

'One Size Doesn't Fit All'. Bank Switching Decisions and Customer Vulnerability in Europe

Marcos Fernández-Gutiérrez. Universidad de Cantabria

John Ashton. University of York

Abstract

Over the last two decades multiple policies promoting financial literacy and information availability in banking markets have been deployed across Europe. The objective of these policies is to improve customers' decision-making, including the ability to switch bank provider. Despite the widespread use of such policies, concerns persist as to whether vulnerable customers can make appropriate switching decisions in banking markets. Drawing on financial ecology and churn theories, this paper examines the relationships between these policies, bank switching and customer vulnerability, using survey data from 24 European countries. We report that the probability of bank switching is significantly lower for three groups of vulnerable customers: the elderly, the less educated and those living in deprived regions. We conclude national financial education policies and disclosure practices have no significant effects on bank switching.

Keywords: banking markets, vulnerable customers, switching, consumer policies, personal current accounts.

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1. Introduction

In the last two decades the banking sector has transformed from a relational model based on the close interaction between bank agents and customers to a transactional model based on technology and increasing levels of banking digitization (Dandapani *et al.*, 2018; De la Cuesta *et al.*, 2022). This shift has been associated with insufficient levels of customer protection and product mis-selling (Clifton *et al.*, 2017; Pasiouras, 2018). As a response, regulatory efforts have centred on enhancing customers' capacity to make appropriate financial decisions (Brennan *et al.*, 2017). To improve "consumer empowerment", these policies have attempted to ensure guaranteed access to basic bank accounts, enhance the ability to switch banking providers (Shi *et al.*, 2017; De la Cuesta *et al.*, 2021 and 2022) and provide greater transparency, information availability and financial literacy (World Bank, 2014; EP, 2015).

These developments are important as the competitive operation of retail banking and perceived low levels of bank switching has been repeatedly examined in the European Union (EC Directorate-General for Competition, 2006; EC, 2012). This disquiet is international in scope and has also been raised by the World Bank (World Bank, 2014), within Australia (Australian Senate Economics References Committee, 2011) and individual European nations (Central Bank of Ireland, 2011; Independent Commission on Banking, 2011). Escaping an unsatisfactory supplier of an essential and required service (Clifton *et al.*, 2017) through switching banking providers

has subsequently become a central market tool within national regulatory policies aimed at empowering banking consumers. Indeed, switching banks has subsequently been advocated as a panacea for the competitive failings of banking markets. Subsequently national competition authorities have used multiple policies to increase bank switching to enhance competition and consumer welfare within banking markets (e.g. Central Bank of Ireland, 2011; EC Directorate-General for Competition, 2006; Independent Commission on Banking, 2011; EC, 2012).

Currently there is a limited comprehension as to how greater bank switching can be achieved. Concerns persist as to the capability of vulnerable customers to make appropriate bank switching decisions. Repeated policy investigations have reported the unwillingness of many bank customers to switch banks (EC Directorate-General for Competition, 2006). Surveys from the European Commission report that whilst banking services are among the worst functioning services consumer markets, switching remains relatively low (EC, 2021).

Despite these efforts, there is insufficient knowledge and empirical evidence about the interaction between personal current account switching, customer vulnerability and policies addressed at “empowering consumers”. This is important as the ability to access bank current account services has wider societal ramifications. Such financial inclusion positively impacts consumer credit outcomes over a lifetime (Brown et al., 2019) and allows households to accumulate financial and durable assets, have a better access to debt,

and face a lower probability of financial distress (Célerier and Matray, 2019).

This paper addresses this research gap, by considering two questions. First, does the likelihood of switching banking supplier vary across customers' demographic, socio-economic and geographic characteristics. This is important to consider as vulnerable customers have been defined as those "at a disadvantage in exchange relationships where that disadvantage is attributable to characteristics that are largely not controllable by them" (Andreasen and Manning, 1990). This work contributes to the financial ecology literature (Leyshon and Thrift, 1994 and 1995) through exploring the characteristics which underscore the ability to make appropriate personal current account switching decisions. Secondly, we examine whether national consumer-oriented policies for increasing financial literacy and the transparency of information (disclosure practices) enhances bank switching. These policies assume bank switching can be increased through focusing on developing the ability of customers to make personal financial decisions. This perspective stands in contrast to churn theory explanations of bank switching (Keaveney, 1995) which assume a wider range of influences influence these decisions.

To examine these questions, this paper employs microdata from the Special Eurobarometer on Financial Products and Services (EC and EP, 2016), a unique source of information on bank personal current account switching behaviour and customer characteristics across European nations. This data

is complemented with information about national consumer financial education policies and disclosure practices from the World Bank (2014) and geographical, market and regulatory factors from EUROSTAT and the World Bank (2017). These diverse sources enable a cross-country analysis encompassing 24 European nations.

We report that a lower propensity to switch banking provider is strongly related to three aspects associated with customer vulnerability: an advanced age, low educational attainment, and residence in a relatively poor region. We also report financial education policies and disclosure practices have an insignificant effect on switching banking provider. We advocate more targeted policies recognising customers' heterogeneity are required to increase bank switching behaviour.

