from country  $j$  receives the weight:

$$w_{ij} = \frac{N_j}{n_j}, \quad (2)$$

where  $N_j$  denotes the population size of country  $j$  and  $n_j$  the corresponding sample size.<sup>6</sup> The resulting weights are normalised to have a mean of one. Standard errors are clustered at the individual level to account for correlation across the three scenario observations contributed by each individual.

Since the coefficients are expressed in log-odds terms, interpretation of the effect of each explanatory variable is facilitated by calculating average marginal effects (AME). For a given outcome category  $k$  and covariate  $x_{ijsr}$ , the marginal effect is defined as:

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<sup>6</sup>We rely on Eurostat (2026c) data to construct the weights. We use population figures from 2023, corresponding to the time of the survey. Specifically, we use population sizes of 68,277,210 for France, 83,118,501 for Germany and 58,997,201 for Italy.

$$\theta_{ijskr} = \begin{cases} \Pr(Y_{ijs} = k | x_{ijsr} = a, X_{ijs,-r}) - \Pr(Y_{ijs} = k | x_{ijsr} = b, X_{ijs,-r}), & \text{for discrete variables,} \\ \frac{\partial \Pr(Y_{ijs} = k | X_{ijs})}{\partial x_{ijsr}}, & \text{for continuous variables,} \end{cases} \quad (3)$$

where  $x_{ijsr}$  denotes  $r$ -th explanatory variable and  $X_{ijs,-r}$  collects all remaining covariates. For discrete regressors,  $a$  and  $b$  denote two categories of the variable (i.e., the category of interest and the reference category). Thus, for the country-specific estimations, the AME is given by

$$AME_{jkr} = \frac{1}{n_j} \sum_{i=1}^{N_j} \theta_{ijskr}, \quad (4)$$

where  $n_j$  denotes the number of observations in country  $j$ . For the pooled EMU sample, we compute population-weighted average marginal effects as:

$$AME_{kr}^w = \frac{\sum_i w_{ij} \theta_{ijskr}}{\sum_j w_{ij}}. \quad (5)$$

**Intensive Margin – Fixed Effects.** As a next step, we discard all observations with the answer *I don't know* and explain the intensive margin of the demand for the digital euro. For that purpose, we estimate a fixed-effects model at the individual level to identify respondents' sensitivity to the interest rate spread. As described above, our dataset records the demand for the digital euro under three scenarios. Conducting a fixed-effects analysis at the individual level ensures that (unobserved and observed) differences between respondents are removed, so that digital euro demand is identified from within-respondent variation in the interest rate spread between the digital euro account and current accounts. The specification is as follows:

$$y_{ijs} = \alpha_{ij} + \beta^{pos} D_{ijs}^{pos} + \beta^{neg} D_{ijs}^{neg} + \varepsilon_{ijs}, \quad (6)$$

where  $y_{ijs}$  denotes respondent  $i$ 's logarithm of digital euro demand in country  $j$  under interest rate scenario  $s$  and  $\alpha_{ij}$  is an individual fixed effect.  $D_{ijs}^{pos}$  and  $D_{ijs}^{neg}$  are dummies for the positive and negative interest rate spread scenarios, respectively.<sup>7</sup> The scenario with no interest rate spread serves as the reference category.  $\varepsilon_{ijs}$  denotes the error term. For the pooled EMU sample, each observation is weighted by Eq. (2). Standard

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<sup>7</sup>Preliminary regressions indicated no significant differences across the different magnitudes of the positive and negative spreads, respectively. Hence, we group these into the two variables here and in the following specifications.

errors are clustered at the respondent level to account for within-individual correlation across the three scenarios.

**Intensive Margin – OLS with Explanatory Variables.** Finally, we apply an OLS regression to the same dependent variable  $y_{ijs}$ , but include various economic and socio-demographic explanatory variables instead of the individual fixed effects. The specification is as follows:

$$y_{ijs} = \mu + \beta X'_{ijs} + \gamma_j + \varepsilon_{ijs}, \quad (7)$$

where  $\mu$  is the intercept,  $X'_{ijs}$  is a vector of explanatory variables,  $\gamma_j$  controls for country-specific effects for France, Germany and Italy, and  $\varepsilon_{ijs}$  denotes the error term. Again, we apply weighting according to Eq. (2) for the pooled EMU estimation and cluster the standard errors at the respondent level.

As part of our robustness tests (see Tables B4 and B5 in Appendix B), we restrict the sample in the intensive margin estimations (Eqs. (6) and (7)) to respondents with a strictly positive demand, using a log transformation instead of  $\log + 1$ .

### 3.3 Explanatory Variables

**Economic Variables.** The first set of explanatory variables comprises economic variables: *Spread*, *Income* and *Property* capture economic demographics possibly associated with the adoption of a new form of money and payment instrument. *Spread* measures interest rate spreads between individuals' hypothetical digital euro accounts and current accounts. We summarise the different interest rate scenarios as *Negative*, *NoSpread* and *Positive* (see Section 3.1 for the corresponding basis point values). *Income* is defined as the logarithm of monthly net household income. *Property* proxies wealth based on individuals' housing tenure status (with *Tenant* as the reference category).

**Socio-Demographic Variables.** Our models also account for a broad set of socio-demographic variables. *Gender* distinguishes between *Male* and *Female* (reference category) respondents. *Age* categorises respondents into *Young* (aged 16–34, reference category), *Middle* (aged 35–54) and *Old* (aged 55 and above). *Migration* captures the migration background and distinguishes between *1stGen*, *2ndGen* and *NoMigration* (reference category). *1stGen* denotes respondents who immigrated to France, Germany or Italy after 1949. *2ndGen* labels respondents for whom at least one parent immigrated to these countries after 1949. *Urban* measures the size of respondents' place of residence and is grouped into *Small* (0–19,999 residents, reference category), *Mid* (20,000–99,999 residents) and *Large* (more than 100,000 residents). Finally, *Country*

controls for respondents' country of residence with *Germany* serving as the reference category.

We include *Education*, measured by respondents' highest degree, as another set of explanatory variables. *Low* (reference category) includes respondents with no school-leaving certificate or with a (lower) secondary school-leaving certificate. *Mid* includes respondents with a higher education entrance qualification or a university of applied sciences entrance qualification. *High* includes respondents with a university degree. In addition, we measure a *Financial Literacy* index ranging from 0 to 1 to account for specific knowledge in the domain of finance.<sup>8</sup> Finally, we measure respondents' *Subjective Knowledge* about the digital euro. In a first step, participants were asked whether they had previously heard about the discussion concerning the introduction of a digital euro. Those who answered 'yes' were subsequently asked to assess their own level of knowledge on this topic. *Bad* (reference category) refers to respondents who had never heard about the digital euro or stated poor knowledge about it. *Good* refers to respondents who had heard about the digital euro and reported a higher level of subjective knowledge than *Bad*.

Another variable of interest is *Digitalisation*, measured as a standardised index, with higher values indicating a more digitalised daily life. To construct this index, respondents were asked several questions about their attitudes towards ongoing digitalisation as well as what types of and how frequently they use digital technologies. Similarly, *European Union Integration* is constructed as a standardised index capturing attitudes towards the European Union (EU) and EMU, with higher values indicating more favourable views. *Election* represents political preferences. We distinguish between *Left*, *Mid* (reference category), *Right* and *NoVote/Undecided* political preferences. The preferences are gathered by asking respondents which national party they would vote for if the European Parliament election were held next Sunday. Responses were subsequently grouped according to the corresponding European party families, thereby making national voting intentions comparable across countries.

**Survey Treatments.** We also conducted several experimental treatments in the survey with random assignment in accordance with the predefined quotas. The full treatment texts can be found in Appendix A. *Treatment1* was randomly assigned to half of all respondents and provided information about central bank money and private money, highlighting differences in issuer and risk. It emphasises that while cashless payments rely on private bank money, these funds are only insured up to EUR 100,000 and may be exposed to loss in the event of bank failure. Respondents were subsequently asked about their preferred payment method and their trust in banks. *Favourite cap-*

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<sup>8</sup>To construct this index, we adjusted questions based on recommendations by Lusardi and Mitchell (2014) and van Rooij et al. (2011).

tures respondents' payment behaviour by identifying their preferred payment method (*Debitcard, Creditcard, Smartphone, Cash* as the reference category and *Other*). Using principal component analysis, we also construct the variables *Trust in Banks* and *Trust in ECB*, which quantify respondents' trust in commercial banks and in the ECB, respectively. Higher values are indicative of greater trust. By providing information on monetary forms and associated risks, we are able to identify how such information affects payment preferences and trust in financial institutions.

Before being asked about their demand for the digital euro, respondents were randomly assigned to one of three information treatments concerning the design of the digital euro (*Treatment2*). Respondents in the reference group (*Definition*) receive a brief general explanation of the digital euro. The second treatment group (*Deposit-Like*) received the same definition as the control group, supplemented by information on an account-based, deposit-like digital euro design. The third treatment group (*Cash-Like*) also received the same definition as the control group, supplemented by information on a token-based, cash-like digital euro design.<sup>9</sup> By varying the information provided, we are able to identify information effects while also covering potentially favourable design features of the digital euro.

## 4 Results

In our analysis, we distinguish between the extensive margin (whether individuals are willing to hold any digital euro at all) and the intensive margin (how much they wish to hold conditional on positive demand). This decomposition allows us to separate factors that are associated with participation from those that are related to the level of holdings. Note that two sets of variables permit causal interpretation: the randomised digital euro design treatments (*Treatment 2*) and interest rate spread scenarios. All other variables capture multivariate associations with the outcome variables.

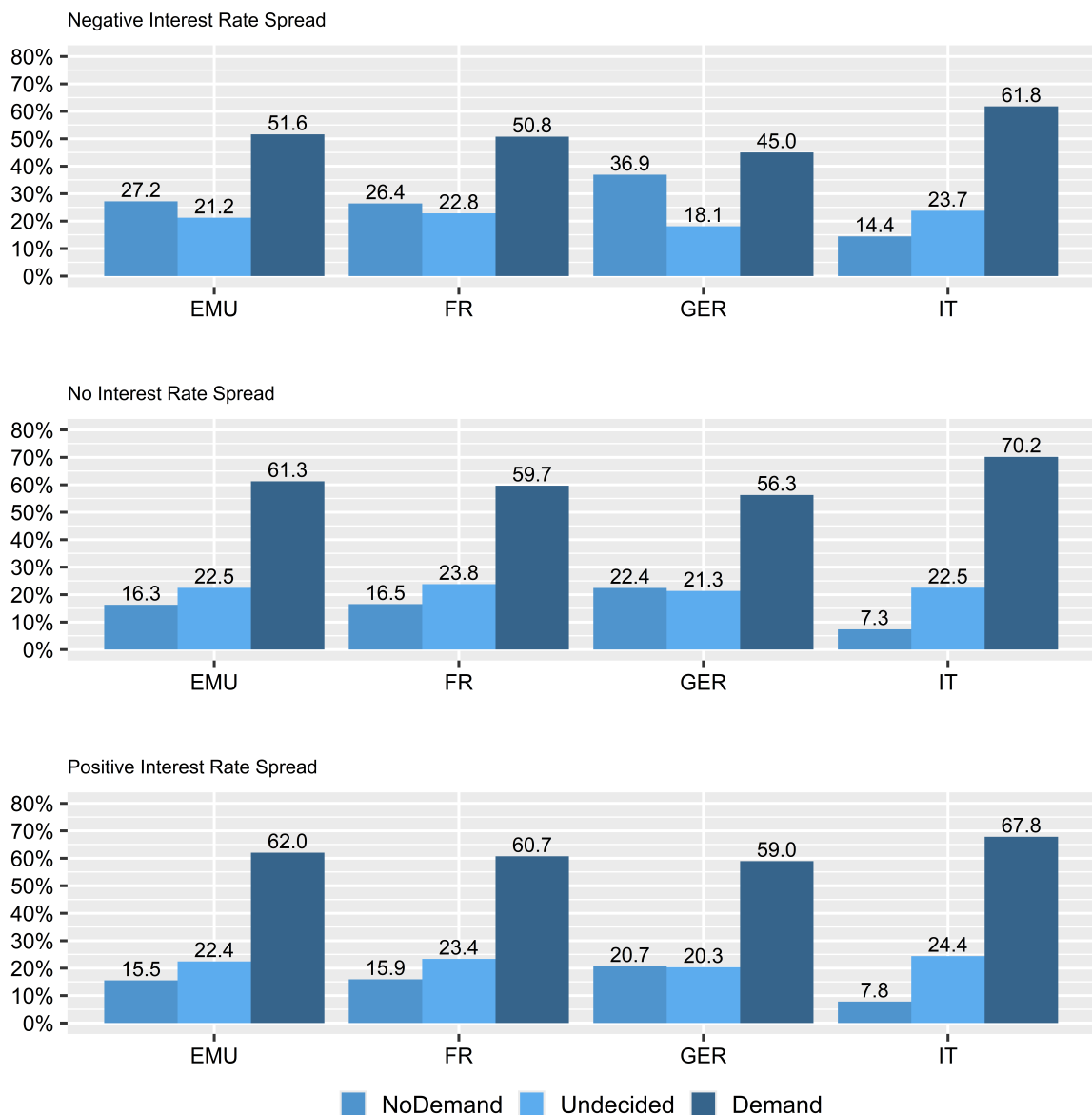
### 4.1 Descriptive Statistics

At the time of the survey (November–December 2023), 45% of respondents reported that they had previously heard about the introduction of a digital euro. Awareness is highest in Germany (53%), followed by Italy (51%) and France (32%), indicating a significant discrepancy across these countries. Overall, this result is in line with Georgarakos et al. (2025), who find European awareness of around 40% in March 2024, but contrasts with Bidder et al. (2024), who state that only 27% of German respondents were aware of the digital euro.

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<sup>9</sup>An explanation of different CBDC design options is beyond the scope of this paper. More detailed information is given, e.g., in Auer et al. (2021).

