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PAYMENT HABITS OF THE HUNGARIAN HOUSEHOLDS IN 2020

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Payment habits of the Hungarian households in 2020

(Lakossági fizetési szokások 2020-ban)

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Contents

Abstract

In our study, we analyse the payment habits of the Hungarian population based on data from a representative questionnaire survey conducted in autumn 2020 using basic statistical methods, regression analysis and cluster analysis. Our results show that at least 90 per cent of households in Hungary have at least one bank account or payment card. Overall coverage is high and falls significantly short of 100 per cent only for the over-60s , so this is not a major barrier to further adoption of electronic payments. Although in decreasing proportions, cash incomes are still present in the Hungarian economy today, especially for those performing manual labour and entrepreneurial activities. In European comparison, Hungarians withdraw cash fewer times, but in significantly larger amounts, and the possibility of free cash withdrawals twice a month is likely to have had a strong influence on the consolidation of this practice. Around 80 per cent of the population use electronic payments, a proportion that is steadily increasing, but at the same time almost all citizens still use cash, too. An important change compared to previous data is that the share of people using electronic payments to pay their utility bills now exceeds the share of people using cash, and the same is true for online purchases. The use of, and choice between, different payment methods is most influenced by different socio-demographic factors (age, education, employment status, household income per capita), transaction situation and the perceived cost of each payment method to consumers. The coronavirus pandemic and the restrictions it imposed increased the use of electronic payment methods even further, but cash still remained the most commonly used means of payment during this period. In the future, the mandatory acceptance of electronic payments for online cash register users from 1 January 2021 and the emergence of user-friendly, low-cost applications based on instant payments are expected to further support the growth of electronic payments. However, for certain demographic groups, cash use may remain dominant even in the long term.

JEL: C38, D12, D14, E42
Keywords: retail payments, payment habits, household behaviour, electronic payment methods, financial integration

Kivonat

Tanulmányunkban a hazai lakossági fizetési szokásait vizsgáljuk egy 2020 őszén készült reprezentatív kérdőíves felvétel adatai alapján alapstatisztikai módszerekkel, regresszióelemzéssel és klaszterelemzéssel. Eredményeink alapján elmondható, hogy a hazai háztartások legalább 90 százaléka rendelkezik legalább 1 bankszámlával, illetve bankkártyával. A lefedettség elsősorban a 60 év feletti korosztályban esik távol a 100 százaléktól, de összességében magasnak mondható, ezért ez érdemben nem hátráltatja az elektronikus fizetések további elterjedését. A készpénzben kapott jövedelmek csökkenő arányban ugyan, de napjainkban is jelen vannak a magyar gazdaságban, különösen a fizikai munkát végzők, és a vállalkozói tevékenységet folytatók esetén. A hazai lakosság európai összehasonlításban ritkán, de alkalmanként jelentősen nagyobb összegben vesz fel készpénzt, amely gyakorlat megszilárdulását vélhetően erősen befolyásolta a havi kétszeri ingyenes készpénzfelvétel lehetősége. A lakosság mintegy 80 százaléka veszi igénybe az elektronikus fizetési lehetőségeket, amely arány folyamatosan növekszik, ám ezzel párhuzamosan továbbra is majdnem minden állampolgár használ készpénzt is. Fontos változás a korábbi tapasztalatokhoz képest, hogy a számlafizetések esetén az elektronikus fizetést használók aránya már meghaladja a készpénzes fizetést használók arányát, s ugyanez jellemzi az internetes vásárlásokat is. Az egyes fizetési módok használatát, illetve az azok között történő választást leginkább a különböző szociodemográfiai tényezők (kor, végzettség, munkahelyi státusz, háztartás egy főre jutó jövedelme), a tranzakciós helyzet, valamint az egyes fizetési módok – fogyasztók által érzékelt – költségei befolyásolják. A koronavírus járvány, és az annak kapcsán hozott korlátozások tovább erősítették az elektronikus fizetési módok használatát, azonban a leggyakrabban használt fizetőeszköz ebben az időszakban is a készpénz maradt. A jövőben a 2021. január 1-től az online pénztárgépet használók esetében érvényes kötelező elektronikus fizetés biztosítása és az azonnali fizetésre épülő felhasználóbarát, olcsó alkalmazások megjelenése várhatóan tovább támogathatja az elektronikus fizetések terjedését. Bizonyos társadalmi csoportok esetén a készpénzhasználat akár hosszútávon is meghatározó maradhat.