This paper contributes to multiple academic areas. First, we present further evidence as to bank customer switching behaviour (Keaveney, 1995; Sharpe, 1997; Kiser, 2002; Shy, 2002; Stango, 2002; Kim *et al.*, 2003; Bouckaert and Degryse, 2004; Gondat-Larralde and Nier, 2006; Mavri and Ioannou, 2008; Barone *et al.*, 2011; Hannan and Adams, 2011; Vyas and Raitani 2014; Ho, 2015; Brunetti *et al.*, 2016; Waddams Price and Zhu, 2016; Ashton and Gregoriou, 2017, Lappeman *et al.*, 2022; Ngau *et al.*, 2023; Van der Cruysen and Diepstraten, 2017). We contribute to this literature by examining bank switching and consumer vulnerability across multiple European nations.

Second, we examine the efficacy of consumer-oriented policies (financial literacy and disclosure practices) in encouraging bank switching across the EU. This work contributes to literature considering the effect of financial literacy policies on financial decision-making (Agarwal *et al.*, 2009; Lusardi and Mitchell, 2014; Miller *et al.*, 2015).

The paper is structured as follows. After this introduction, the determinants of switching in the banking sector are described. The third section presents the data and the empirical approach employed. The fourth section reports the results. The fifth section provides a discussion of the results and section six concludes and provides policy recommendations.

2. Bank switching and vulnerable customers: A review.

The literature examining switching in banking markets has been influenced by multiple theoretical arguments and associated policy discussions directed at increasing consumer welfare, market competition, and consumer comprehension. These theoretical approaches include churn theory, financial ecologies and associated work examining consumer vulnerability within financial markets. These areas are considered in turn.

Bank switching and the associated market churn of customers has been the subject of repeated examination with the marketing literature. Following Keaveney (1995), this churn literature has examined the multiple and often intertwined causal factors underlying the switching process and why

customers may choose to switch suppliers. These factors initially included pricing, inconvenience, service failures and encounters, employees' responses, competitors' actions, and ethical concerns. Overtime this range of influences has expanded. These developments have included identifying socio-economic and psychological factors associated with bank switching. These variables have included age, education, place of residence, and the often negative situational triggers unique to each customer switching decision (Ngau *et al.*, 2023). Other contributions have identified psychological influences such as the consumer commitment or psychological attachment to supplier (Bansal *et al.*, 2004), the relationship bonding strategies adopted by firms (Chiua *et al.*, 2005), and the potency of barriers limiting switching decisions (Colgate *et al.*, 2001). Other work has examined how decisions to switch, or not-switch, supplier varies (Ganesh *et al.*, 2000), and the multitude of events which may trigger switching decisions (Vyas and Raitani, 2014). More recent work has identified the importance of advertising (Martin and Mainelli, 2003), branding (Van Trijp *et al.*, 1996; Mavri and Ioannou, 2008), social media (Lappeman *et al.*, 2022) and service failure (Zhao *et al.*, 2023) on bank switching decisions.

The financial ecology literature (Leyshon and Thrift, 1994 and 1995; Langley and Leyshon, 2017; Grafe and Mieg, 2019; de la Cuesta-González *et al.*, 2021) has also examined financial services provision and switching. Financial ecologies are widely used to explain why vulnerable people face unequal outcomes when accessing and using financial services. This

approach emphasises the multiple economic and social roles, financial services can convey. This framework proposes when personal current accounts become harder to access, a diversity of externalities can arise across society, such as financial exclusion for poor communities (Leyshon et al., 2004). The financial ecologies approach subsequently places greater emphasis on the interconnections between people and place that underlie financial relationships (Marshall, 2004). These interconnections include income inequality and demographic trends, such as old age, whereby vulnerability becomes concentrated in a small number of often deprived areas (Marshall, 2004).

These unequal outcomes in the provision of financial services are thought to be related to the form of competition prevailing in many banking markets. This competition is driven by the limited number of customers who switch their personal current accounts. If these switching customers are better educated, younger, urban customers with higher incomes, banks will adjust their service provision towards these relatively advantaged customers rather than vulnerable users (Jilke, 2015).

Financial vulnerability therefore views customer heterogeneity as instrumental in financial decision making (De la Cuesta *et al.*, 2021), with low levels of skills, knowledge and/or confidence among vulnerable customers leading to challenges in accessing banking services. Similarly, vulnerable customers can experience difficulties in understanding the information about and the language used in banking products. These

vulnerable customers may also receive (or perceive) poorer attention than other more profitable customers. These outcomes can intimidate vulnerable customers, placing them in a position of inferiority, with less confidence when making switching decisions.

Lastly, it has long been understood that substantial heterogeneity exists within a populations' financial literacy and behaviour (Lusardi and Mitchell, 2014; Xiao and O'Neill, 2018). As customers' decisions depend on their perceptions, customers with the least skill, experience or confidence are likely to make worse decisions than their better off counterparts (Clifton *et al.*, 2017). For instance, vulnerable customers are prone to loss aversion, and tend to avoid risks in favour of decisions with less, but safer gains (De la Cuesta *et al.*, 2022).

Firm actions can also influence switching decision-making (Carlin, 2009). The behaviour of financial firms in designing, presenting, and selling financial services, how contracts are written, and the forms of pricing adopted can all limit consumers' comprehension of financial services and discourage switching. Critically, if customers do not understand the quality and attributes of a complex financial service, they are less able to judge the value of the service and poor purchase decisions become likely (Huberman and Jiang, 2006; Kamenica, 2008; Carlin and Manso, 2011). Through this process, consumer decision-making failures arise allowing some firms to sell lower quality and higher cost services to unknowing and vulnerable customers.