**Figure 1: Demand for a Digital Euro**



*Note:* Observations in *EMU* are weighted by country population size such that each country contributes proportionally to its population in the calculations.

Figure 1 shows the intention to hold digital euro balances under different interest rate scenarios. The upper panel assumes a negative spread compared to a current account, the middle panel assumes no spread, and the bottom panel shows a particularly attractive scenario where the digital euro features a higher interest rate compared to the current account. In the pooled EMU sample, the intention to hold digital euro balances ranges between 52% and 62%, depending on the spread scenario. On average, this intention is highest in Italy, followed by France, and lowest in Germany. In the reference scenario without an interest rate spread, 70% of Italian, 60% of French and 56% of German respondents are willing to hold a digital euro. Moreover, the results indicate an asymmetric interest rate effect. While EMU-wide willingness to hold a digital

euro increases by almost 10 pp if the interest rate spread rises from negative to zero, a further increase from zero to a positive spread raises willingness by approximately an additional 1 pp.<sup>10</sup> This asymmetry is consistent with prospect theory (Kahneman and Tversky, 1979; Tversky and Kahneman, 1991), particularly its prediction of loss aversion: losses relative to a reference point (here, current account rates) loom larger than equivalent gains.

Figure 2 shows the demand curve for the digital euro with respect to the different interest rate spread scenarios, with undecided respondents being excluded from the calculations. The y-axis represents the interest rate spread relative to the current account and the x-axis shows the cumulative demand across the different spread scenarios. The upper panel illustrates heterogeneity by monthly net household income.<sup>11</sup> It shows that low-income households are more willing than high-income households to shift money to a digital euro account when interest rate spreads are negative. At an interest rate spread of  $-50$  bps, 9% of low-income respondents are willing to hold at least a fraction of their household income in a digital euro account, compared with 8% of high-income respondents. This pattern aligns with standard money demand theory: low-income households require a larger share of income in liquid form for transactions, while higher-income households allocate more to illiquid assets (Keynes, 1936). Once the interest rate spread reaches zero or becomes positive, differences across income groups become small.

The lower panel of Figure 2 illustrates country-specific differences and suggests once more that Italian respondents are more willing to demand a digital euro than respondents in France or Germany. This is also reflected in the share of income allocated to digital euro holdings: in Italy, respondents allocate 36% of their monthly net household income, compared with 21% in France and 19% in Germany. On average, demand in the pooled EMU sample ranges roughly between EUR 700 and EUR 1,100, with interest rate spreads of  $-50$  bps and  $+50$  bps as lower and upper bounds, respectively. These figures imply an average aggregate demand for France, Germany and Italy ranging between approximately EUR 150 bn and EUR 235 bn, corresponding to a share of 1.5%–2.5% of the three countries' GDP.<sup>12</sup> Our findings further suggest that the discussed digital euro holding limit of EUR 3,000 (see, e.g., European Central Bank, 2025) is sufficient to accommodate the vast majority of respondents. Depending on the interest rate spread scenario, between 90–94% of the respondents demand less than EUR 3,000. At country level, the share of respondents demanding less than the

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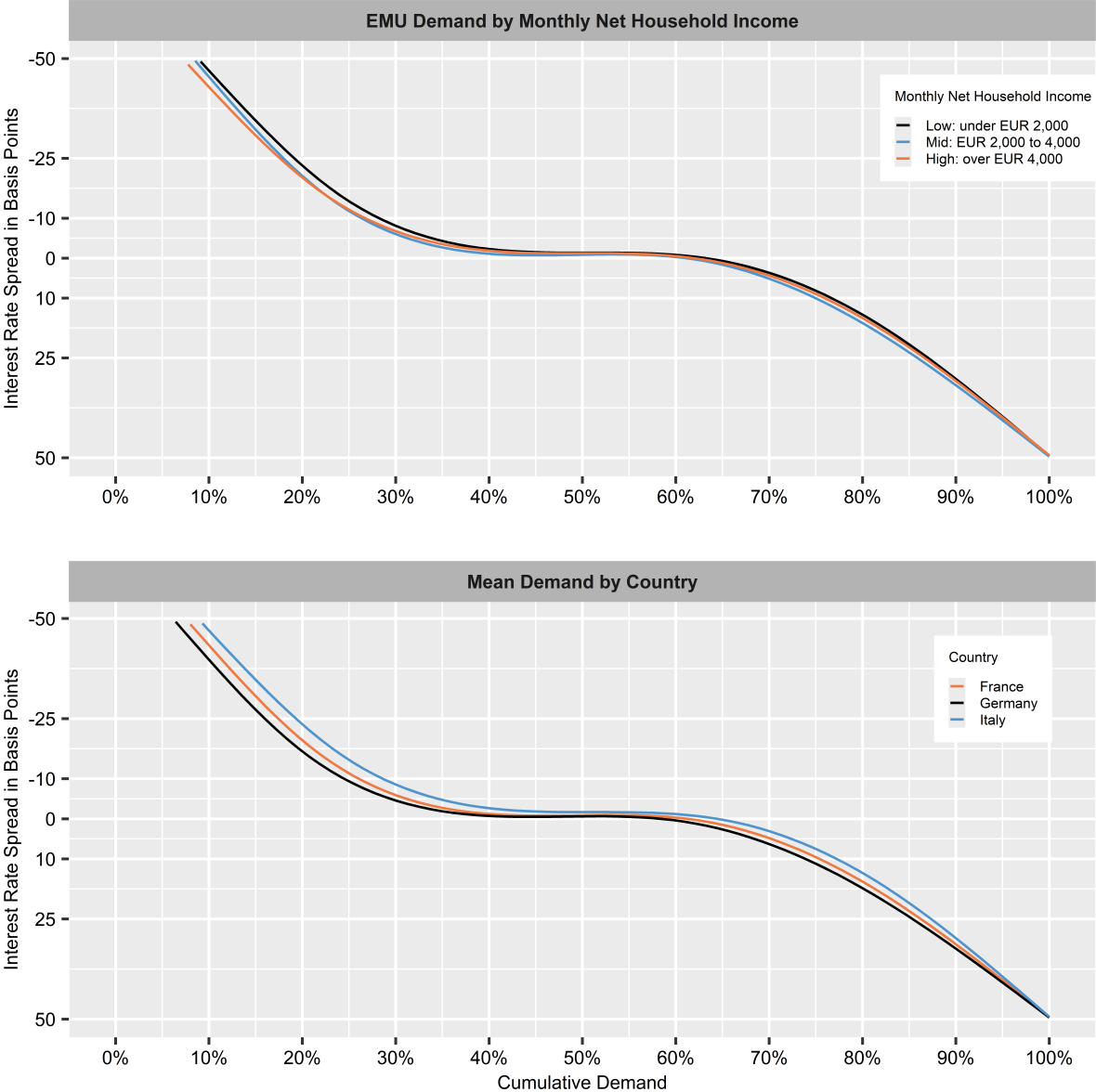
<sup>10</sup>It should be noted that in Italy willingness to hold a digital euro even declines slightly if the interest rate spread becomes positive.

<sup>11</sup>Low: monthly net household income under EUR 2,000; mid: EUR 2,000 – EUR 4,000; high: EUR 4,001 and more.

<sup>12</sup>Corresponding to data from Eurostat (2026a). As a reference, we use GDP measured in current prices for the year 2023.

limit ranges from 93% to 97% in France, from 93% to 96% in Germany and from 84% to 88% in Italy.

**Figure 2: Demand Curve for a Digital Euro**



*Note:* The y-axis represents the interest rate spread relative to the current account and the x-axis shows the cumulative demand across the different spread scenarios. Observations in EMU demand (upper panel) are weighted by country population size such that each country contributes proportionally to its population in the calculations. Undecided respondents are excluded from the calculations. Demand curves are smoothed for visualisation purposes using a generalised additive model with a cubic shrinkage spline.

## 4.2 Extensive Margin

Next, we analyse which factors are associated with the willingness to hold a digital euro. We first estimate a parsimonious ‘small model’ including only standard economic factors (income and interest rate spreads), before extending the specification to a ‘large model’ that adds socio-demographic characteristics, payment behaviour and trust variables. Econometrically, we estimate multinomial logit regression models and calculate average marginal effects according to Eqs. (1)–(5). The dependent variable takes the three categories *NoDemand* for respondents with zero demand, *Undecided* and *Demand* for respondents with a demand of at least EUR 1. Income is defined as the logarithm of monthly net household income and interest rate spread (relative to the current account) is grouped as *Negative*, *NoSpread* (reference category) and *Positive*. Table 1 presents the corresponding results, also accounting for country-specific differences in the pooled EMU estimation (Germany serves as the reference).

To conserve space, the following interpretation mostly focuses on the pooled EMU results and refers to the country-specific estimations only in the case of clearly visible differences. In line with the descriptive statistics, Table 1 reveals asymmetric effects of interest rate spreads on willingness to hold a digital euro. Relative to the reference category, a negative interest rate spread decreases the willingness to hold a digital euro by 10 pp in the pooled EMU sample and increases the willingness of not holding it by 11 pp. This effect is strongest for Germany and weakest for Italy. In contrast, positive interest rate spreads exert only moderate effects. Under this scenario, the willingness of not holding a digital euro decreases significantly only in Germany and the pooled EMU sample.<sup>13</sup>

*Income* exhibits the expected sign across all model specifications. In the pooled EMU sample, a 1% increase in *Income* raises willingness to hold a digital euro by 6 pp. At the same time, higher monthly net household income reduces the likelihood of being undecided by 4 pp and – to some extent – the likelihood of expressing no demand. Consistent with the descriptive evidence discussed above, respondents, particularly in Italy (+13 pp), but also in France (+4 pp), report a higher willingness to hold a digital euro than respondents in Germany. At the same time, they are also more often undecided than Germans (IT: +4 pp, FR: +3 pp), who appear to have made up their minds more often regarding whether to demand a digital euro (or not). The explanatory power of the small model reported in Table 1 remains limited: a McFadden of 3% and low classification accuracy for the *NoDemand* and *Undecided* categories suggest that important socio-demographic variables relevant for the extensive margin are omitted.

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<sup>13</sup>It is also worth noting that, in Italy, positive interest rate spreads reduce the willingness to hold a digital euro. See also footnote 10.

**Table 1:** Willingness to Hold a Digital Euro – Economic Determinants (‘Small Model’)

	<b>Demand (NoDemand, Undecided, Demand)</b>			
	EMU	France	Germany	Italy
Spread[NoDemand  Negative - NoSpread]	0.109*** (0.004)	0.099*** (0.007)	0.145*** (0.009)	0.071*** (0.007)
Spread[NoDemand  Positive - NoSpread]	-0.008* (0.003)	-0.006 (0.006)	-0.017** (0.007)	0.004 (0.005)
Spread[Undecided  Negative - NoSpread]	-0.012** (0.004)	-0.010 (0.007)	-0.032*** (0.007)	0.012 (0.007)
Spread[Undecided  Positive - NoSpread]	-0.000 (0.004)	-0.004 (0.007)	-0.010 (0.007)	0.019** (0.007)
Spread[Demand  Negative - NoSpread]	-0.097*** (0.005)	-0.089*** (0.008)	-0.113*** (0.009)	-0.083*** (0.008)
Spread[Demand  Positive - NoSpread]	0.008 (0.005)	0.010 (0.008)	0.027*** (0.008)	-0.023** (0.008)
Income[NoDemand  dY/dX]	-0.017** (0.006)	-0.015 (0.011)	-0.023* (0.012)	-0.009 (0.007)
Income[Undecided  dY/dX]	-0.038*** (0.006)	-0.027* (0.011)	-0.035*** (0.011)	-0.054*** (0.011)
Income[Demand  dY/dX]	0.055*** (0.007)	0.043** (0.013)	0.058*** (0.013)	0.064*** (0.011)
Country[NoDemand  FR - GER]	-0.070*** (0.011)			
Country[NoDemand  IT - GER]	-0.167*** (0.010)			
Country[Undecided  FR - GER]	0.034** (0.011)			
Country[Undecided  IT - GER]	0.040** (0.012)			
Country[Demand  FR - GER]	0.036** (0.013)			
Country[Demand  IT - GER]	0.126*** (0.014)			
Num. Obs.	17832	6063	5727	6042
Num. Individuals	5944	2021	1909	2014
McFadden R <sup>2</sup>	0.030	0.010	0.017	0.015
Accuracy: Overall	0.591	0.571	0.533	0.666
Accuracy: NoDemand	0.017	0.000	0.037	0.000
Accuracy: Undecided	0	0	0	0
Accuracy: Demand	0.994	1.000	0.980	1.000
True Positives Rate: NoDemand	0.017	0.000	0.037	0.000
True Positives Rate: Undecided	0	0	0	0
True Positives Rate: Demand	0.994	1.000	0.980	1.000
False Positives Rate: NoDemand	0.007	0.000	0.024	0.000
False Positives Rate: Undecided	0	0	0	0
False Positives Rate: Demand	0.987	1.000	0.965	1.000

*Note:* Observations in EMU are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. *Significance Level:* \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ .

**Table 2: Willingness to Adopt a Digital Euro – ‘Large Model’**

	<b>Demand (NoDemand, Undecided, Demand)</b>			
	EMU	France	Germany	Italy
Spread[NoDemand  Negative - NoSpread]	0.105*** (0.004)	0.099*** (0.007)	0.144*** (0.009)	0.071*** (0.007)
Spread[NoDemand  Positive - NoSpread]	-0.007* (0.003)	-0.006 (0.006)	-0.017** (0.007)	0.004 (0.005)
Spread[Undecided  Negative - NoSpread]	-0.011** (0.004)	-0.010 (0.007)	-0.032*** (0.007)	0.012 (0.007)
Spread[Undecided  Positive - NoSpread]	-0.000 (0.004)	-0.004 (0.007)	-0.010 (0.007)	0.019** (0.007)
Spread[Demand  Negative - NoSpread]	-0.095*** (0.005)	-0.089*** (0.008)	-0.112*** (0.009)	-0.083*** (0.008)
Spread[Demand  Positive - NoSpread]	0.007 (0.005)	0.010 (0.008)	0.027*** (0.008)	-0.023** (0.008)
Income[NoDemand  dY/dX]	-0.024*** (0.006)	-0.027* (0.012)	-0.037** (0.011)	-0.008 (0.008)
Income[Undecided  dY/dX]	0.003 (0.007)	-0.002 (0.014)	0.010 (0.012)	-0.007 (0.011)
Income[Demand  dY/dX]	0.021** (0.008)	0.029* (0.015)	0.027* (0.013)	0.015 (0.011)
Property[NoDemand  Property - Tenant]	-0.005 (0.009)	-0.025 (0.018)	0.011 (0.017)	0.002 (0.016)
Property[Undecided  Property - Tenant]	-0.002 (0.011)	0.020 (0.019)	-0.019 (0.017)	-0.004 (0.023)
Property[Demand  Property - Tenant]	0.007 (0.012)	0.005 (0.021)	0.008 (0.019)	0.002 (0.024)
Gender[NoDemand  Male - Female]	0.013 (0.008)	0.014 (0.015)	0.024 (0.016)	-0.001 (0.011)
Gender[Undecided  Male - Female]	-0.035*** (0.010)	-0.055*** (0.017)	-0.021 (0.016)	-0.032 (0.017)
Gender[Demand  Male - Female]	0.022* (0.010)	0.041* (0.018)	-0.003 (0.018)	0.033 (0.017)
Age[NoDemand  Middle - Young]	0.034*** (0.010)	0.016 (0.021)	0.054* (0.022)	0.036** (0.013)
Age[NoDemand  Old - Young]	0.042*** (0.012)	0.015 (0.024)	0.065** (0.024)	0.048*** (0.014)
Age[Undecided  Middle - Young]	0.033** (0.013)	0.064** (0.021)	0.015 (0.021)	0.014 (0.021)
Age[Undecided  Old - Young]	0.073*** (0.014)	0.130*** (0.025)	0.043 (0.025)	0.047* (0.023)
Age[Demand  Middle - Young]	-0.068*** (0.014)	-0.080*** (0.024)	-0.069** (0.025)	-0.050* (0.022)
Age[Demand  Old - Young]	-0.115*** (0.015)	-0.145*** (0.027)	-0.108*** (0.028)	-0.095*** (0.025)
Migration[NoDemand  1stGen - NoMigration]	-0.004 (0.017)	0.034 (0.042)	-0.024 (0.030)	0.023 (0.035)
Migration[NoDemand  2ndGen - NoMigration]	-0.026 (0.013)	-0.032 (0.024)	-0.029 (0.026)	-0.005 (0.033)
Migration[Undecided  1stGen - NoMigration]	-0.101*** (0.018)	-0.112** (0.038)	-0.079** (0.026)	-0.154*** (0.032)

*To be continued on next page*

	<b>Demand (NoDemand, Undecided, Demand)</b>			
	EMU	France	Germany	Italy
Migration[Undecided  2ndGen - NoMigration]	-0.041*	-0.005	-0.062*	-0.061
	(0.017)	(0.028)	(0.025)	(0.039)
Migration[Demand  1stGen - NoMigration]	0.105***	0.077	0.103**	0.131**
	(0.021)	(0.046)	(0.034)	(0.041)
Migration[Demand  2ndGen - NoMigration]	0.067***	0.036	0.090**	0.066
	(0.017)	(0.027)	(0.029)	(0.043)
Urban[NoDemand  Mid - Small]	-0.003	-0.002	-0.006	-0.010
	(0.009)	(0.017)	(0.018)	(0.012)
Urban[NoDemand  Large - Small]	0.016	0.014	0.028	-0.003
	(0.009)	(0.020)	(0.019)	(0.013)
Urban[Undecided  Mid - Small]	-0.016	0.006	-0.028	-0.029
	(0.011)	(0.019)	(0.019)	(0.019)
Urban[Undecided  Large - Small]	0.010	0.049*	-0.005	-0.006
	(0.012)	(0.024)	(0.019)	(0.020)
Urban[Demand  Mid - Small]	0.020	-0.005	0.034	0.039
	(0.012)	(0.021)	(0.021)	(0.020)
Urban[Demand  Large - Small]	-0.026*	-0.062**	-0.024	0.009
	(0.012)	(0.023)	(0.021)	(0.020)
Education[NoDemand  Mid - Low]	0.014	0.002	0.039	0.008
	(0.010)	(0.023)	(0.020)	(0.016)
Education[NoDemand  High - Low]	0.046***	0.075**	0.042*	0.024
	(0.010)	(0.025)	(0.019)	(0.017)
Education[Undecided  Mid - Low]	0.001	-0.018	0.009	0.004
	(0.013)	(0.025)	(0.020)	(0.025)
Education[Undecided  High - Low]	-0.006	-0.011	-0.001	-0.020
	(0.013)	(0.029)	(0.020)	(0.027)
Education[Demand  Mid - Low]	-0.015	0.016	-0.048*	-0.013
	(0.014)	(0.028)	(0.022)	(0.028)
Education[Demand  High - Low]	-0.040**	-0.064*	-0.041	-0.004
	(0.014)	(0.030)	(0.021)	(0.029)
Financial Literacy[NoDemand  dY/dX]	0.202***	0.197***	0.256***	0.146***
	(0.016)	(0.030)	(0.034)	(0.024)
Financial Literacy[Undecided  dY/dX]	-0.235***	-0.196***	-0.274***	-0.247***
	(0.019)	(0.034)	(0.032)	(0.034)
Financial Literacy[Demand  dY/dX]	0.033	-0.002	0.018	0.101**
	(0.021)	(0.036)	(0.037)	(0.037)
Subjective Knowledge[NoDemand  Good - Bad]	0.011	-0.001	0.012	0.010
	(0.009)	(0.021)	(0.018)	(0.012)
Subjective Knowledge[Undecided  Good - Bad]	-0.070***	-0.079***	-0.053**	-0.087***
	(0.011)	(0.024)	(0.018)	(0.019)
Subjective Knowledge[Demand  Good - Bad]	0.059***	0.080**	0.040*	0.076***
	(0.012)	(0.025)	(0.020)	(0.020)
Digitalisation[NoDemand  dY/dX]	-0.022***	-0.024***	-0.025***	-0.017***
	(0.002)	(0.004)	(0.004)	(0.003)
Digitalisation[Undecided  dY/dX]	-0.031***	-0.026***	-0.029***	-0.033***
	(0.003)	(0.004)	(0.004)	(0.005)
Digitalisation[Demand  dY/dX]	0.053***	0.050***	0.054***	0.049***
	(0.003)	(0.005)	(0.005)	(0.005)
European Union Integration[NoDemand  dY/dX]	-0.012***	-0.013**	-0.018***	-0.008*

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	<b>Demand (NoDemand, Undecided, Demand)</b>			
	EMU	France	Germany	Italy
European Union Integration[Undecided  dY/dX]	(0.003) -0.000	(0.005) -0.006	(0.006) 0.005	(0.003) 0.002
European Union Integration[Demand  dY/dX]	(0.003) 0.013***	(0.006) 0.019**	(0.006) 0.013*	(0.005) 0.005
	(0.003)	(0.006)	(0.006)	(0.006)
Election[NoDemand  Left - Mid]	-0.010 (0.010)	-0.044* (0.022)	-0.004 (0.019)	0.021 (0.020)
Election[NoDemand  Right - Mid]	-0.003 (0.012)	-0.011 (0.022)	-0.004 (0.026)	0.009 (0.017)
Election[NoDemand  Other - Mid]	-0.007 (0.015)	-0.007 (0.039)	0.005 (0.031)	-0.005 (0.019)
Election[NoDemand  NoVote/Undecided - Mid]	-0.012 (0.011)	-0.022 (0.021)	-0.025 (0.023)	0.011 (0.019)
Election[Undecided  Left - Mid]	0.021 (0.013)	0.056* (0.023)	0.003 (0.020)	0.011 (0.029)
Election[Undecided  Right - Mid]	0.037** (0.014)	0.067** (0.024)	0.039 (0.027)	0.017 (0.028)
Election[Undecided  Other - Mid]	0.016 (0.018)	0.054 (0.043)	-0.007 (0.029)	0.009 (0.030)
Election[Undecided  NoVote/Undecided - Mid]	0.109*** (0.014)	0.129*** (0.023)	0.100*** (0.025)	0.107*** (0.029)
Election[Demand  Left - Mid]	-0.011 (0.014)	-0.012 (0.025)	0.001 (0.022)	-0.031 (0.030)
Election[Demand  Right - Mid]	-0.035* (0.015)	-0.056* (0.026)	-0.035 (0.029)	-0.026 (0.028)
Election[Demand  Other - Mid]	-0.009 (0.020)	-0.047 (0.047)	0.002 (0.036)	-0.004 (0.030)
Election[Demand  NoVote/Undecided - Mid]	-0.097*** (0.015)	-0.107*** (0.024)	-0.075** (0.025)	-0.118*** (0.030)
Favourite[NoDemand  Debitcard - Cash]	-0.051*** (0.010)	-0.029 (0.024)	-0.086*** (0.019)	-0.023 (0.015)
Favourite[NoDemand  Creditcard - Cash]	-0.032** (0.012)	-0.025 (0.024)	-0.037 (0.023)	-0.019 (0.017)
Favourite[NoDemand  Smartphone - Cash]	-0.079*** (0.015)	-0.086** (0.031)	-0.104*** (0.030)	-0.050** (0.019)
Favourite[NoDemand  Other - Cash]	-0.068*** (0.016)	0.001 (0.038)	-0.121*** (0.029)	-0.064** (0.024)
Favourite[Undecided  Debitcard - Cash]	0.007 (0.013)	-0.020 (0.028)	0.043* (0.019)	-0.021 (0.022)
Favourite[Undecided  Creditcard - Cash]	-0.010 (0.014)	-0.027 (0.027)	0.014 (0.024)	-0.032 (0.026)
Favourite[Undecided  Smartphone - Cash]	0.037 (0.021)	0.027 (0.041)	0.047 (0.033)	0.035 (0.038)
Favourite[Undecided  Other - Cash]	0.059** (0.021)	0.015 (0.040)	0.082* (0.032)	0.072 (0.047)
Favourite[Demand  Debitcard - Cash]	0.044** (0.013)	0.049 (0.029)	0.044* (0.021)	0.045 (0.023)
Favourite[Demand  Creditcard - Cash]	0.042** (0.015)	0.052 (0.028)	0.024 (0.027)	0.050 (0.027)
Favourite[Demand  Smartphone - Cash]	0.043* (0.021)	0.059 (0.041)	0.056 (0.034)	0.015 (0.039)

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	<b>Demand (NoDemand, Undecided, Demand)</b>			
	EMU	France	Germany	Italy
Favourite[Demand  Other - Cash]	0.009 (0.021)	-0.016 (0.042)	0.039 (0.032)	-0.007 (0.049)
Trust in Banks[NoDemand  dY/dX]	0.014*** (0.003)	0.013* (0.006)	0.022*** (0.006)	0.010* (0.004)
Trust in Banks[Undecided  dY/dX]	0.003 (0.004)	0.001 (0.006)	0.009 (0.007)	-0.002 (0.007)
Trust in Banks[Demand  dY/dX]	-0.017*** (0.004)	-0.014* (0.007)	-0.031*** (0.007)	-0.008 (0.007)
Trust in ECB[NoDemand  dY/dX]	-0.051*** (0.003)	-0.058*** (0.006)	-0.068*** (0.006)	-0.029*** (0.004)
Trust in ECB[Undecided  dY/dX]	-0.012** (0.004)	-0.009 (0.006)	-0.014* (0.006)	-0.012 (0.007)
Trust in ECB[Demand  dY/dX]	0.064*** (0.004)	0.066*** (0.007)	0.081*** (0.007)	0.041*** (0.007)
Treatment1[NoDemand  Definition - ControlGroup]	0.000 (0.007)	-0.004 (0.014)	0.002 (0.015)	0.001 (0.010)
Treatment1[Undecided  Definition - ControlGroup]	0.001 (0.009)	0.017 (0.016)	-0.011 (0.015)	0.001 (0.016)
Treatment1[Demand  Definition - ControlGroup]	-0.001 (0.010)	-0.014 (0.017)	0.009 (0.017)	-0.002 (0.016)
Treatment2[NoDemand  Cash-Like - Definition]	0.019* (0.009)	0.019 (0.017)	0.028 (0.018)	0.013 (0.012)
Treatment2[NoDemand  Deposit-Like - Definition]	0.011 (0.009)	0.009 (0.018)	0.015 (0.018)	0.010 (0.013)
Treatment2[Undecided  Cash-Like - Definition]	0.012 (0.011)	0.000 (0.019)	0.021 (0.019)	0.009 (0.019)
Treatment2[Undecided  Deposit-Like - Definition]	0.002 (0.011)	-0.002 (0.020)	-0.004 (0.019)	0.019 (0.020)
Treatment2[Demand  Cash-Like - Definition]	-0.030* (0.012)	-0.020 (0.020)	-0.049* (0.021)	-0.022 (0.020)
Treatment2[Demand  Deposit-Like - Definition]	-0.013 (0.012)	-0.007 (0.021)	-0.011 (0.021)	-0.029 (0.020)
Country[NoDemand  FR - GER]	-0.041*** (0.011)			
Country[NoDemand  IT - GER]	-0.095*** (0.012)			
Country[Undecided  FR - GER]	-0.028* (0.012)			
Country[Undecided  IT - GER]	0.037* (0.015)			
Country[Demand  FR - GER]	0.070*** (0.013)			
Country[Demand  IT - GER]	0.058*** (0.015)			
Num. Obs.	17832	6063	5727	6042
Num. Individuals	5944	2021	1909	2014
McFadden R <sup>2</sup>	0.192	0.178	0.207	0.163
Accuracy	0.657	0.639	0.649	0.700

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	Demand (NoDemand, Undecided, Demand)			
	EMU	France	Germany	Italy
Accuracy: NoDemand	0.401	0.350	0.549	0.154
Accuracy: Undecided	0.265	0.313	0.235	0.300
Accuracy: Demand	0.885	0.872	0.852	0.923
True Positives Rate: NoDemand	0.401	0.350	0.549	0.154
True Positives Rate: Undecided	0.265	0.313	0.235	0.300
True Positives Rate: Demand	0.885	0.872	0.852	0.923
False Positives Rate: NoDemand	0.076	0.083	0.142	0.017
False Positives Rate: Undecided	0.078	0.097	0.053	0.079
False Positives Rate: Demand	0.542	0.513	0.439	0.670

*Note:* Observations in EMU are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. *Significance Level:* \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ .

Therefore, Table 2 reports the results of an expanded multinomial logit regression that also includes socio-demographic characteristics (including payment behaviour and trust variables) and the two survey treatments. The explanatory power improves substantially relative to the small model, with the McFadden  $R^2$  increasing to 19% in the pooled EMU sample. Moreover, the model classifies the *NoDemand* and *Undecided* categories more accurately, although *Demand* remains the category with the highest classification accuracy. Compared with the small model results, the effect of *Spread* remains robust in magnitude (including the asymmetric pattern) and significance. In contrast, the estimated effect of *Income* becomes smaller in the large specification and loses statistical significance, in particular for Italy. Similarly, the country-specific effects largely shrink, implying that standard economic determinants of money demand are not strongly related to adoption of a new form of money. Taken together with the non-significance of *Property* as a proxy for respondents' wealth, these findings suggest that non-economic factors play a more important role in the willingness to hold a digital euro.

Among the additional covariates, *Male* respondents are more likely to express positive demand (+2 pp) and less likely (−4 pp) to be undecided than female respondents. *Age* is significantly negatively associated with the willingness to hold a digital euro. Respondents aged 35–54 and those aged 55 or older are about 7 pp and 12 pp less likely to express demand for a digital euro than respondents aged 16–34. With the exception of France, first-generation immigrants express a significantly higher willingness to hold a digital euro; in the pooled EMU sample, they are 11 pp more likely to do so. In contrast, second-generation immigrants differ significantly from respondents without a migration background only in Germany and in the pooled EMU sample. One possible explanation for the relationship between *Migration* and *Demand* relates to risk attitudes. Jaeger et al. (2010) find that individuals with lower risk aversion are

more likely to migrate, while Liu (2013) shows that higher risk aversion reduces the likelihood of adopting new technologies. Since a digital euro represents a new payment technology, combining these insights may help to explain why first-generation immigrants are more likely to adopt it.

A high level of *Education* is associated with a reduction in the willingness to hold a digital euro by almost 5 pp in the pooled EMU sample, with some country-level heterogeneity as the effect is insignificant for Italy. In general, the effect of education is less pronounced compared to *Financial Literacy*. Here, a one-unit increase in the index raises the likelihood of *NoDemand* by 20 pp and lowers the likelihood of being undecided by 24 pp. In contrast, there is no statistically significant relationship between financial literacy and the outcome category *Demand*. This result is consistent with Filippin (2025), who documents a negative association between financial literacy and demand for a digital euro. The author argues that households with lower financial literacy prefer less risky assets, such as CBDCs, whereas financially literate households shift their portfolios towards riskier assets. These findings are also in line with Georgarakos et al. (2025), who emphasise that financial literacy is more strongly associated with awareness of the digital euro than with willingness to demand it. *Subjective Knowledge* also seems to be more important than education. A higher level of subjective knowledge about the digital euro significantly increases the willingness to adopt it across all country specifications with a pooled EMU estimate of 6 pp. This finding highlights the potential importance of public awareness: respondents with greater subjective knowledge about the digital euro exhibit significantly higher willingness to hold it. This aligns with Georgarakos et al. (2025), who emphasise central bank communication as key to consumer decisions about the digital euro.

In line with our expectations, a one-unit increase in the *Digitalisation* index raises the willingness to hold a digital euro by 5 pp in the pooled EMU sample. Since younger respondents are typically more digitally active, this supports the view that digital transformation in the payment system is a matter of time. Accordingly, the preference for digital central bank money may also rise. Our results also suggest that a more positive sentiment towards *European Union Integration* is positively associated with willingness to hold a digital euro (pooled EMU estimate: 1 pp). This finding is complemented by the results for *Election*, which captures respondents' political preferences. There is some evidence (specifically in France) that right-wing party voters are less likely to express demand for a digital euro and more often undecided than those supporting centrist parties. More strikingly, however, is the finding that respondents who are politically undecided or do not intend to vote are also more likely to be undecided about the adoption of a digital euro (+11 pp) and less willing to express demand (-10 pp) than supporters of centrist parties. This result aligns with (Hayo and Méon, 2024), who find that monetary policy communication particularly impacts undecided

voters with less entrenched priors. Thus, political indecision may be interpreted as a proxy for low issue engagement more generally.

The results for *Favourite* indicate that respondents who primarily use cashless instruments (debit and credit cards, smartphones and other electronic payment methods) exhibit substantially higher demand for a digital euro than cash-oriented respondents. This finding supports the argument that a digital euro would compete primarily with bank deposits and other cashless instruments rather than with cash (e.g., Ahnert et al., 2023; Gross and Letizia, 2023; Li, 2023). In addition, *Trust in Banks* and *Trust in ECB* significantly affect the willingness to hold a digital euro. Lower trust in the banking system (2 pp in the pooled EMU sample) and specifically higher trust in the ECB (+6 pp) are associated with a significantly higher willingness to hold digital euro balances.

Information on the distinction between private and central bank money (*Treatment 1*) has no statistically significant effect on the willingness to hold digital euro balances. Respondents likely do not perceive the difference between private and central bank money as relevant for their choice. The deposit insurance limit of EUR 100,000 likely covers nearly all respondents' holdings. European household surveys indicate that fewer than 3% of households have MFI deposits exceeding this amount.<sup>14</sup> *Treatment 1*'s null effect likely reflects adequate coverage for most respondents. By contrast, *Treatment 2* exhibits at least some modest effect. At the EMU level, a cash-like design increases *NoDemand* by 2 pp; in Germany, it reduces *Demand* by 5 pp. Overall, design features appear to play a secondary role relative to interest rate spreads, attitudinal variables and socio-demographics.

As part of our robustness tests, we estimate several alternative model specifications for the EMU estimations, which are documented in Table B1 in Appendix B. The first two columns replicate the results from Tables 1 and 2. To improve estimation efficiency in the presence of barely significant or non-significant variable blocks (e.g., property, urban and both survey treatments), we apply a block-wise backward model selection based on the Bayesian Information Criterion (BIC) to the large model (column Reduced 1). Column Reduced 2 also aims at improving estimation efficiency by means of block-wise exclusion of variables based on a likelihood ratio test. Since the goodness-of-fit measures are very similar across the alternative specifications and the coefficients are very robust across the models, we retain the large model as our baseline specification for the analysis. Finally, the regressions on the pooled EMU sample are weighted by population size. A comparison of weighted and unweighted results reveals virtually the same quantitative patterns.<sup>15</sup> Here and in the following estima-

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<sup>14</sup>See, for instance, Deutsche Bundesbank (2025); European Central Bank (2026); Eurostat (2026b).

<sup>15</sup>Results are available on request.

tions, we rely exclusively on weighted regressions to improve the representativeness of our data for the EMU.

To summarise, our analysis shows that the willingness to express a positive demand for a digital euro (as opposed to no demand or being undecided) depends more strongly on socio-demographic characteristics than on key economic variables. In the pooled EMU sample, willingness to hold a digital euro is consistently higher among younger and male respondents, individuals with greater trust in the ECB and the EU, higher levels of digitalisation and subjective knowledge about the digital euro, as well as those with higher income, a migration background and a preference for non-cash payment methods. Individuals with higher trust in commercial banks, those who abstain from voting and those with higher education and financial literacy are less likely to express demand. Financial incentives matter in the form of an asymmetric effect: negative interest rate spreads relative to current accounts decrease the willingness to hold a digital euro more strongly than positive spreads increase it. Design features (cash-like vs deposit-like) play a rather limited role.

### 4.3 Intensive Margin – Fixed Effects

We now turn to the intensive margin, that is, the amount demanded by those respondents who report a specific figure (excluding the undecided). As a first step, we estimate a fixed-effects model according to Eq. (6), with weights based on Eq. (2) for the pooled EMU sample. The fixed-effects specification isolates the within-individual response to changes in the interest rate spread, abstracting from time-invariant cross-sectional heterogeneity. Since the spread is the only survey item that varies across the scenarios, this allows us to identify the interest rate elasticity of digital euro demand while holding all other (observable and unobservable) characteristics constant. The dependent variable is the logarithm of digital euro demand (*log. Demand*, based on a  $\log+1$  transformation). Table 3 reports the results.

The results show high interest rate spread elasticities, with the largest value observed for Germany. Relative to the no-spread scenario, a negative interest rate spread reduces digital euro demand by 54% in France, by 63% in Germany and by 50% in Italy.<sup>16</sup> In the pooled EMU sample, a negative interest rate spread is associated with a 57% reduction in demand. The effects of a positive interest rate spread are less broadly significant and are observed only in Germany (+28%) and in the pooled EMU sample (+12%). Thus, the results imply an asymmetric interest rate effect on digital euro demand. Negative spreads substantially reduce demand, whereas positive spreads lead to smaller and less consistently significant increases.

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<sup>16</sup>Note that the estimated coefficients are transformed using  $(e^\beta - 1) \times 100\%$ .

**Table 3: Demand for a Digital Euro – Interest Rate Spreads in Fixed-Effects Models**

	<b>log. Demand (log+1)</b>			
	EMU	France	Germany	Italy
Spread: No Spread	Ref.	Ref.	Ref.	Ref.
Spread: Negative	-0.840*** (0.032)	-0.784*** (0.053)	-0.984*** (0.058)	-0.689*** (0.053)
Spread: Positive	0.117*** (0.026)	0.070 (0.046)	0.249*** (0.045)	-0.023 (0.043)
Num. Obs.	13487	4532	4469	4486
Num. Individuals	4636	1559	1539	1538
R <sup>2</sup> (overall)	0.834	0.829	0.832	0.803
R <sup>2</sup> (within)	0.109	0.095	0.153	0.069

*Note:* Observations in *EMU* are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. *Significance Level:* \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

To strengthen monetary policy transmission, the ECB initially considered a remunerated digital euro (European Central Bank, 2020), but later shifted towards an unremunerated design due to financial stability concerns (European Central Bank, 2025).<sup>17</sup> Our findings suggest that interest rates could be used to influence demand for a digital euro. Even if the ECB chooses not to remunerate the digital euro, the spread between digital euro and current account interest rates would itself operate as an additional policy instrument. In particular, if the digital euro remains unremunerated while current account rates rise, households would likely shift from central bank money towards private money. As long as current account rates exceed those on digital euro accounts, the introduction of a digital euro may therefore even strengthen financial stability, provided that substitution away from cash remains sufficiently limited. In practice, however, most current account holdings do not yield a positive return.

Note that this analysis includes respondents reporting zero demand, which may blur the distinction between the extensive and intensive margins. To assess the role of these observations, we re-estimate the intensive-margin specification excluding zero-demand respondents. The results, reported in Table B2 in Appendix B, continue to show an asymmetric demand pattern, with only the German sample showing a significant response to a positive spread, although the coefficients are smaller than in Table 3. This suggests that the strong impact of the interest rate spread is driven in

<sup>17</sup>The effects of a remunerated CBDC on financial stability are theoretically ambiguous. While competition with bank deposits may weaken bank funding (Ahnert et al., 2023), higher deposit rates could also strengthen financial stability. Moreover, a remunerated CBDC may serve as a safe outside option during periods of stress and simultaneously mitigate the consequences of bank runs (see, e.g., Andolfatto, 2020; Chiu et al., 2023; Fernández-Villaverde et al., 2021; Keister and Monnet, 2022; Schilling et al., 2024; Williamson, 2022).

part by the extensive margin, that is, by the decision whether to hold digital euros at all. Conditional on participation, the effect on the quantity demanded appears weaker.

#### 4.4 Intensive Margin – OLS with Explanatory Variables

We complement the fixed-effects analysis with (pooled) OLS regressions including a rich set of explanatory variables. This allows us to relate the level of digital euro demand to economic and socio-demographic characteristics beyond the interest rate spread. First, we focus again on standard economic variables explaining money demand: *Income* (in logs) and interest rate spread (*Spread*). The results for the estimation of Eq. (7), with weights based on Eq. (2) for the pooled EMU sample, are given in Table 4. Again, the following interpretation primarily focuses on the pooled EMU results and refers to the country-specific estimates only when clearly visible differences are present.

**Table 4:** Demand for a Digital Euro: Economic Determinants (‘Small Model’)

	<b>log. Demand (log+1)</b>			
	EMU	France	Germany	Italy
(Intercept)	-4.044*** (0.364)	-3.012*** (0.626)	-3.872*** (0.666)	-3.388*** (0.544)
Spread: No Spread	Ref.	Ref.	Ref.	Ref.
Spread: Negative	-0.975*** (0.034)	-0.937*** (0.057)	-1.118*** (0.060)	-0.802*** (0.057)
Spread: Positive	0.059* (0.028)	-0.001 (0.050)	0.219*** (0.049)	-0.107* (0.046)
Income	1.043*** (0.047)	0.960*** (0.080)	1.020*** (0.086)	1.160*** (0.068)
Country: Germany	Ref.			
Country: France	0.370*** (0.091)			
Country: Italy	1.605*** (0.086)			
Num. Obs.	13855	4649	4586	4620
Num. Individuals	5004	1676	1656	1672
R <sup>2</sup>	0.153	0.086	0.098	0.134
Adj. R <sup>2</sup>	0.153	0.085	0.098	0.134

*Note:* Observations in EMU are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. *Significance Level:* \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ .

These estimates show again that negative interest rate spreads reduce demand for a digital euro more strongly than positive interest rate spreads increase it. In the pooled EMU sample, negative interest rate spreads reduce demand for a digital euro by 62% relative to the no-spread scenario. German respondents exhibit the strongest response

to negative interest rate spreads, with demand declining by 67%, followed by respondents in France (−61%) and Italy (−55%). Consistent with the fixed-effects estimation, German respondents increase digital euro demand by 25% under the positive spread scenario relative to the no-spread scenario.

Moreover, there is evidence for a unit income elasticity.<sup>18</sup> That is, a 1% increase in monthly net household income is associated with roughly a 1% increase in digital euro demand (among respondents included in the intensive-margin sample). The null hypothesis of a unit income elasticity cannot be rejected for the pooled EMU sample, France and Germany. For Italy, the income elasticity is significantly greater than 1: a 1% increase in *Income* increases demand for a digital euro by almost 1.2%. The country-specific effects corroborate the descriptive findings: the demand for a digital euro is highest in Italy, followed by France. Conditional on the interest rate spread and household income, Italian and French respondents demand about 400% and 45%, respectively, more digital euro than German respondents.

In a second step, we add socio-demographic characteristics, payment behaviour and trust variables, as well as the two survey treatments to the set of explanatory variables. Table 5 shows the results. Similar to the extensive margin, this inclusion leads to a substantially improved model fit: For the pooled EMU sample, the adjusted R<sup>2</sup> increases from 15% to 35%, underscoring the relevance of non-economic variables for respondents' demand for a digital euro.

The coefficients and patterns for the interest rate spread are virtually the same as for the baseline results. We observe a stronger responsiveness to negative spreads as opposed to positive ones, for which we only find a significant effect in Germany. For income, we observe evidence of a unit elasticity for all country-specific models and the pooled EMU specification. The country dummies for France and, particularly, for Italy are smaller than those in Table 4, indicating that the additional covariates absorb some of the previously documented effects.

Despite the positive income effect, wealth, proxied by *Property*, does not affect the intensive margin. This could also be interpreted as evidence that respondents do not primarily view the digital euro as a store of value, but rather as a means of payment. There is also no statistically significant difference in digital euro demand between male and female respondents. While other surveys (e.g., Abramova et al., 2022; Bijlsma et al., 2024; Cupak et al., 2024; Georgarakos et al., 2025) find that male respondents are more likely to adopt a digital euro or have a higher demand for it, our results show that these differences disappear once a broader set of variables is taken into account. Older respondents demand significantly less digital euro: The difference between the age group 55 and older and the reference group (16–34) amounts to −39% for the

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<sup>18</sup>Note that income is the only explanatory variable specified in logs, implying a direct elasticity interpretation without the transformation described in footnote 16.

pooled EMU sample, while respondents aged 35–54 demand 18% less. In contrast to the extensive margin, first-generation immigrants do not exhibit a higher digital euro demand than respondents without a migration background. Second-generation immigrants demand more digital euro than non-immigrants, but only in Germany, resulting in a pooled EMU estimate of (+38%).

**Table 5:** Demand for a Digital Euro: ‘Large Model’

	<b>log. Demand (log+1)</b>			
	EMU	France	Germany	Italy
(Intercept)	-2.716*** (0.345)	-2.672*** (0.643)	-2.589*** (0.602)	-2.152*** (0.557)
Spread: No Spread	Ref.	Ref.	Ref.	Ref.
Spread: Negative	-0.949*** (0.034)	-0.909*** (0.056)	-1.080*** (0.060)	-0.788*** (0.057)
Spread: Positive	0.074** (0.028)	0.009 (0.050)	0.244*** (0.049)	-0.099* (0.046)
Income	0.983*** (0.045)	0.942*** (0.088)	0.986*** (0.079)	1.041*** (0.067)
Property: Tenant	Ref.	Ref.	Ref.	Ref.
Property: Property	0.082 (0.074)	0.126 (0.128)	0.031 (0.115)	0.096 (0.148)
Gender: Female	Ref.	Ref.	Ref.	Ref.
Gender: Male	0.096 (0.063)	0.213 (0.111)	0.016 (0.110)	0.074 (0.101)
Age: Young	Ref.	Ref.	Ref.	Ref.
Age: Middle	-0.196* (0.078)	-0.159 (0.137)	-0.344* (0.143)	0.050 (0.113)
Age: Old	-0.500*** (0.093)	-0.472** (0.166)	-0.549** (0.171)	-0.408** (0.141)
Migration: No Migration	Ref.	Ref.	Ref.	Ref.
Migration: 1st Gen	0.199 (0.119)	0.112 (0.223)	0.291 (0.188)	-0.034 (0.184)
Migration: 2nd Gen	0.322** (0.102)	0.237 (0.154)	0.351* (0.169)	0.160 (0.218)
Urban: Small	Ref.	Ref.	Ref.	Ref.
Urban: Mid	0.150* (0.074)	0.095 (0.130)	0.153 (0.129)	0.261* (0.121)
Urban: Large	-0.036 (0.079)	-0.055 (0.149)	-0.131 (0.134)	0.172 (0.126)
Education: Low	Ref.	Ref.	Ref.	Ref.
Education: Mid	-0.084 (0.092)	0.173 (0.189)	-0.261 (0.140)	-0.153 (0.182)
Education: High	-0.276** (0.096)	-0.280 (0.202)	-0.225 (0.137)	-0.250 (0.188)
Financial Literacy	-1.107*** (0.133)	-0.926*** (0.231)	-1.240*** (0.239)	-0.884*** (0.213)
Subjective Knowledge: Bad	Ref.	Ref.	Ref.	Ref.
Subjective Knowledge: Good	-0.014 (0.070)	0.027 (0.131)	0.081 (0.121)	-0.064 (0.107)
Digitalisation	0.240*** (0.018)	0.248*** (0.031)	0.258*** (0.032)	0.160*** (0.029)
European Union Integration	0.099*** (0.024)	0.099* (0.040)	0.129** (0.042)	0.062 (0.041)
Election: Mid	Ref.	Ref.	Ref.	Ref.

*To be continued on next page*

	<b>log. Demand (log+1)</b>			
	EMU	France	Germany	Italy
Election: Left	-0.030 (0.087)	0.041 (0.152)	-0.043 (0.133)	-0.123 (0.168)
Election: Right	-0.176 (0.096)	-0.219 (0.165)	-0.265 (0.175)	-0.118 (0.161)
Election: Other	-0.021 (0.120)	0.147 (0.311)	-0.059 (0.224)	0.053 (0.165)
Election: NoVote/Undecided	-0.098 (0.097)	-0.119 (0.157)	-0.137 (0.171)	-0.094 (0.178)
Favourite: Cash	Ref.	Ref.	Ref.	Ref.
Favourite: Debitcard	0.484*** (0.087)	0.346 (0.177)	0.500*** (0.135)	0.539*** (0.148)
Favourite: Creditcard	0.439*** (0.098)	0.409* (0.172)	0.265 (0.174)	0.528** (0.172)
Favourite: Smartphone	0.732*** (0.124)	0.676** (0.220)	0.766*** (0.210)	0.723*** (0.198)
Favourite: Other	0.540*** (0.134)	0.081 (0.266)	0.722*** (0.190)	0.673** (0.238)
Trust in Banks	-0.174*** (0.025)	-0.157*** (0.042)	-0.255*** (0.043)	-0.083 (0.043)
Trust in ECB	0.530*** (0.028)	0.510*** (0.046)	0.590*** (0.048)	0.426*** (0.048)
Treatment1: Control Group	Ref.	Ref.	Ref.	Ref.
Treatment1: Definition	-0.045 (0.061)	-0.002 (0.106)	-0.049 (0.107)	-0.091 (0.097)
Treatment2: Definition	Ref.	Ref.	Ref.	Ref.
Treatment2: Deposit-Like	-0.090 (0.075)	-0.012 (0.133)	-0.110 (0.130)	-0.165 (0.122)
Treatment2: Cash-Like	-0.212** (0.073)	-0.136 (0.125)	-0.293* (0.129)	-0.174 (0.119)
Country: Germany	Ref.			
Country: France	0.244** (0.090)			
Country: Italy	0.962*** (0.090)			
Num. Obs.	13855	4649	4586	4620
Num. Individuals	5004	1676	1656	1672
R <sup>2</sup>	0.355	0.297	0.372	0.271
Adj. R <sup>2</sup>	0.354	0.292	0.367	0.267

Note: Observations in EMU are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. Significance Level: \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

The effect of *Education* is negative, but only for the pooled EMU sample (-24% lower demand among respondents with high education). While *Subjective Knowledge* is a key determinant of willingness to hold a digital euro, it is insignificant across all country specifications when the intensive margin is considered. This suggests that central bank communication is important for promoting broader adoption of the digital euro, but appears to have a weak influence on the amount demanded once adoption has occurred. For the intensive margin, *Financial Literacy* again plays an essential role.

A one-unit increase in financial literacy index decreases digital euro demand by 67% in the pooled EMU sample. Respondents' *Digitalisation* also affects the demand for a digital euro. The more digitally engaged the respondent, the higher the estimated demand for digital euro holdings (+27%). A similar pattern emerges for *European Union Integration*: more favourable attitudes towards the EU and EMU are associated with higher digital euro demand (+10%). However, as in the previous results, no statistically significant positive relationship is found for Italy. Similarly, election variables are not statistically significant across countries, in contrast to the extensive margin results.

Moreover, we discover a strong positive association between respondents' preferred means of payment and their digital euro demand. Relative to respondents who prefer cash, all respondents with a preference for cashless payment instruments demand significantly more digital euro. In the pooled EMU sample, respondents who prefer debit cards, credit cards, smartphones and other payment instruments (e.g., cryptoassets or PayPal) demand 62%, 55%, 108% and 72% more digital euro, respectively.

We further find that *Trust in Banks* and *Trust in ECB* explain digital euro demand. A one-unit decrease in *Trust in Banks* reduces digital euro demand by 16% in the pooled EMU sample. A similar-sized estimate is found for France and an even stronger negative effect for Germany (-23%), while no statistically significant effect is found for Italy. These results indicate that commercial banks do not necessarily need to raise deposit rates to compete with a digital euro. Increasing respondents' trust in their financial institution by, for instance, enhancing customer service or modernising IT-infrastructure may be sufficient to minimise disintermediation. This conclusion sheds new light on an important controversy in the extant literature, namely whether the introduction of a digital currency weakens commercial banks. Our results suggest support for Andolfatto (2020) that a CBDC need not have a detrimental effect on bank lending. They stand in contrast to Ahnert et al. (2023) that higher CBDC remuneration increases consumers' incentives to withdraw deposits. Thus, our study provides little evidence that a digital euro will increase financial fragility in the Eurosystem. Conversely, *Trust in ECB* is positively associated with digital euro demand. Quantitatively, a one-unit increase in *Trust in ECB* raises digital euro demand in the pooled EMU sample by 70%, with coefficients of similar magnitude in all three countries. Additional information on the distinction between central bank and private money (*Treatment1*) does not affect digital euro demand. However, there is again some evidence for Germany (and the pooled EMU sample) that a cash-like digital euro is viewed less favourably.

As part of our robustness tests, we estimate several alternative model specifications for the EMU sample, which are documented in Table B3 in Appendix B. Across these alternatives, coefficient estimates and goodness-of-fit measures remain very similar, indicating that our main findings are robust to the choice of model complexity. The first two columns replicate the results from Tables 4 and 5. To improve estimation

efficiency, we apply a block-wise backward model selection based on the BIC to the large model (column Reduced 1). According to this criterion, *Property*, *Gender*, *Urban*, *Subjective Knowledge*, *Election*, *Treatment1* and *Treatment2* should be excluded from the large model. Column Reduced 2 also aims at improving estimation efficiency by means of block-wise exclusion of variables and cluster-robust F-tests. As the efficiency gains appear to be relatively small, we retain the large model as our baseline specification for reasons of easier comparability.

As a final step, we narrow down the sample further. Tables B4 and B5 report the results for the small and large specifications when excluding respondents with zero demand, respectively. Comparing the difference between intensive-margin analyses including/excluding participants with zero demand reveals both common and distinct patterns. Important differences emerge with respect to economic factors, most notably, the effect of interest rate spreads remains asymmetric but is substantially smaller in magnitude (see also Table B2 in Appendix B for the corresponding fixed-effects results) and, in particular, income plays a stronger role for the level of demand than for the adoption decision, indicating higher price and income sensitivity along the intensive margin. In contrast, many socio-demographic and attitudinal variables lose explanatory power once zero-demand observations are excluded. In particular, age, education, European Union integration and trust in commercial banks (with the exception of Germany) become largely insignificant, suggesting that these factors primarily affect participation rather than conditional demand. At the same time, some effects become more pronounced or emerge only on the intensive margin among respondents with positive demand. Male respondents exhibit higher demand and financial literacy remains negatively associated with demand, although the association is weaker and mainly found in the German sample. Consistent with the baseline results, digitalisation, trust in the ECB and a preference for cashless payment instruments continue to be positively related to digital euro demand. Taken together, these findings indicate that while economic factors – most notably income – are related to the level of demand, many behavioural and socio-demographic characteristics are rather associated with the decision to hold a digital euro.

## 5 Conclusion

This paper examines the willingness to hold a retail digital euro and its potential demand within the European Economic and Monetary Union. To this end, we conducted a representative survey in the three largest EMU economies (France, Germany and Italy), covering 5,944 respondents selected through quota sampling by gender, age, income and regional distribution.

On average, between 52% and 62% of respondents are willing to hold a digital euro, depending on the hypothetical interest rate spread between a digital euro account and current accounts. Respondents in Italy are more likely to demand a digital euro (62–70%) than respondents in France (51–61%) and Germany (45–59%). In the pooled EMU sample, average demand ranges from EUR 700 to EUR 1,100, with interest rate spreads of –50 and +50 basis points defining the lower and upper bounds, respectively. This corresponds to aggregate demand for France, Germany and Italy ranging from EUR 150 bn to EUR 235 bn or 1.5% to 2.5% of the three countries' GDP.