1 Introduction

Cash, card, credit transfer or smartphone? How do we pay in different transaction situations? For the Central Bank of Hungary (Magyar Nemzeti Bank, MNB), it is of particular importance to examine the payment habits of the population and the proportions of using different payment methods as well as the motivations for choosing between them. The results of our most recent survey, conducted in autumn 2020 on a representative sample of the Hungarian adult population, using basic statistical methods, regression estimation and cluster analysis, are presented in detail in this paper.

A number of international empirical results have shown the link between the efficiency of payments and economic growth (Bartha et al. 2017, p. 310). Increasing the availability and use of electronic payment methods supports economic growth (Turján et al. 2011) and ensures that people can choose the payment method that best suits their needs in each transaction situation. The Magyar Nemzeti Bank (MNB) is continuously examining the payment habits of different economic actors, with a particular focus on the possibility and extent of using electronic payments and the underlying motivations. The aim of this study is to survey the payment habits of Hungarian households. In addition to the continuously evolving regulatory data collection practices, which mainly include transactional data, an important advantage of questionnaire surveys is that various socio-demographic data and information on subjective preferences can be associated with transactional data. This provides a quantitative breakdown of the population's payment habits and preferences as well as an indication of what measures might affect changes in the accessibility and use of certain payment methods.

In the second chapter of the paper, we present the methodology of our analysis, and in the third chapter we briefly summarize the previous national and international literature on the topic. In the fourth chapter, we examine the payment behaviour of the adult population at an aggregate level. In the fifth chapter in order to find the different factors influencing payment behaviour we analysed different groups of adults based on different sociodemographic factors. Chapter six compares the domestic figures with international data, and chapter seven summarises the main findings of our study.

2 Methodology

The analysis is based on a questionnaire survey conducted by the Magyar Nemzeti Bank in the autumn of 2020, which aimed to explore the payment habits of the Hungarian population. The sample of 1,500 people is considered representative of the domestic population aged 18 and over by sex, age, educational attainment, region and type of residence (urban/rural). Data were collected through personal interviews, and the questionnaire completed by the respondents included various quantitative and qualitative information as well as other sociodemographic characteristics (e.g. income of the household, labour market status, type of job). [1]

The survey also included a so-called payment diary, which is widely used in surveys with a similar focus around the world. The logging required the respondent to record transactions made the day before the data was collected, including not only purchases but also, for example, utility bill payments or money given to individuals. The diary included the amount paid, the method of payment, a brief description of the payment situation and a question about the amount of cash the respondent currently had in their wallet. The remainder of the questionnaire started with questions on access to electronic payment infrastructure (number of bank accounts/payment cards) and continued with the number and circumstances of credit transfers and payment card transactions performed in the previous month. This was followed by a survey of attitude towards card and cash payments, and a set of questions on cash withdrawals and deposits. The questionnaire also included questions about the payment methods used for online purchases, the use of mobile payments, the general openness to electronic payments, the use of instant payments and the impact of the pandemic situation on payment habits.[2]

The number and amount of different payment transactions in both the payment diary and the rest of the questionnaire are self-reported, so in order to check their reliability, we compared them with the regular domestic data collected by the Magyar Nemzeti Bank, where possible. It is fair to say that, overall, the survey results are sufficiently accurate to allow us to draw robust conclusions from their analysis, and the cases where significant differences are observed that may affect the interpretation of the data are clearly indicated.

Significant deviation from the reported data is mainly observed in the payment diary when comparing the data of POS transactions with the online cash register (hereinafter OCR) database[3] of the National Tax and Customs Administration (NTCA) for September-October 2020, which includes all online cash register transactions. As a result of the comparison, the cash usage rate calculated on the basis of the payment diary is lower than the actual data both in terms of the number of transactions (59 per cent instead of 77 per cent) and their total value (43 per cent instead of 59 per cent). Also the average value of the transactions logged is significantly higher than the one calculated on the basis of the OCR data, especially for cash payments. On the whole, these results suggest that, when completing the diary, respondents were generally less likely to remember their lower value transactions of the previous day, particularly those paid in cash. Thus, aggregated descriptive statistical indicators cannot be considered reliable on their own, but the comparisons of cash and electronic transaction data as well as the correlations between demographics and payment situations, still allow relevant conclusions to be drawn, which are presented in Chapter 5.