Despite these multiple theoretical concerns, policymakers have long argued consumer welfare will be enhanced by more consumer driven competition. Such competition requires customers' switch between suppliers based on the price and quality of financial services. It has therefore been widely assumed that to make appropriate switching decisions, customers must research the market and become active and informed market participants. This ability to make informed choices and navigate banking and financial markets is then engrained through the application of policies to enhance customer financial literacy. For instance, in the European Union (EU), the European Consumer Agenda has highlighted the importance of consumer education, emphasizing improved knowledge is required for effective consumer participation in the marketplace (Brennan *et al.*, 2017).

In summary, a wide range of theories have addressed why customer choose to switch their personal current account provider. These theories vary in their predictions. Churn theories has focused on the multitude of factors affecting the switching process. The financial ecologies literature has focused on the place of consumer within society to explain switching decisions. Lastly, consumer vulnerability work has emphasised the why poor or no switching decisions can arise, be this for personal or firm level influences.

While presenting a diverse range of predictions these different theoretical approaches, do have commonalities. Clearly, individual socio-economic factors are viewed to be influential within switching decision making. Further all theories assume that switching decisions arise from more than

just personal decision-making abilities. Drawing on these insights we now turn to the analysis where we examine the socio-economic factors influencing personal current account switching and if national policies focused on enhancing individual decision-making abilities (through financial education and information disclosure) are influential on bank switching decisions, or otherwise.

3. Data and empirical approach

This section is divided into three sub-sections, which describe the hypotheses, the data employed, and the methods used. The assessment considers personal current accounts: a composite financial service offering core deposit and payment services, and in some cases optional borrowing or overdraft facilities. This gateway financial service is employed as a conduit for most customers' income and payments and provides information on current account usage and financial behaviours.

3.1 Hypotheses

Two hypotheses are considered. First, we examine whether customers with socio-economic characteristics associated with vulnerability are less likely to switch their personal current account provider. As customer vulnerability is not directly observable, studies typically focus on socio-economic variables associated with a higher risk of experiencing vulnerability (Clifton *et al.*, 2017; Fernández-Gutiérrez *et al.*, 2017; Shi *et al.*, 2017). In

particular, the elderly are characterised by declining skills, higher risk aversion and sensitivity to framing (Lunn and Lyons, 2010). These factors make elderly customers more likely to make sub-optimal decisions. Similarly, less educated customers are characterized by lower literacy and numeracy skills, and face difficulties in comprehending information required for appropriate decision-making. These effects are amplified in the presence of misleading information (Shi *et al.*, 2017). Residents from rural and poorer locations are also more likely to be placed at a disadvantage in banking markets. As these areas are less profitable for banks, banks have closed a disproportionate number of their branches (Marshall, 2004). The residents of poorer and rural areas may have insufficient access to financial service providers to adequately provide for their financial needs (De la Cuesta *et al.*, 2021).

To summarise, a high age, a low educational attainment and residence in a rural or poor area would constitute characteristics of a financial ecology, within which bank switching decisions become more challenging. These socio-economic factors associated with vulnerability are also influential within churn theory (Ngau *et al.*, 2023). We analyse whether this customer vulnerability is reflected in current account provider switching decisions, by testing the following hypothesis:

H₁. Individuals with socio-economic characteristics representative of customer vulnerability are less likely to switch their personal current account provider.

Second, we examine the association between individuals' decisions to switch current accounts and the national policies directed at increasing consumer empowerment. National strategies to enhance switching have focused on financial literacy (World Bank, 2014; EP, 2015; Brennan *et al.*, 2017; Pasiouras, 2018). While it is often assumed switching rates are positively associated with greater financial literacy, the effectiveness of financial education is disputed by many (Hoffmann and Otteby, 2018). Switching is also encouraged through policies to make the switching process easier or more transparent. If these policies are effective, it might be expected switching rates are higher in those nations where efforts to introduce compulsory information to customers (disclosure practices) have been more intense.

As previously indicated, such policies are focused in enhancing the individual customers ability to make switching decisions, without considering other potentially influential factors. This approach conflicts with many of the insights provided from churn theory (Ngau *et al.*, 2023), where bank switching is viewed to be a complex action, involving personal, psychological, social and economic situational triggers. We analyse the relationship between national financial literacy and disclosure policies through testing the following hypothesis:

H₂. More frequent personal current account switching decisions occur in nations which use more consumer-oriented policies (financial education and disclosure practices).

3.2 Data

Information on switching personal current accounts and individual demographic and socio-economic factors is obtained from the Special Eurobarometer on Financial Products and Services (EC and EP, 2016). This unique survey requested by the European Commission (Directorate General for Financial Stability, Financial Services and Capital Markets Union) examines current consumer behaviour when buying financial services in the EU.

The survey was carried out in April 2016 using face-to-face interviews. This yielded a sample of 27,969 respondents from 28 EU countries. To consider switching, respondents were asked: *"in the last 5 years have you changed provider of these products and services?"* for 11 financial services (7 banking services and 4 insurance services). We restrict the analysis to those consumers that have a personal current bank account, using the answers provided in the survey to the question: *"which of the following financial products and services do you have?"*. This includes 76.5% of the respondents yielding a sample of 21,397 respondents.