The decision to adopt a digital euro is associated with socio-demographic, behavioural characteristics and standard economic variables. Willingness to hold is generally higher among younger and male respondents, individuals with greater trust in the ECB and the EU, higher levels of digitalisation and subjective knowledge about the digital euro, as well as among respondents with higher income, a migration background and a preference for cashless payment methods. Financial incentives also matter, but asymmetrically: negative interest rate spreads relative to current accounts reduce the willingness to hold a digital euro more strongly than positive spreads increase it. Design features (cash-like vs. deposit-like) appear to play only a very limited role.

Comparing the extensive and the intensive margin reveals both common and distinct patterns. While core determinants such as age, financial literacy, trust in the ECB, trust in commercial banks, attitudes towards the EU, digitalisation and payment behaviour are consistently statistically significant and economically relevant across both margins and show the same signs, important differences emerge with respect to economic factors. Interest rate spreads (with the same asymmetric pattern) and, in particular, income exhibit stronger effects on the level of demand than on the adoption decision, indicating higher price and income sensitivity along the intensive margin. The distinction becomes even more pronounced when the analysis is restricted to respondents with strictly positive demand. In that case, interest rate spreads and, in particular, income remain significant, whereas several socio-demographic and attitudinal variables – such as age, education and trust in commercial banks – lose significance, suggesting they are primarily related to participation rather than conditional demand. However, the reaction of digital euro demand to the interest rate spread is smaller once respondents with zero demand are excluded. Overall, these results reveal a clear pattern: behavioural and socio-demographic characteristics are more predictive of the adoption decision, whereas economic factors matter more for the level of demand.

Several implications follow from these findings. First, the currently discussed holding limit of EUR 3,000 (see, e.g., European Central Bank, 2025) appears sufficient for the vast majority of respondents. Depending on the spread scenario, between about 90% and 94% of respondents demand less than EUR 3,000. Second, central bank communication appears to be important for fostering adoption. Subjective knowledge

about the digital euro is a key determinant of willingness to hold, but it is insignificant in the intensive-margin specifications. This suggests that communication can broaden adoption but has only a limited influence on the amount demanded once adoption has occurred. The importance of central bank communication is underscored by the relevance of trust in the ECB. Greater trust in the ECB is associated with higher demand for central bank money. However, reaching the general public is not straightforward and it remains to be seen whether central banks can actually achieve this (Blinder et al., 2024). For instance, Hayo and Neuenkirch (2014) show for Germany that factors such as objective monetary policy knowledge and trust in institutions appear to play an important role in people's trust in a central bank. But since interest in monetary affairs is limited, at least during times of low inflation rates, these factors are difficult to influence.

In contrast, our findings suggest that commercial banks do not necessarily need to raise deposit rates to compete with a digital euro. Increasing respondents' trust in commercial banks by, for instance, enhancing customer service or modernising IT-infrastructure may be sufficient to minimise disintermediation. This conclusion challenges the view that the introduction of a CBDC necessarily weakens commercial banks or increases financial fragility. Third, our findings indicate that interest rate policy could be employed by the Eurosystem to manage demand for the digital euro. By varying the remuneration of the digital euro, it could potentially control the spread between digital euro accounts and current accounts. Our estimates suggest that as long as interest rates on current accounts exceed those on digital euro accounts, demand for the digital euro will be attenuated. However, the impact appears to be smaller when the spread is positive. This nonlinearity complicates using the interest-rate spread as a practical monetary policy instrument. Fourth, although income is positively associated with the intensive margin, wealth is not. This finding suggests that respondents do not primarily perceive the digital euro as a store of value, but rather as a means of payment. In addition, there is evidence that a digital euro competes primarily with bank deposits rather than with cash.

Finally, we emphasise that our conclusions should be interpreted in light of several limitations. First, demand is elicited in a hypothetical setting rather than based on observed behaviour. Second, our survey covers only France, Germany and Italy at a particular point in time. Third, stated demand may change as knowledge of the digital euro and its eventual design features evolves. These caveats imply that our demand estimates should be viewed as indicative rather than as precise forecasts.

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## **Appendix A: Background on Survey**

### **Survey Sampling Quota**

The sampling quotas for gender and age were set by Dynata to match the real-world distribution. In addition, we include monthly net household income and regional distribution as sampling quotas. For the income distribution, we rely on the statistics of Insee (2021), Destatis (2023) and Banca D'Italia (2022) for France, Germany and Italy, respectively. The regions are defined according to the NUTS1 (French: Nomenclature des Unités Territoriales Statistiques) definition (Eurostat, 2023). Table A1, Table A2 and Table A3 illustrate the dictated quotas. Since the quotas are overall satisfied, we use unweighted sample data for our regressions.

**Table A1:** French Sample (N = 2021)

<b>Variable</b>	<b>Population (%)</b>	<b>Sample (%)</b>	<b>Frequency</b>
<b>Gender</b>			
Male	48	46.86	947
Female	52	53.14	1074
<b>Age</b>			
16–24	13	13.01	263
25–34	16	13.81	279
35–44	18	17.96	363
45–54	17	15.88	321
55–64	15	17.57	355
65+	21	21.77	440
<b>Monthly Net Household Income</b>			
0–1000€	8	8.07	163
1001–1500€	9	9.10	184
1501–2000€	15	15.29	309
2001–2500€	10	9.75	197
2501–3000€	11	11.08	224
3001–3500€	11	9.85	199
3501–4000€	9	9.15	185
4001–7000€	21	21.62	437
More Than 7000€	6	6.09	123
<b>Region</b>			
Île de France	19	20.73	419
Center - Val de Loire	4	4.40	89
Bourgogne - Franche Comté	4	4.50	91
Normandy	5	5.05	102
Hauts-de-France	9	11.58	234
Grand Est	9	9.05	183
Pays-de-la-Loire	6	6.09	123
Bretagne	5	5.10	103
Nouvelle-Aquitaine	9	8.02	162
Occitanie	9	7.57	153
Auvergne - Rhône-Alpes	12	10.24	207
Provence-Alpes-Côte d'Azur	8	7.22	146
Corse	1	0.45	9

**Table A2: German Sample (N = 1909)**

<b>Variable</b>	<b>Population (%)</b>	<b>Sample (%)</b>	<b>Frequency</b>
<b>Gender</b>			
Male	48	47.93	915
Female	52	52.07	994
<b>Age</b>			
16–24	12	12.41	237
25–34	14	13.67	261
35–44	17	15.77	301
45–54	18	17.02	325
55–64	16	16.50	315
65+	24	24.62	470
<b>Monthly Net Household Income</b>			
0–1000€	8	8.12	155
1001–1500€	11	11.21	214
1501–2000€	13	12.73	243
2001–2500€	13	12.47	238
2501–3000€	10	9.43	180
3001–3500€	9	8.75	167
3501–4000€	8	7.91	151
4001–7000€	22	23.36	446
More Than 7000€	6	6.02	115
<b>Region</b>			
Baden-Wurttemberg	13	9.22	176
Bavaria	16	13.67	261
Berlin	4	6.18	118
Brandenburg	3	3.40	65
Bremen	1	0.79	15
Hamburg	2	3.14	60
Hessen	7	8.75	167
Mecklenburg-Western Pomerania	2	2.46	47
Lower Saxony	10	8.75	167
North Rhine-Westphalia	21	20.74	396
Rhineland-Palatinate	5	5.19	99
Saarland	1	1.36	26
Saxony	5	6.50	124
Saxony-Anhalt	3	3.61	69
Schleswig-Holstein	4	3.14	60
Thuringia	3	3.09	59

**Table A3: Italian Sample (N = 2014)**

<b>Variable</b>	<b>Population (%)</b>	<b>Sample (%)</b>	<b>Frequency</b>
<b>Gender</b>			
Male	48	48.31	973
Female	52	51.69	1041
<b>Age</b>			
16–24	10	9.88	199
25–34	15	14.70	296
35–44	19	18.17	366
45–54	17	16.68	336
55–64	15	15.44	311
65+	24	25.12	506
<b>Monthly Net Household Income</b>			
0–1000€	7	7.30	147
1001–1500€	10	10.38	209
1501–2000€	11	11.47	231
2001–2500€	11	11.57	233
2501–3000€	8	8.29	167
3001–3500€	8	8.39	169
3501–4000€	8	8.34	168
4001–7000€	21	21.95	442
More Than 7000€	16	12.31	248
<b>Region</b>			
Nord-Ovest	26	31.83	641
Nord-Est	20	16.24	327
Centro (IT)	20	20.16	406
Sud	23	22.00	443
Isole	11	9.78	197

## Treatment Texts

**Treatment 1:** Cash is so-called “central bank money” and is issued directly by the European Central Bank in the euro zone and distributed via banks to households and firms. Due to ongoing digitalisation, the cash usage in Europe is declining, while payments are made by cards or smartphones. These cashless payment methods are not based on central bank money, but on money held on current accounts. Those may be lost in the event of bank failure. In Europe, private bank accounts are insured up to EUR 100,000, so that in the case of a bank failure, only higher deposited accounts are at risk of loss.

**Treatment 2.** To observe the hypothetical demand for a digital euro, respondents were provided with different sets of information about the digital euro. These treatments serve as proxies for favourable design features and allow us to examine how the degree and type of information affect demand. The respondents were randomly assigned to one of four treatment groups, with each treatment group satisfying the survey quotas. The first treatment group (Group A) received no information and therefore serves as the initial control group. The second treatment group (Group B) received a brief explanation of the digital euro. The third and fourth treatment groups (Group C and D) received the same explanation as Group B, but were additionally provided with information describing a deposit-like and cash-like digital euro, respectively.<sup>19</sup> However, before respondents were asked about their demand for a digital euro, Group A was also provided with the same basic definition as Group B, since it would be unrealistic for consumers to demand a new type of money without any prior information. In practice, consumers would receive such information when opening a digital euro account. Accordingly, our empirical analysis differentiates only between the following treatment groups:

**Treatment 2a: Definition (Control Group).** The European Central Bank (ECB) is considering introducing a digital euro (Digi€). Just like euro cash, the digital euro will be issued by the ECB, will have the same value as euro cash, and can be exchanged on a one-to-one basis for cash or funds in a bank account. The digital euro enables secure real-time payments for people living in the EU and EU businesses. The digital euro is independent of the banking system, and a Digi€ balance remains available at all times even if a bank goes bust, whilst Digi€ payments remain possible without restrictions.

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<sup>19</sup>The treatments are based on design features discussed by Auer et al. (2021) and European Central Bank (2020).

**Treatment 2b: Deposit-Like.** The European Central Bank (ECB) is considering introducing a digital euro (Digi€). Just like euro cash, the digital euro will be issued by the ECB, will have the same value as euro cash, and can be exchanged on a one-to-one basis for cash or funds in a bank account. The digital euro enables secure real-time payments for people living in the EU and EU businesses. The digital euro is independent of the banking system, and a Digi€ balance remains available at all times even if a bank goes bust, whilst Digi€ payments remain possible without restrictions. In one possible version of the digital euro, users would open “Digi€ account” through a bank. Payments using digital euros could be made via online banking, a card or a smartphone app. As with a normal bank account, the payer’s identity and the amount of the payment would be passed on to the recipient with every transaction, and the banks or firms involved would also be able to track the payments. The ECB creates backup copies of all Digi€ accounts in the background and, if necessary, can not only track all payments but also execute them should a bank become insolvent.

**Treatment 2c: Cash-Like.** The European Central Bank (ECB) is considering introducing a digital euro (Digi€). Just like euro cash, the digital euro will be issued by the ECB, will have the same value as euro cash, and can be exchanged on a one-to-one basis for cash or funds in a bank account. The digital euro enables secure real-time payments for people living in the EU and EU businesses. The digital euro is independent of the banking system, and a Digi€ balance remains available at all times even if a bank goes bust, whilst Digi€ payments remain possible without restrictions. In one possible version of the digital euro, the Digi€ balance would be stored on a local device, such as a prepaid card or a smartphone app. Digi€ balances could be transferred anonymously, in real time and without an internet connection from one device to another, without banks or other firms being involved in the payment process. Just as with the loss of a wallet, the Digi€ balance would also be lost if the prepaid card or smartphone were lost. Banks would simply provide the relevant prepaid cards and smartphone apps, and the ECB would only record the amount of digital euro requested.

## Variable Definitions

**Table A4:** Description of Variables

Variable	Definition
Demand	<i>Dependent variable</i> with three outcome categories: zero demand ( <i>NoDemand</i> ), positive demand ( <i>Demand</i> ), and undecided respondents ( <i>Undecided</i> ).
log. Demand	<i>Dependent variable</i> : logarithm of digital euro demand.
Spread	Interest rate spread between Digi€ accounts and bank current accounts. Digi€ account rates are either 50, 25, or 10 bps lower ( <i>Negative</i> ) or 10, 25, or 50 bps higher ( <i>Positive</i> ) than the rate on respondents' current accounts. The reference category is an equal interest rate on both accounts ( <i>NoSpread</i> ).
Income	Logarithm of respondents' monthly net household income in euro.
Property	Housing tenure status, distinguishing property owners ( <i>Property</i> ) from tenants ( <i>Tenant</i> , reference category).
Gender	<i>Female</i> (reference category) and <i>Male</i> .
Age	Age categories: <i>Young</i> (aged 16–34, reference category), <i>Mid</i> (aged 35–54), and <i>Old</i> (aged 55 and above).
Migration	Migration background: <i>NoMigration</i> (reference category), <i>1stGen</i> (respondent immigrated after 1949), and <i>2ndGen</i> (at least one parent immigrated after 1949).
Urban	Residence size: <i>Small</i> (0–19,999 residents, reference group), <i>Mid</i> (20,000–99,999 residents), and <i>Large</i> (100,000 and more residents).
Education	Education level: <i>Low</i> (reference category, no or (lower) secondary school-leaving certificate), <i>Mid</i> (higher education entrance qualification or university of applied sciences entrance qualifications), and <i>High</i> (university degree).
Financial Literacy	Financial Literacy index (0–1), based on four questions on financial knowledge based on recommendations by Lusardi and Mitchell (2014) and van Rooij et al. (2011), plus an additional question if respondents could self-assess whether they are a saver or a borrower.
Subjective Knowledge	Self-assessed Knowledge of the digital euro: <i>Bad</i> (reference category) and <i>Good</i> .