[1] The weighted distribution of the population groups surveyed is shown in Table 1 of the Annex.
[2] The results have already been used in a previous study (Deák et al. 2021) which is available at: https://www.mnb.hu/letoltes/impact-of-the-coronavirus-pandemic-on-hungary-s-payment-turnover-in-2020.pdf
[3] Taxpayers can only fulfill their obligation of giving receipt with online cash register for certain activities.

3 Literature summary

In recent years, the Magyar Nemzeti Bank has conducted several surveys with similar focus. Ilyés and Varga (2015) analysed the effects of sociodemographic factors on household payment behaviour by surveying a representative sample of 1,000 people, with special reference to the use of electronic payments, finding that educational attainment and income are the main explanatory factors. The research by Végső et al. (2018), using a similar methodology, focused primarily on cash use and related subjective perceptions. Their results confirm the impact of education and income on payment preferences, while also showing that although a large part of the Hungarian population is still strongly cash-oriented, they see a shift to electronic payments as a possibility in the future. The adoption of electronic payments in Hungary has also recently been investigated by the Electronic Payment Service Providers Association (EFISZ, 2021) using a questionnaire methodology, with a focus on the rural population and the changes induced by the coronavirus pandemic. The main findings of the survey are that although cash is still clearly the most widely used payment method in Hungarian settlements—which is also considered by respondents to be the cheapest payment method—contactless payment is also popular due to its speed and convenience, and the pandemic situation has contributed significantly to the spread of electronic payments during 2020-2021.

In addition, other central banks regularly publish studies on the payment habits and preferences of the population based on questionnaires and payment diary surveys. The European Central Bank carried out a survey covering the entire euro area population in 2019 (ECB 2020) and 2016 (Esselink – Hernández 2017), which also examined the use of and the attitude towards both cash and electronic payment methods in different situations. It is important to note that the use of cash, although on a steadily declining trend, is still the number one payment method in the euro area, with a 73 per cent usage rate, despite the fact that in 2019 respondents reported that they typically preferred to pay electronically rather than with banknotes or coins, and that the proportion of cash payments for online purchases is almost negligible. Since 2016, the Federal Reserve has been conducting a survey, in the October of every year, based primarily on payment diaries, to identify the payment habits of the US population and the change of trends over time. The most recent results for 2020 can be found in the publication of Greene and Stavins (2021), and for a summary analysis of the 2019 data prior to the coronavirus outbreak, see Kim et al. (2020). Findings show that while the rate of cash use in the United States is significantly lower than in Europe, its decline was less significant during the years preceding the pandemic, which, however, caused a drop in cash payments, especially for smaller value transactions. In 2017 (SNB 2017) and 2020 (SNB 2020), the Swiss central bank similarly surveyed payment preferences within the country and, in the case of the latter study, the impact of the pandemic, too. The results show that, although almost all respondents still use banknotes or coins at least occasionally, the share of cash payments decreased sharply in three years, falling from 70 per cent to 43 per cent, with the outbreak of the coronavirus also playing a significant role in it. However, the use of various innovative payment solutions (e.g. mobile payments) has grown significantly, with almost half of the population now using some form of these. Since 2007, the Dutch central bank has been producing an annual survey including payment diary and a detailed questionnaire survey on household payment habits, which is part of the European Central Bank's comprehensive studies and also forms the basis for a number of separate analyses on different aspects of the choice between payment methods (e.g. Cruijsen – Knoben 2021, Cruijsen et al. 2017, Cruijsen – Plooij 2015).