For hypothesis one, the selection of individual demographic and socio-economic independent factors was guided by past studies on the determinants of current account switching (Carbó-Valverde *et al.*, 2011), financial exclusion (Deku *et al.*, 2016; Kara and Molyneux, 2017) and customer vulnerability in banking services (Clifton *et al.*, 2017; Shi *et al.*, 2017; De la Cuesta *et al.*, 2021 and 2022). Our analysis considers age,

educational attainment and place of residence as key independent variables at the individual level. We also use nationality, gender, employment status, occupation, marital status, household size and household ownership status as individual level control variables.

Age is measured across intervals from 15 to 24, from 25 to 34, from 35 to 44, from 45 to 54, from 55 to 64 and more than 64. We focus on those respondents over the age of 64 as a vulnerable group. Information on the education attainment considers the age when respondents have finished full-time education. Respondents with a basic education are those who left education at 15 or before, those under 19 still studying and respondents who never received a full-time education. Respondents with a secondary education include persons who finished studying between the ages of 16 and 19, as well as those over 19 still studying. Respondents with a higher education are those that completed full-time education after the age of 19. Customers with a basic education are the group representative of vulnerability.

Regarding other individual characteristics, respondents' nationality indicates if the person has a different nationality than their country of residence or not. Gender differentiates men and women. Current employment status distinguishes respondents who are self-employed or in paid work, versus those not employed. Occupation describes respondents who work as managers, other white-collar workers, manual workers, and other occupations. Marital status records respondents who are single, divorced or widowed versus those married or cohabiting. Household size

quantifies the number of household members; this variable is also considered in a squared format. House ownership distinguishes between those who own their house, those who hold a mortgage and other respondents.

To test whether geographical factors affect customers' switching decisions, we include the characteristics of the place of residence as independent variables. We focus on residents in rural areas, regions with lower population density or regions with lower GDP per capita as indicators of customer vulnerability.

The concentration of population in an area of residence is quantified over two dimensions. First, the size of the community where the respondent lives is considered using information provided by EC and EP (2016). This data, derived from postal codes, indicates if respondents live in rural areas, towns and suburbs or small urban areas and cities. We also consider the population density of the respondents' region using variables corresponding to the following intervals: more than 500, from 200 to 500, from 100 to 200, from 75 to 100, from 50 to 75 and less than 50 inhabitants per square kilometre. This information is obtained from EUROSTAT (2017a) for 2015, and it corresponds to the NUTS 2¹ European level of regional disaggregation (excepting Germany, Italy and the UK, where the information refers to the NUTS 1 level). Once collected, this data is merged with the individual

¹ The NUTS (in French, *Nomenclature des Unités Territoriales Statistiques* – Nomenclature of territorial units for statistics- classification is a hierarchical system for dividing the territory of the EU in regions. The NUTS-2013 classification, considered in this analysis, divided the EU in 98 major socio-economic regions (NUTS1) and 276 basic regions (NUTS2) (EUROSTAT 2015).

information from the Special Eurobarometer on Financial Products and Services (EC and EP, 2016) for the region where each respondent lives. We also include information on the GDP per capita (in thousand euros per inhabitant) of the region where the respondent lives, obtained from EUROSTAT (2017b). This variable corresponds to the year 2015² and employs the following intervals: more than 40, from 30 to 40, from 20 to 30, from 10 to 20 and less than 10 thousand euros per year. This variable corresponds to the NUTS 2 level (NUTS1 for Germany, Italy, and the UK).

We use five variables to capture effects on switching derived from national macroeconomic or market characteristics at the time the Eurobarometer survey was conducted. First, we employ GDP growth, measured as the average growth at constant prices, in the period 2011-2015 (EUROSTAT, 2017b). Second, inflation is recorded as the average annual growth of the consumer price index in the period 2011-2015 (EUROSTAT, 2017c). Third, national interest rates, measured as the 2011-2014 average money market interest rate at 6 months (EUROSTAT, 2017d) is employed (as information for 2015 was not available for eight countries³). Fourth, the Boone indicator of competition (average for the period 2011-2015), was obtained from the World Bank Global Financial Development Database (World Bank, 2017). This indicator measures the elasticity of profits to marginal costs, where a higher value implies less competitive conduct by financial institutions. Fifth,

² Information of GDP per capita for the Irish regions corresponds to 2014, due to unavailability of more recent data at the time of data collection.

³ For Croatia, as previous data were not available, information on the interest rate corresponds to 2014.

the national market size is calculated from the percentage of adult population using any banking service (EC and EP, 2016) and the national population (EUROSTAT, 2017e), expressed in tens of millions.

To test hypothesis two, we construct a composite indicator of consumer financial education from World Bank (2014) information for 114 nations. This provides information on six items as to whether nations have an agency which: i. *Has the responsibility to implement and/or oversee any aspect of financial education/literacy*; ii. *Conducts a survey of financial capability/literacy and publishes regular reports*; iii. *Develops and monitors implementation of a strategy*; iv. *Provides training on financial literacy topics*; v. *Issues guidelines to the providers of financial services on financial education/literacy*; and vi. *Develops training materials on financial topics*. Following Pasiouras (2018), we construct a composite indicator from these six items. We code each of them as one if the answer is yes, and zero if not. Then, we sum the six sub-indicators, to obtain a single indicator ranging from 0 to 6. We rescale this indicator to a value ranging from zero (representing the minimum level of financial education policies) to one (the maximum).