*To be continued on next page*

<b>Variable</b>	<b>Definition</b>
Digitalisation	Digitalisation index based on principal component analysis of attitudes towards digitalisation and frequency of internet use across different activities. Mean normalised to zero; ranges approximately from –6 to 6.
European Union Integration	Index of attitudes towards the EU and the EMU, based on principal component analysis of views on European integration and the euro. Mean normalised to zero; ranges approximately from –3 to 5.
Election	Political preferences based on intended vote in a hypothetical European Parliament election. National parties are mapped into European party families and grouped as <i>Left</i> (S&D, The-Greens/EFA, and The Left), <i>Mid</i> (EPP and Renew Europe, reference category), <i>Right</i> (ECR and ID), <i>Other</i> , and <i>NoVote/Undecided</i> , based on the 2019–2024 European Parliament legislature.
Trust in Banks	Index of trust in commercial and savings banks based on principal component analysis of assessments of deposits’ safety, bank failure risk, data confidentiality, misuse of personal data, and protection against hacking. Mean normalised to zero; ranges approximately from –5 to 3.
Trust in ECB	Index of trust in the ECB in the context of digital euro based on principal component analysis of assessments of data confidentiality, surveillance, and protection against hacking. The mean is normalised to zero. The resulting index ranges approximately from –4 to 3.
Treatment1	Information treatment on distinction between central bank and private money: <i>Definition</i> (information treatment) versus <i>ControlGroup</i> (reference group).
Treatment2	Information treatment on digital euro design and function: <i>Definition</i> (reference group, control group), <i>Cash-Like</i> , and <i>Deposit-Like</i> .
Country	Country indicator for <i>France</i> , <i>Germany</i> (reference group), and <i>Italy</i> .

*Note:* Additional information on variables, alongside descriptive statistics, can be found in Hayo et al. (2025).

## Appendix B: Additional Results

**Table B1:** Willingness to Hold a Digital Euro – Model Comparison

	<b>Demand (NoDemand, Undecided, Demand)</b>			
	Small	Large	Reduced 1	Reduced 2
Spread[NoDemand  NegativeSpread - NoSpread]	0.109*** (0.004)	0.105*** (0.004)	0.105*** (0.004)	0.105*** (0.004)
Spread[NoDemand  PositiveSpread - NoSpread]	-0.008* (0.003)	-0.007* (0.003)	-0.007* (0.003)	-0.007* (0.003)
Spread[Undecided  NegativeSpread - NoSpread]	-0.012** (0.004)	-0.011** (0.004)	-0.011** (0.004)	-0.011** (0.004)
Spread[Undecided  PositiveSpread - NoSpread]	-0.000 (0.004)	-0.000 (0.004)	-0.000 (0.004)	-0.000 (0.004)
Spread[Demand  NegativeSpread - NoSpread]	-0.097*** (0.005)	-0.095*** (0.005)	-0.095*** (0.005)	-0.095*** (0.005)
Spread[Demand  PositiveSpread - NoSpread]	0.008 (0.005)	0.007 (0.005)	0.007 (0.005)	0.007 (0.005)
Income[NoDemand  dY/dX]	-0.017** (0.006)	-0.024*** (0.006)	-0.025*** (0.006)	-0.024*** (0.006)
Income[Undecided  dY/dX]	-0.038*** (0.006)	0.003 (0.007)	0.003 (0.007)	0.003 (0.007)
Income[Demand  dY/dX]	0.055*** (0.007)	0.021** (0.008)	0.022** (0.007)	0.021** (0.008)
Property[NoDemand  Property - Tenant]		-0.005 (0.009)		-0.005 (0.009)
Property[Undecided  Property - Tenant]		-0.002 (0.011)		-0.002 (0.011)
Property[Demand  Property - Tenant]		0.007 (0.012)		0.007 (0.012)
Gender[NoDemand  Male - Female]		0.013 (0.008)	0.013 (0.008)	0.013 (0.008)
Gender[Undecided  Male - Female]		-0.035*** (0.010)	-0.034*** (0.010)	-0.035*** (0.010)
Gender[Demand  Male - Female]		0.022* (0.010)	0.021* (0.010)	0.022* (0.010)
Age[NoDemand  Middle - Young]		0.034*** (0.010)	0.035*** (0.010)	0.034*** (0.010)
Age[NoDemand  Old - Young]		0.042*** (0.012)	0.042*** (0.012)	0.042*** (0.012)
Age[Undecided  Middle - Young]		0.033** (0.013)	0.033** (0.013)	0.033** (0.013)
Age[Undecided  Old - Young]		0.073*** (0.014)	0.073*** (0.014)	0.073*** (0.014)
Age[Demand  Middle - Young]		-0.068*** (0.014)	-0.068*** (0.014)	-0.068*** (0.014)
Age[Demand  Old - Young]		-0.115*** (0.015)	-0.115*** (0.015)	-0.114*** (0.015)
Migration[NoDemand  1stGen - NoMigration]		-0.004 (0.017)	-0.003 (0.017)	-0.004 (0.017)
Migration[NoDemand  2ndGen - NoMigration]		-0.026	-0.026	-0.026

*To be continued on next page*

	<b>Demand (NoDemand, Undecided, Demand)</b>			
	Small	Large	Reduced 1	Reduced 2
Migration[Undecided  1stGen - NoMigration]		(0.013)	(0.013)	(0.013)
		-0.101***	-0.100***	-0.101***
Migration[Undecided  2ndGen - NoMigration]		(0.018)	(0.018)	(0.018)
		-0.041*	-0.042*	-0.041*
Migration[Demand  1stGen - NoMigration]		(0.017)	(0.017)	(0.017)
		0.105***	0.103***	0.105***
Migration[Demand  2ndGen - NoMigration]		(0.021)	(0.021)	(0.021)
		0.067***	0.067***	0.067***
		(0.017)	(0.017)	(0.017)
Urban[NoDemand  Mid - Small]		-0.003		-0.003
		(0.009)		(0.009)
Urban[NoDemand  Large - Small]		0.016		0.016
		(0.009)		(0.009)
Urban[Undecided  Mid - Small]		-0.016		-0.016
		(0.011)		(0.011)
Urban[Undecided  Large - Small]		0.010		0.010
		(0.012)		(0.012)
Urban[Demand  Mid - Small]		0.020		0.020
		(0.012)		(0.012)
Urban[Demand  Large - Small]		-0.026*		-0.026*
		(0.012)		(0.012)
Education[NoDemand  Mid - Low]		0.014	0.015	0.014
		(0.010)	(0.010)	(0.010)
Education[NoDemand  High - Low]		0.046***	0.048***	0.046***
		(0.010)	(0.010)	(0.010)
Education[Undecided  Mid - Low]		0.001	0.001	0.001
		(0.013)	(0.013)	(0.013)
Education[Undecided  High - Low]		-0.006	-0.005	-0.006
		(0.013)	(0.013)	(0.013)
Education[Demand  Mid - Low]		-0.015	-0.016	-0.015
		(0.014)	(0.013)	(0.014)
Education[Demand  High - Low]		-0.040**	-0.044**	-0.040**
		(0.014)	(0.014)	(0.014)
Financial Literacy[NoDemand  dY/dX]		0.202***	0.202***	0.202***
		(0.016)	(0.016)	(0.016)
Financial Literacy[Undecided  dY/dX]		-0.235***	-0.235***	-0.235***
		(0.019)	(0.019)	(0.019)
Financial Literacy[Demand  dY/dX]		0.033	0.033	0.033
		(0.021)	(0.021)	(0.021)
Subjective Knowledge[NoDemand  Good - Bad]		0.011	0.010	0.011
		(0.009)	(0.009)	(0.009)
Subjective Knowledge[Undecided  Good - Bad]		-0.070***	-0.071***	-0.070***
		(0.011)	(0.011)	(0.011)
Subjective Knowledge[Demand  Good - Bad]		0.059***	0.061***	0.059***
		(0.012)	(0.012)	(0.012)
Digitalisation[NoDemand  dY/dX]		-0.022***	-0.022***	-0.022***
		(0.002)	(0.002)	(0.002)
Digitalisation[Undecided  dY/dX]		-0.031***	-0.031***	-0.031***
		(0.003)	(0.003)	(0.003)

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Continuation of table

	<b>Demand (NoDemand, Undecided, Demand)</b>			
	Small	Large	Reduced 1	Reduced 2
Digitalisation[Demand  dY/dX]		0.053*** (0.003)	0.052*** (0.003)	0.053*** (0.003)
European Union Integration[NoDemand  dY/dX]		-0.012*** (0.003)	-0.012*** (0.003)	-0.012*** (0.003)
European Union Integration[Undecided  dY/dX]		-0.000 (0.003)	0.000 (0.003)	-0.000 (0.003)
European Union Integration[Demand  dY/dX]		0.013*** (0.003)	0.012*** (0.003)	0.013*** (0.003)
Election[NoDemand  Left - Mid]		-0.010 (0.010)	-0.008 (0.010)	-0.010 (0.010)
Election[NoDemand  Right - Mid]		-0.003 (0.012)	-0.002 (0.012)	-0.003 (0.012)
Election[NoDemand  Other - Mid]		-0.007 (0.015)	-0.007 (0.015)	-0.007 (0.015)
Election[NoDemand  NoVote/Undecided - Mid]		-0.012 (0.011)	-0.011 (0.011)	-0.012 (0.011)
Election[Undecided  Left - Mid]		0.021 (0.013)	0.022 (0.013)	0.021 (0.013)
Election[Undecided  Right - Mid]		0.037** (0.014)	0.037* (0.014)	0.037** (0.014)
Election[Undecided  Other - Mid]		0.016 (0.018)	0.015 (0.018)	0.016 (0.018)
Election[Undecided  NoVote/Undecided - Mid]		0.109*** (0.014)	0.110*** (0.014)	0.109*** (0.014)
Election[Demand  Left - Mid]		-0.011 (0.014)	-0.013 (0.014)	-0.011 (0.014)
Election[Demand  Right - Mid]		-0.035* (0.015)	-0.035* (0.015)	-0.035* (0.015)
Election[Demand  Other - Mid]		-0.009 (0.020)	-0.008 (0.020)	-0.009 (0.020)
Election[Demand  NoVote/Undecided - Mid]		-0.097*** (0.015)	-0.099*** (0.015)	-0.097*** (0.015)
Favourite[NoDemand  Debitcard - Cash]		-0.051*** (0.010)	-0.051*** (0.010)	-0.051*** (0.010)
Favourite[NoDemand  Creditcard - Cash]		-0.032** (0.012)	-0.032** (0.012)	-0.032** (0.012)
Favourite[NoDemand  Smartphone - Cash]		-0.079*** (0.015)	-0.079*** (0.015)	-0.079*** (0.015)
Favourite[NoDemand  Other - Cash]		-0.068*** (0.016)	-0.068*** (0.016)	-0.068*** (0.016)
Favourite[Undecided  Debitcard - Cash]		0.007 (0.013)	0.007 (0.013)	0.007 (0.013)
Favourite[Undecided  Creditcard - Cash]		-0.010 (0.014)	-0.010 (0.014)	-0.010 (0.014)
Favourite[Undecided  Smartphone - Cash]		0.037 (0.021)	0.038 (0.021)	0.037 (0.021)
Favourite[Undecided  Other - Cash]		0.059** (0.021)	0.060** (0.021)	0.059** (0.021)
Favourite[Demand  Debitcard - Cash]		0.044** (0.013)	0.044** (0.013)	0.044** (0.013)

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Continuation of table

	<b>Demand (NoDemand, Undecided, Demand)</b>			
	Small	Large	Reduced 1	Reduced 2
Favourite[Demand  Creditcard - Cash]		0.042** (0.015)	0.042** (0.015)	0.042** (0.015)
Favourite[Demand  Smartphone - Cash]		0.043* (0.021)	0.041 (0.021)	0.043* (0.021)
Favourite[Demand  Other - Cash]		0.009 (0.021)	0.008 (0.021)	0.009 (0.021)
Trust in Banks[NoDemand  dY/dX]		0.014*** (0.003)	0.014*** (0.003)	0.014*** (0.003)
Trust in Banks[Undecided  dY/dX]		0.003 (0.004)	0.003 (0.004)	0.003 (0.004)
Trust in Banks[Demand  dY/dX]		-0.017*** (0.004)	-0.017*** (0.004)	-0.017*** (0.004)
Trust in ECB[NoDemand  dY/dX]		-0.051*** (0.003)	-0.052*** (0.003)	-0.051*** (0.003)
Trust in ECB[Undecided  dY/dX]		-0.012** (0.004)	-0.012** (0.004)	-0.012*** (0.004)
Trust in ECB[Demand  dY/dX]		0.064*** (0.004)	0.064*** (0.004)	0.064*** (0.004)
Treatment1[NoDemand  Definition - ControlGroup]		0.000 (0.007)		
Treatment1[Undecided  Definition - ControlGroup]		0.001 (0.009)		
Treatment1[Demand  Definition - ControlGroup]		-0.001 (0.010)		
Treatment2[NoDemand  Cash-Like - Definition]		0.019* (0.009)		0.019* (0.009)
Treatment2[NoDemand  Deposit-Like - Definition]		0.011 (0.009)		0.011 (0.009)
Treatment2[Undecided  Cash-Like - Definition]		0.012 (0.011)		0.012 (0.011)
Treatment2[Undecided  Deposit-Like - Definition]		0.002 (0.011)		0.002 (0.011)
Treatment2[Demand  Cash-Like - Definition]		-0.030* (0.012)		-0.030** (0.012)
Treatment2[Demand  Deposit-Like - Definition]		-0.013 (0.012)		-0.013 (0.012)
Country[NoDemand  FR - GER]	-0.070*** (0.011)	-0.041*** (0.011)	-0.046*** (0.011)	-0.041*** (0.011)
Country[NoDemand  IT - GER]	-0.167*** (0.010)	-0.095*** (0.012)	-0.098*** (0.011)	-0.095*** (0.012)
Country[Undecided  FR - GER]	0.034** (0.011)	-0.028* (0.012)	-0.029* (0.012)	-0.028* (0.012)
Country[Undecided  IT - GER]	0.040** (0.012)	0.037* (0.015)	0.035* (0.014)	0.037* (0.015)
Country[Demand  FR - GER]	0.036** (0.013)	0.070*** (0.013)	0.075*** (0.013)	0.070*** (0.013)
Country[Demand  IT - GER]	0.126*** (0.014)	0.058*** (0.015)	0.062*** (0.014)	0.058*** (0.015)