Similar analyses based on household surveys conducted at varying intervals are regularly published by the Reserve Bank of Australia (Caddy et al. 2020), the Bank of Canada (Henry et al. 2018) and the Bank of Japan (Fujiki 2020), among others. It is also worth highlighting the work of Bagnall et al. (2016), who compare payment diary survey data from 7 countries to examine international patterns of payment preferences, finding that cash usage rates vary significantly across countries with similar economic performance, which can partly be explained by the different characteristics and development of electronic payment infrastructures and different consumption patterns, but also by presumably difficult-to-identify cultural factors. However, it is true for all countries surveyed that cash use is significantly higher for low-value transactions. Cruijsen and Horst (2019) attempt to model the sociological and psychological aspects of payment choice based on previous Dutch survey data, and, according to their results, subjective perceptions of certain characteristics of different payment methods

(mainly security, speed and acceptability) and behavioural patterns conveyed by the media linking the use of different payment methods to different ages or life situations play a key role in the decision.

The impacts of the coronavirus pandemic on payment behaviour have also been the focus of several recent studies. Kotkowski and Polasik (2021) investigated the main patterns of adoption of electronic payment methods in 22 European countries through a questionnaire survey, while Rösl and Seitz (2021) published a comprehensive analysis of the impact of crisis situations on cash demand. Deák et al. (2021) reported on the impact of the coronavirus pandemic on payments in Hungary. The pandemic and its various effects are also being actively studied by national central banks, which all report, to varying degrees, a decline in cash use and an increase in the popularity of electronic payments, but opinions are divided as to whether this phenomenon is temporary or the changes will persist in the longer term. Early analyses are already available from the Italian (Ardizzi et al. 2020), Dutch (Jonker et al. 2020), British (Caswell et al. 2020), Swiss (Kraenzlin et al. 2020) and Canadian (Chen et al. 2020) central banks, and preliminary data and conclusions are also available from the ECB (Panetta 2021) and Germany (Bartzsch 2021).

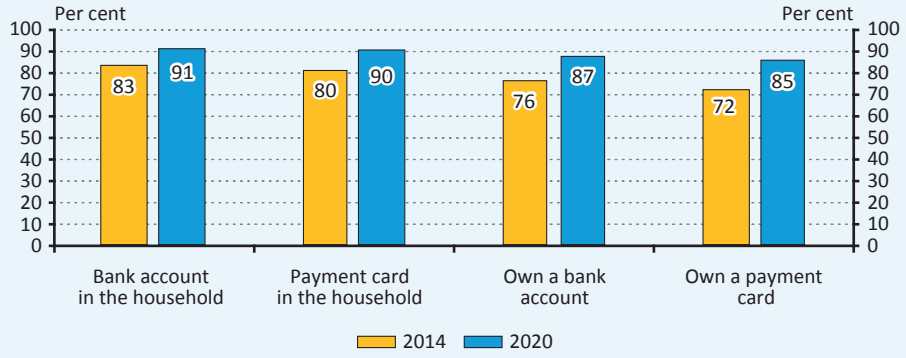
4 Aggregated descriptive statistics on households' payment habits

In this chapter, we will look at the proportions in which Hungarian households have access to electronic payment services, the forms in which they receive their disposable income and the forms in which they spend it (electronic or cash). We will also discuss the share of customers using various payment methods across different demographic groups, and the observed changes compared to previous years. More and more innovative payment solutions are available to be used in different situations, and online payments are also becoming increasingly widespread, so we attempt to look at as many transaction situations as possible to see which payment methods are more popular in different payment situations.

4.1 PAYMENT CARD AND BANK ACCOUNT COVERAGE OF THE HOUSEHOLDS

Nowadays, electronic payments are easy for almost everyone to use, and bank account and payment card coverage has increased by almost 10 percentage points in 6 years. 87 per cent of the adult population have at least one bank account and 85 per cent have at least one payment card. (Chart 1) The share of those with a bank account but no payment card is only 1.5 per cent, while the share of those with no bank account but a payment card (e.g. an additional card linked to another person's account) is negligible at 0.35 per cent. The proportion of people with more than one bank account or payment card is 3 per cent and 11 per cent respectively. Examined at household level, bank account and payment card ownership rates are even higher. 91 per cent of the Hungarian households have at least one bank account and 90 per cent have at least one payment card. The proportion of households with a bank account but no payment card is 0.9 per cent.