An analogous indicator is constructed from World Bank (2014) information on disclosure practices. This provides information on eight disclosure requirements for personal current accounts: i. *Plain language*; ii. *Local language*; iii. *Standardized disclosure format*; iv. *Recourse rights and processes*; v. and vi. *A monthly account statement free of charge (for banks and for other regulated financial institutions, respectively)*; vii. *Detailed*

transactional information for a period; and viii. To notify customers in writing of changes in terms/conditions in their agreements. We calculate a composite indicator, in a similar manner to the financial education measure and rescale it from zero, representing the minimum level of disclosure requirements to one (the maximum).

Information on financial education policies is available for 25 of the 28 EU countries (data is unavailable for Sweden, Cyprus and Malta). From these nations, information for disclosure practices is available for 24 countries (data is unavailable for Poland). Subsequently 24 countries, representing 90.4% of the EU population in 2016 (EUROSTAT, 2017e) are assessed. This yields a final valid sample of 19,159 individuals. The definition and source of all the variables is provided in Table I. The values of all the independent variables at the country level are shown in an appendix.

The variables' descriptive statistics are presented in Table II. The sample composition (after applying sampling weights) is displayed first. The next column shows the average percentage of customers that have switched their personal current account in the last 5 years, by country and by socio-economic characteristic. On average, 8.21% of customers who have a bank account have switched during the last 5 years. There are large differences between EU nations. Relatively high levels of bank switching are observed in Denmark (18.2%), the Czech Republic (15.29%), Romania (12.5%), Slovenia (11.95%), UK (10.34%), Luxembourg (10.27%) and Latvia (10.25%). Switching levels are lower in Greece (2.3%), Portugal (3.96%),

Italy (5.27%), Ireland (5.44%), the Netherlands (5.77%) and Germany (6.05%).

For socio-economic characteristics, average switching rates are lower among the elderly (3.66% among those over 64), those with basic levels of education (5.37%), those not working (6.15%) and those who own their house (5.52%). Average switching rates are higher among those in age intervals between 15 and 44 (over 10%), those with higher education (11.3%), non-nationals (13.36%), managers (9.65%) and residents of cities (9.47%).

[TABLE I]

[TABLE II]

3.3 Empirical approach

Our dependent variable capturing recent switching decisions (y_i) is binary, being one if the individual i has switched their provider of personal current bank account during the last 5 years, and zero otherwise. Given the data format of the dependent variable, we use a probit specification to estimate the relationships between recent switching decisions and the independent variables. A probit specification has been frequently used to analyse consumer switching behaviour in presence of a binary dependent variable

(Brunetti *et al.*, 2016; Waddams Price and Zhu, 2016; Clifton *et al.*, 2017).

Our analysis is based on two different probit estimations of the following form, assuming F follows a normal standard distribution function (Φ):

$$(1) \quad \Pr(y_i = 1) = F(X_i, R_i, C_i)$$

$$(2) \quad \Pr(y_i = 1) = F(X_i, R_i, M_i, FinEd_i, Disc_i)$$

Where:

y_i = decision on switching made by individual i .

X_i = vector of characteristics of individual i .

R_i = vector of characteristics of the place of residence of individual i .

C_i = country of individual i (binary variables).

M_i = vector of macroeconomic and market characteristics in the country of individual i .

$FinEd_i$ = indicator on consumer financial education in the country of individual i .

$Disc_i$ = indicator on disclosure practices in the country of individual i .

Model 1 is used to test hypothesis one while controlling for national differences. Model 2 permits the simultaneous testing of hypotheses one and two, while controlling for the national macroeconomic and market characteristics. All the estimations provide robust standard errors clustered at the national level, to correct for correlation of the error term within

countries (taken as clusters). By using the sampling weights from EC and EP (2016), the estimates are representative at the population level.

4. Results

The estimated marginal effects are reported in Table III. They indicate the estimated change in the probability of having switched current bank account that is associated with a unitary change in each independent variable.

For hypothesis one, we observe considerable heterogeneity in current bank account switching. Respondents over 64 years old have a lower probability of switching their bank account than those respondents aged between 35 and 44 (reference category): -6.8% in model 1 and -6.9% in model 2. Those in the between 55 and 64 age group (-3.3% and -3.4%, respectively) also have a lower probability of switching than respondents between 35 and 44 years old. Consumers with a basic educational attainment have a lower probability of switching bank account than those with more education (reference category). This is observed within model 1 (-2%) and model 2 (-2.3%). The probability of switching is also lower among those with secondary education relative to those with higher education (-2.3% and -2.4%, respectively). Given the average percentage of bank switching (8.21%) the magnitude of the effects estimated with respect to age and educational attainment is sizable.

For other individual characteristics, non-nationals have a higher probability of switching their bank account than nationals (+2.1% in both models 1

and 2). This is consistent with Carbó-Valverde *et al.* (2011), who find that immigrants face lower switching costs. Those owning their house are associated with a lower probability of switching (-2.9% and -2.7%, respectively), possibly because their financial needs are less pressing. Other individual characteristics do not display significant effects.

Respondents living in rural areas and towns do not show a lower probability of switching than respondents living in cities (reference category), with p-values ranging from 0.19 to 0.22 for rural residents and from 0.11 to 0.17 for town residents. However, respondents living in regions of population density of between 50 and 75 and between 100 and 200 (only in model 2) inhabitants per square kilometre have a lower likelihood of switching banks account than residents in regions with more than 500 inhabitants per square kilometre (reference category).