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Continuation of table

	<b>Demand (NoDemand, Undecided, Demand)</b>			
	Small	Large	Reduced 1	Reduced 2
Num. Obs.	17832	17832	17832	17832
Num. Individuals	5944	5944	5944	5944
McFadden R <sup>2</sup>	0.030	0.192	0.190	0.192
Accuracy	0.591	0.657	0.658	0.657
Accuracy: NoDemand	0.017	0.401	0.398	0.400
Accuracy: Undecided	0.000	0.265	0.270	0.265
Accuracy: Demand	0.994	0.885	0.886	0.885
True Positives Rate: NoDemand	0.017	0.399	0.398	0.400
True Positives Rate: Undecided	0.000	0.264	0.270	0.265
True Positives Rate: Demand	0.994	0.886	0.886	0.885
False Positives Rate: NoDemand	0.007	0.075	0.075	0.076
False Positives Rate: Undecided	0.000	0.077	0.077	0.077
False Positives Rate: Demand	0.987	0.544	0.541	0.542

Note: Observations are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. Significance Level: \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

**Table B2:** Demand for a Digital Euro – Interest Rate Spreads in Fixed-Effects Models (Excl. Zero Demand)

	log. Demand ( <i>w/o Zero-Demand</i> )			
	EMU	France	Germany	Italy
Spread: No Spread	Ref.	Ref.	Ref.	Ref.
Spread: Negative	-0.260*** (0.019)	-0.266*** (0.032)	-0.306*** (0.038)	-0.211*** (0.027)
Spread: Positive	0.009 (0.018)	-0.063 (0.033)	0.101** (0.034)	-0.028 (0.026)
Num. Obs.	9970	3265	2853	3852
Num. Individuals	3564	1165	1035	1364
R <sup>2</sup> (overall)	0.869	0.861	0.849	0.888
R <sup>2</sup> (within)	0.038	0.031	0.062	0.027

*Note:* Observations in *EMU* are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. *Significance Level:* \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

**Table B3: Demand for a Digital Euro – Model Comparison**

	log. Demand (log+1)			
	EMU			
	Small	Large	Reduced 1	Reduced 2
(Intercept)	-4.044*** (0.364)	-2.716*** (0.345)	-2.937*** (0.326)	-2.888*** (0.329)
Spread: NoSpread	Ref.	Ref.	Ref.	Ref.
Spread: Negative	-0.975*** (0.034)	-0.949*** (0.034)	-0.947*** (0.034)	-0.948*** (0.034)
Spread: Positive	0.059* (0.028)	0.074** (0.028)	0.075** (0.028)	0.074** (0.028)
Income	1.043*** (0.047)	0.983*** (0.045)	1.001*** (0.044)	1.000*** (0.044)
Property: Tenant		Ref.		
Property: Property		0.082 (0.074)		
Gender: Female		Ref.		
Gender: Male		0.096 (0.063)		
Age: Young		Ref.	Ref.	Ref.
Age: Middle		-0.196* (0.078)	-0.187* (0.078)	-0.188* (0.077)
Age: Old		-0.500*** (0.093)	-0.471*** (0.091)	-0.472*** (0.091)
Migration: No Migration		Ref.	Ref.	Ref.
Migration: 1st Gen		0.199 (0.119)	0.203 (0.119)	0.209 (0.118)
Migration: 2nd Gen		0.322** (0.102)	0.337*** (0.101)	0.328** (0.101)
Urban: Small		Ref.		Ref.
Urban: Mid		0.150* (0.074)		0.148* (0.074)
Urban: Large		-0.036 (0.079)		-0.041 (0.078)
Education: Low		Ref.	Ref.	Ref.
Education: Mid		-0.084 (0.092)	-0.079 (0.091)	-0.074 (0.091)
Education: High		-0.276** (0.096)	-0.268** (0.094)	-0.259** (0.095)
Financial Literacy		-1.107*** (0.133)	-1.079*** (0.132)	-1.070*** (0.132)
Subjective Knowledge: Bad		Ref.		
Subjective Knowledge: Good		-0.014 (0.070)		
Digitalisation		0.240*** (0.018)	0.242*** (0.018)	0.241*** (0.018)
European Union Integration		0.099*** (0.024)	0.106*** (0.024)	0.110*** (0.024)
Election: Mid		Ref.		
Election: Left		-0.030 (0.087)		
Election: Right		-0.176 (0.096)		
Election: Other		-0.021 (0.120)		
Election: NoVote/Undecided		-0.098 (0.097)		
Favourite: Cash		Ref.	Ref.	Ref.
Favourite: Debitcard		0.484*** (0.087)	0.479*** (0.087)	0.479*** (0.087)

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Continuation of table

	log. Demand (log+1)			
	Small	EMU		
		Large	Reduced 1	Reduced 2
Favourite: Creditcard		0.439*** (0.098)	0.443*** (0.098)	0.444*** (0.098)
Favourite: Smartphone		0.732*** (0.124)	0.720*** (0.124)	0.736*** (0.124)
Favourite: Other		0.540*** (0.134)	0.529*** (0.134)	0.533*** (0.134)
Trust in Banks		-0.174*** (0.025)	-0.172*** (0.025)	-0.174*** (0.025)
Trust in ECB		0.530*** (0.028)	0.534*** (0.028)	0.533*** (0.028)
Treatment1: Control Group		Ref.		
Treatment1: Definition		-0.045 (0.061)		
Treatment2: Definition		Ref.		Ref.
Treatment2: Deposit-Like		-0.090 (0.075)		-0.094 (0.075)
Treatment2: Cash-Like		-0.212** (0.073)		-0.215** (0.073)
Country: Germany	Ref.	Ref.	Ref.	Ref.
Country: France	0.370*** (0.091)	0.244** (0.090)	0.252** (0.086)	0.252** (0.088)
Country: Italy	1.605*** (0.086)	0.962*** (0.090)	0.968*** (0.082)	0.961*** (0.082)
Num. Obs.	13855	13855	13855	13855
Num. Individuals	5004	5004	5004	5004
R <sup>2</sup>	0.153	0.355	0.353	0.354
Adj. R <sup>2</sup>	0.153	0.354	0.352	0.353

Note: Observations in EMU are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. Significance Level: \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

**Table B4:** Demand for a Digital Euro: Economic Determinants ('Small Model' / Excl. Zero Demand)

	log. Demand ( <i>w/o Zero-Demand</i> )			
	EMU	France	Germany	Italy
(Intercept)	-3.314*** (0.210)	-2.798*** (0.375)	-3.603*** (0.370)	-3.049*** (0.345)
Spread: No Spread	Ref.	Ref.	Ref.	Ref.
Spread: Negative	-0.228*** (0.022)	-0.261*** (0.037)	-0.223*** (0.044)	-0.204*** (0.031)
Spread: Positive	-0.003 (0.020)	-0.070 (0.036)	0.101** (0.038)	-0.059* (0.030)
Income	1.159*** (0.027)	1.089*** (0.048)	1.191*** (0.047)	1.192*** (0.043)
Country: Germany	Ref.			
Country: France	-0.079 (0.051)			
Country: Italy	0.520*** (0.049)			
Num. Obs.	10542	3459	3059	4024
Num. Individuals	4136	1359	1241	1536
R <sup>2</sup>	0.309	0.244	0.287	0.322
Adj. R <sup>2</sup>	0.309	0.243	0.286	0.322

*Note:* Observations in *EMU* are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. *Significance Level:* \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .

**Table B5: Demand for a Digital Euro: ‘Large Model’ (Excl. Zero Demand)**

	<b>log. Demand (w/o Zero-Demand)</b>			
	EMU	France	Germany	Italy
(Intercept)	-3.053*** (0.229)	-2.645*** (0.425)	-3.171*** (0.405)	-3.004*** (0.368)
Spread: No Spread	Ref.	Ref.	Ref.	Ref.
Spread: Negative	-0.254*** (0.022)	-0.285*** (0.037)	-0.280*** (0.043)	-0.209*** (0.031)
Spread: Positive	0.001 (0.020)	-0.068 (0.036)	0.118** (0.038)	-0.062* (0.029)
Income	1.097*** (0.030)	1.012*** (0.057)	1.150*** (0.053)	1.127*** (0.046)
Property: Tenant	Ref.	Ref.	Ref.	Ref.
Property: Property	0.096 (0.050)	0.046 (0.084)	0.142 (0.080)	0.095 (0.102)
Gender: Female	Ref.	Ref.	Ref.	Ref.
Gender: Male	0.204*** (0.042)	0.279*** (0.075)	0.187* (0.074)	0.118 (0.065)
Age: Young	Ref.	Ref.	Ref.	Ref.
Age: Middle	0.063 (0.052)	0.028 (0.094)	-0.076 (0.092)	0.286*** (0.084)
Age: Old	-0.061 (0.062)	-0.179 (0.111)	-0.029 (0.113)	0.041 (0.101)
Migration: No Migration	Ref.	Ref.	Ref.	Ref.
Migration: 1st Gen	0.176* (0.080)	0.249 (0.146)	0.119 (0.119)	0.031 (0.149)
Migration: 2nd Gen	0.140* (0.069)	0.060 (0.105)	0.109 (0.112)	0.124 (0.160)
Urban: Small	Ref.	Ref.	Ref.	Ref.
Urban: Mid	0.073 (0.049)	0.119 (0.087)	-0.030 (0.087)	0.139 (0.080)
Urban: Large	0.105* (0.051)	0.136 (0.101)	0.024 (0.088)	0.182* (0.082)
Education: Low	Ref.	Ref.	Ref.	Ref.
Education: Mid	0.027 (0.059)	0.028 (0.124)	0.025 (0.089)	-0.050 (0.119)
Education: High	0.062 (0.063)	0.055 (0.133)	0.054 (0.090)	-0.025 (0.123)
Financial Literacy	-0.253** (0.087)	0.032 (0.151)	-0.580*** (0.159)	-0.089 (0.143)
Subjective Knowledge: Bad	Ref.	Ref.	Ref.	Ref.
Subjective Knowledge: Good	0.052 (0.046)	0.031 (0.090)	0.120 (0.080)	0.008 (0.074)
Digitalisation	0.047*** (0.012)	0.064** (0.020)	0.067** (0.021)	-0.002 (0.020)
European Union Integration	-0.001 (0.016)	-0.015 (0.027)	0.041 (0.030)	-0.029 (0.025)
Election: Mid	Ref.	Ref.	Ref.	Ref.
Election: Left	-0.073 (0.055)	-0.088 (0.099)	-0.112 (0.086)	-0.023 (0.107)
Election: Right	-0.122* (0.062)	-0.234* (0.111)	-0.125 (0.113)	-0.077 (0.105)
Election: Other	-0.009 (0.077)	0.461** (0.172)	-0.051 (0.159)	-0.017 (0.112)
Election: NoVote/Undecided	-0.009 (0.063)	-0.062 (0.107)	-0.017 (0.114)	0.033 (0.111)
Favourite: Cash	Ref.	Ref.	Ref.	Ref.

*To be continued on next page*

	log. Demand (w/o Zero-Demand)			
	EMU	France	Germany	Italy
Favourite: Debitcard	0.128* (0.059)	0.105 (0.128)	0.049 (0.090)	0.257** (0.099)
Favourite: Creditcard	0.208** (0.065)	0.192 (0.122)	0.173 (0.116)	0.252* (0.114)
Favourite: Smartphone	0.269*** (0.078)	0.232 (0.152)	0.257* (0.122)	0.334* (0.136)
Favourite: Other	0.175 (0.095)	0.010 (0.184)	0.217 (0.141)	0.291 (0.175)
Trust in Banks	-0.030 (0.016)	-0.033 (0.028)	-0.090** (0.029)	0.044 (0.027)
Trust in ECB	0.117*** (0.019)	0.093** (0.033)	0.113*** (0.033)	0.121*** (0.030)
Treatment1: Control Group	Ref.	Ref.	Ref.	Ref.
Treatment1: Definition	-0.033 (0.040)	0.019 (0.071)	-0.091 (0.071)	-0.008 (0.062)
Treatment2: Definition	Ref.	Ref.	Ref.	Ref.
Treatment2: Deposit-Like	0.038 (0.048)	0.152 (0.086)	-0.021 (0.086)	-0.036 (0.077)
Treatment2: Cash-Like	-0.061 (0.048)	-0.026 (0.086)	-0.062 (0.087)	-0.106 (0.077)
Country: Germany	Ref.			
Country: France	-0.128* (0.059)			
Country: Italy	0.410*** (0.057)			
Num. Obs.	10542	3459	3059	4024
Num. Individuals	4136	1359	1241	1536
R <sup>2</sup>	0.343	0.292	0.345	0.355
Adj. R <sup>2</sup>	0.341	0.286	0.338	0.350

Note: Observations in EMU are weighted by country population size such that each country contributes proportionally to its population in the estimation. Standard errors are clustered at the respondent level. Significance Level: \*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$ .