For regional GDP per capita, the probability of switching is lower in the poorest regions (<10 thousand euros per inhabitant) relative to the richest (>40 thousand euros per inhabitant) (reference category). This effect is larger in model 1 (-8.9%) than in model 2 (-5.5%). In model 1 switching is also lower in regions with GDP per capita between 10 and 20 thousand euros per inhabitant than in the richest regions (-5%).

The coefficient sign for the variables representing national macroeconomic or market characteristics are accordance with expectations, albeit insignificant. Switching personal current accounts is positively associated with interest rates, as higher interest rates provide consumers greater

financial incentives to switch. The Boone indicator of competition is negatively associated with the probability of switching current accounts. Switching is therefore higher in nations with more competitive banking markets (as measured by this indicator).

For hypothesis two, the coefficient for national consumer financial education policies and the probability of switching is statistically insignificant (p-value = 0.216). An insignificant coefficient value is also found for national disclosure practices and the probability of switching (p-value = 0.29). These results imply no significant relationship exists between neither national financial education policies or disclosure requirements and bank switching.

[TABLE III]

For robustness, we also estimate a logit specification, an alternative to a probit specification in presence of a binary dependent variable. This produces similar results. Estimates associated with old age, low educational attainment, and house ownership, are still negative and significant, with a similar magnitude to the probit estimates. Only results reported for non-national customers become insignificant. Similar findings are also reported for the place of residence (only the relationship between living in a town and switching becomes statistically significant at 90%). For hypothesis two, the estimated values of the coefficients for financial education policies and disclosure practices are similar and remain insignificant. Variables representing customer vulnerability (in particular, high age and low

educational attainment) are strongly related to the probability of switching. This finding also occurs when the estimations control for national financial education policies and disclosure requirements.

5. Discussion

The results from the analysis provide strong support for Hypothesis 1, that individuals with socio-economic characteristics representative of customer vulnerability are less likely to switch their personal current account provider. We report that age, education, GDP and whether someone is living in an urban space are all significantly linked to less current account switching. Plausible outcomes are also recorded for other national and market level factors.

The results refute Hypothesis 2, that more frequent personal current account switching decisions occur in nations which have use more consumer-oriented policies (financial education and disclosure practices). The results obtained show that neither financial education policies or disclosure requirements influence the probability of customer current bank account switching. The estimates for the effect of elderly and the less-educated customers status on banking switching are also consistent when we control our estimations for these national consumer-oriented policies. This indicates these policies are also ineffective in reducing differences in switching behaviour between more and less vulnerable customers.

Both findings support the conjecture that individual level decision making underlying the national policies, is not the only influence affecting bank switching decisions. Indeed, this process may be far more complex, as predicted by churn theory, and involves socio-economic factors as suggested by the financial ecology literature. The finding that personal current account switching is unevenly distributed across socio-economic and geographical groups also has strong commonalities with work examining financial literacy (Lusardi et al., 2015).

6. Conclusions

In this study, we examine the relationships between customers' propensity to switch personal current accounts, customer vulnerability and policies used to enhance switching. We report that substantial heterogeneity exists in the distribution of customers' switching personal current accounts, when comparing vulnerable customers and their counterparts. The elderly and less educated customers are far less likely to switch their personal current account than other customers. A lower propensity to switch banks is also observed for customers living in poorer regions. We further report that neither financial education policies or disclosure practices carried out at the national level have a significant effect on the individual propensity to switch current bank account. These results, which contradict contemporary policy approaches, are unsurprising in light of the predictions of churn theory and the financial ecologies literature.

The implications of these findings are multifarious. Clearly, policies that aim to encourage bank switching should acknowledge and incorporate the heterogeneity of customer switching and the specific needs and circumstances of vulnerable customers. As existing national financial education programmes appear to have limited value, we propose tailoring financial education programmes to respond to the needs of a diverse population. Indeed, targeted interventions to develop financial literacy in specific population groups have been previously successful (Carlin and Robinson, 2012) acknowledging that certain groups of people may require focused support to engender greater bank switching. A similar conclusion also applies to regulatory actions based on the introduction of disclosure requirements. Mandatory transparency policies are not sufficient to address the difficulties of vulnerable customers, as these customers may be unaware of the information disclosed or may not understand it (De la Cuesta *et al.*, 2021). We propose implementation of regulation to address the specific difficulties of vulnerable customers, and focus on what information is presented, and how this information is presented. An application of consumer policy, considering the needs and requirements of different demographic, socio-economic and geographical groups would certainly be considered superior to a 'one-size-fits-all' approach often employed in consumer policies in the financial sector (Hoffmann and Otteby, 2017). The convenience surveys introduced by the European regulation (Market in Financial Instruments Directive, MIFID) are a good example of how customer heterogeneity can be incorporated into such regulatory policies.

We also acknowledge other factors over the sample period may have been influential. The stubborn resistance to bank switching over time and internationally, may have arisen from conflicting prudential policy demands placed on banks. Since the announcement of Basel III, limited switching has been proposed in personal current accounts markets to ensure stable bank financing (Brunetti *et al.*, 2016). Subsequently banks internationally have been encouraged to develop long-term banking relationships with their customers and limit customer switching in personal current accounts markets. This has occurred at a time when competition authorities and other financial regulators have been encouraging more bank switching for competitive and consumer welfare outcomes. Clearly it is essential to review such policy holistically to remove these inconsistencies (Miller *et al.*, 2015). This study encourages further research on the topic of consumers' switching of banking services. Future research should address the interaction between branch attachment (Shimul *et al.* 2023) as well as other variables capturing the relationship between customers and providers), switching and customer vulnerability. In addition, mechanisms and cognitive factors which explain inertia and switching costs should receive further specific attention, to improve the understanding of why customer do not switch. Finally, further research on the efficacy of financial education policies and disclosure practices is required. Similarly, the effectiveness of other policies addressing at promoting consumer switching banking services should be the object of future analysis.

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Table I: Variables and Data source

Dimension	Variable labels	Data source
DEPENDENT VARIABLE		
Switching Personal Current Account	<i>'In the last 5 years have you changed provider of these products and services?'</i>	Special Eurobarometer on Financial Products and Services. European Commission (EC) and European Parliament (EP) (2016)
INDIVIDUAL CHARACTERISTICS		
Age	15-24, 25-34, 35-44, 45-54, 55-64, >64	
Educational Attainment	Basic education Secondary education Higher Education	
Nationality	Possess the nationality of his/her country of residence or not	
Gender	Woman or otherwise	
Employment status	Self Employed, Employed (vs others)	
Occupation	Manager, White collar, Manual worker	
Marital Status	Single adult (single, divorced or widowed) or married or otherwise	
Household Size and Household size ^2	Number of household members and this value squared	
House Ownership	House owner, Mortgage (vs others)	
CHARACTERISTICS OF THE PLACE OF RESIDENCE		
Size of Community	Rural, Town and City	EUROSTAT (2017a and 2017b), combined with EC and EP (2016)
Concentration of population in the region of residence (inhabitants per square kilometre)	<50, 50-75, 75-100, 100-200, 200-500, >500	
GDP per capita in the region of residence (€000's per inhabitant)	<10, 10-20, 20-30, 30-40, >40.	
CHARACTERISTICS OF THE COUNTRY OF RESIDENCE		
GDP growth %	Average rate of GDP change in the period 2011-2015	EUROSTAT (2017b)
Inflation %	Average annual growth of the consumer price index in the period 2011-2015	EUROSTAT (2017c)
Interest rate %	Money market interest rates at 6 months, average 2011-2014	EUROSTAT (2017d)
Boone indicator of competition	Elasticity of profits to marginal costs, average 2011-2015	World Bank (2017)
Market size of the country	The percentage of adult population using any banking service / the number of adult inhabitants in each country	EC and EP (2016), EUROSTAT (2017e)
Consumer financial education policies	Composite indicator from information on consumer financial	World Bank (2014)

	education policies	
Disclosure practices affecting bank accounts	Composite indicator from information on disclosure practices affecting bank accounts	World Bank (2014)

Table II. Sample composition and average switching rates, by country and by socio-economic characteristic

Country	%	Switching *	Age	%	Switching *	Marital status	%	Switching *
Austria	2.1	8.81	15-24	10.6	10.17	Single, Divorced or Widowed	33.3	8.44
Belgium	3.0	8.88	25-34	14.5	12.05	Married and other	65.4	8.05
Bulgaria	1.1	6.70	35-44	17.6	11.59			
Croatia	1.0	7.04	45-54	18.8	7.86			
Czechia	2.6	15.29	55-64	15.0	6.70			
Denmark	1.6	18.20	>64	23.4	3.66	House ownership		
Estonia	0.4	7.02	Education			Owner	38.7	5.52
Finland	1.5	8.59	Basic education	21.5	5.37	Mortgager	27.4	10.09
France	16.2	9.85	Secondary education	48.1	7.51	Other	33.9	9.77
Germany	20.5	6.05	Higher education	29.7	11.30	Size of community		
Greece	0.7	2.30	Nationality			Rural	26.5	7.83
Hungary	2.0	8.52	National	96.8	8.05	Town	38.1	7.31
Ireland	0.9	5.44	Foreigner	3.2	13.36	City	35.4	9.47
Italy	11.4	5.27	Gender			Regional population density		
Latvia	0.5	10.25	Man	47.6	8.74	>500	20.0	8.25
Lithuania	0.6	9.65	Woman	52.4	7.73	200-500	29.8	7.32
Luxembourg	0.1	10.27	Employment status			100-200	25.4	8.40
Netherlands	4.5	5.77	Self-employed	7.6	11.72	75-100	12.0	7.89
Portugal	2.2	3.96	Employed	45.9	9.72	50-75	8.3	11.48
Romania	1.7	12.50	Not working	46.5	6.15	<50	4.5	7.73
Slovakia	1.2	8.62	Occupation			Regional GDP per capita		
Slovenia	0.5	11.95	Manager	20.2	9.65	>40	21.1	8.67
Spain	9.0	8.30	Other white collar	20.5	8.41	30-40	35.9	7.59
UK	14.8	10.34	Manual worker	40.9	7.20	20-30	24.3	9.20
N	19,159	8.21	Other	18.4	8.67	10-20	15.1	7.28
			* (% - in the last 5 years – weighted)			<10	3.5	8.97

Table III. Marginal effects estimated on the probability of switching current bank account.

		Model 1		Model 2	
	Variable	Marginal effect	Standard error	Marginal effect	Standard error
Age	Age 15 to 24	-0.000	(0.010)	0.001	(0.011)
	Age 25 to 34	0.002	(0.010)	0.003	(0.011)
	Age 35 to 44	reference category			
	Age 45 to 54	-0.023*	(0.014)	-0.025	(0.015)
	Age 55 to 64	-0.033**	(0.014)	-0.034**	(0.014)
	Age > 64	-0.068***	(0.008)	-0.069***	(0.009)
Educational attainment	Basic education	-0.020*	(0.011)	-0.023**	(0.011)
	Second. education	-0.023***	(0.005)	-0.024***	(0.005)
	Higher education	reference category			
Nationality	Non-national	0.021*	(0.012)	0.021*	(0.012)
Gender	Woman	-0.006	(0.005)	-0.006	(0.005)
Employment status	Self Employed	0.033	(0.024)	0.032	(0.024)
	Employed	0.001	(0.010)	0.000	(0.010)
Occupation	Manager	0.018	(0.020)	0.020	(0.021)
	White-Collar	0.006	(0.021)	0.008	(0.021)
	Manual Worker	-0.004	(0.024)	-0.001	(0.024)
Marital status	Single Adult	-0.001	(0.004)	0.001	(0.004)
Household size	Household size	-0.006	(0.009)	-0.007	(0.013)
	Household size^2	0.001	(0.001)	0.001	(0.001)
House ownership	House ownership	-0.029***	(0.006)	-0.027***	(0.007)
	House mortgage	-0.006	(0.013)	-0.007	(0.013)
Size of community	Rural	-0.015	(0.012)	-0.014	(0.011)
	Town	-0.015	(0.011)	-0.016	(0.010)
	City	reference category			
Regional Population Density	Rpd > 500	reference category			
	Rpd 200 to 500	0.001	(0.015)	0.002	(0.014)
	Rpd 100 to 200	0.026	(0.020)	0.030*	(0.018)
	Rpd 75 to 100	0.011	(0.015)	0.015	(0.016)
	Rpd 50 to 75	0.036*	(0.020)	0.045**	(0.020)
	Rpd < 50	0.016	(0.022)	0.003	(0.023)
Regional GDP per Capita	Rgdp > 40	reference category			
	Rgdp 30 to 40	-0.008	(0.005)	-0.006	(0.007)
	Rgdp 20 to 30	0.004	(0.012)	0.012	(0.012)
	Rgdp 10 to 20	-0.050**	(0.022)	-0.029	(0.020)
	Rgdp < 10	-0.089***	(0.026)	-0.055**	(0.024)
Country Level Variables	Gdp growth			0.004	(0.005)
	Inflation			0.002	(0.014)
	Interest			0.007	(0.005)
	Booneind			-0.109	(0.084)
	Marketsize			-0.002	(0.003)
	Disclospract			-0.033	(0.031)
Financial education	Financialeduc			0.021	(0.017)
Country binary variables		Yes		No	
N		19,159		19,159	

Statistical significance at: *, 10%; **, 5%; ***, 1%. Robust standard errors clustered by country in parenthesis.

Annex. Summary of variables at the country level

	GDP growth (average 2011- 2015)	Inflation (average 2011- 2015)	Interest rate (average 2011- 2014)	Boone indicator (average 2011- 2015)	Market size, tens of million users (2016)	Financial education policies (0-1)	Disclosure practices (0-1)
Belgium	1.0	1.7	0.78	-0.026	0.916	0.667	0.500
Denmark	1.1	1.2	0.87	-0.062	0.470	0.667	0.750
Germany	1.6	1.4	0.78	-0.026	6.608	0.000	1.000
Greece	-3.9	0.1	0.78	0.052	0.833	0.000	0.500
Spain	-0.2	1.2	0.78	-0.370	3.570	0.333	0.375
Finland	0.0	1.9	0.78	0.082	0.446	0.500	0.875
France	1.0	1.2	0.78	-0.006	5.124	0.167	1.000
Ireland	7.0	0.8	0.78	0.062	0.330	0.000	0.625
Italy	-0.6	1.5	0.78	0.008	3.818	0.500	0.750
Luxembourg	3.1	1.8	0.78	0.270	0.045	0.500	0.500
Netherlands	0.8	1.7	0.78	0.028	1.404	0.833	0.750
Austria	1.0	2.1	0.78	0.002	0.650	0.167	0.375
Portugal	-0.9	1.4	0.78	-0.034	0.737	1.000	0.875
UK	2.0	2.3	0.88	-0.014	4.758	1.000	0.750
Bulgaria	1.5	0.7	2.87	-0.024	0.393	0.167	0.750
Czechia	1.6	1.6	0.95	-0.044	0.782	0.833	0.750
Estonia	3.5	2.6	0.78	-0.076	0.105	0.500	0.250
Hungary	1.9	2.3	5.47	-0.092	0.593	0.667	0.625
Latvia	3.6	1.5	0.96	-0.586	0.148	0.833	0.125
Lithuania	3.7	1.6	1.12	-0.008	0.205	1.000	0.750
Romania	2.4	2.7	4.56	-0.036	0.808	0.333	0.125
Slovakia	2.5	1.8	0.78	0.018	0.375	0.500	0.375
Slovenia	0.4	1.3	0.78	-0.132	0.157	0.000	0.750
Croatia	-0.4	1.6	1.32 (1)	-0.054	0.303	0.000	0.625

(1) Data corresponding to 2014.