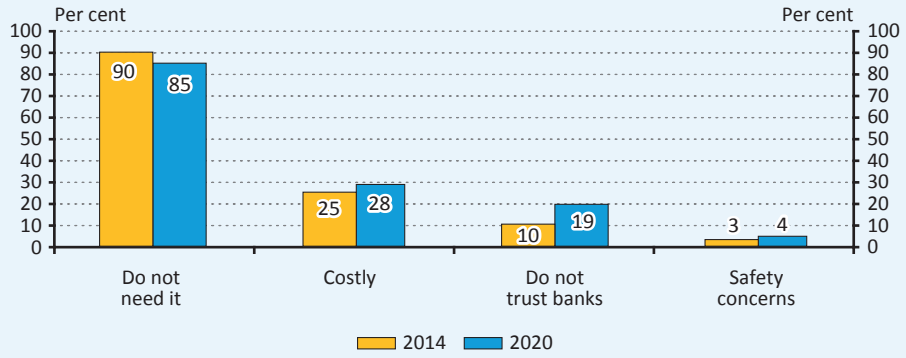
Chart 1
The payment card and bank account coverage of the population and their changes



In the case of respondents who do not have a bank account or payment card, we also asked questions about the underlying reasons. 62 per cent of the population without a bank account do not consider a bank account necessary, 28 per cent consider it costly to maintain it, 23 per cent have one in the family, 19 per cent do not trust banks and therefore do not have a bank account, and 4 per cent do not open an account because of security concerns. (Chart 2) 40 per cent of the population without a payment card do not have one because of the cost of maintaining it and 26 per cent because they do not trust banks. A further 22 per cent cited the fact that someone else in the family has a card as a reason, and 19

per cent did not consider it safe. Compared to the 2014 MNB survey, fewer respondents said they did not need a bank account[4], but the rates of mistrust, lack of security and costly maintenance increased.

Chart 2
Reasons for not having a bank account in 2014 and 2020

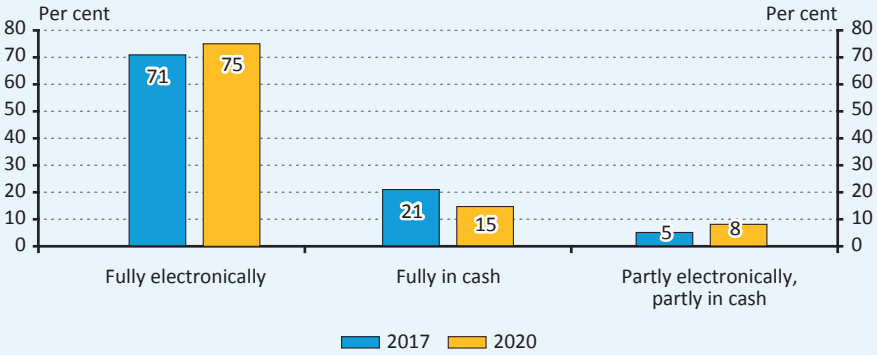


Note: The category "don't need it" is presented as an aggregate of "don't need it" and "someone else has it in the family" for comparability with the previous survey.

4.2 FORM OF REGULAR INCOME, CASH WITHDRAWAL AND CASH HOLDING PATTERNS

The use of different payment methods is fundamentally determined by the way in which people receive their regular income: electronically, in cash, or perhaps a combination of the two. Although many people today may take it for granted that they receive their salary to a bank account and then withdraw cash according to their needs, an important lesson from our survey is that within certain demographic groups, the proportion of people who receive part or all of their income in cash is still not negligible. Our results show that while 75 per cent of the domestic adult population with a regular income receive it electronically, 15 per cent earn it entirely in cash, and a further 8 per cent receive a mix of electronic and cash incomes. (Chart 3) Understandably, for these groups, the use of cash is also more important in everyday transactions, as cash is not typically deposited into a bank account (converted into scriptural money) for payment purposes. Compared to the same survey in 2017, the proportion of respondents with regular cash income has decreased by 6 percentage points, which means that – taking into account the size of the samples – a statistically significant shift can be observed towards electronic incomes.

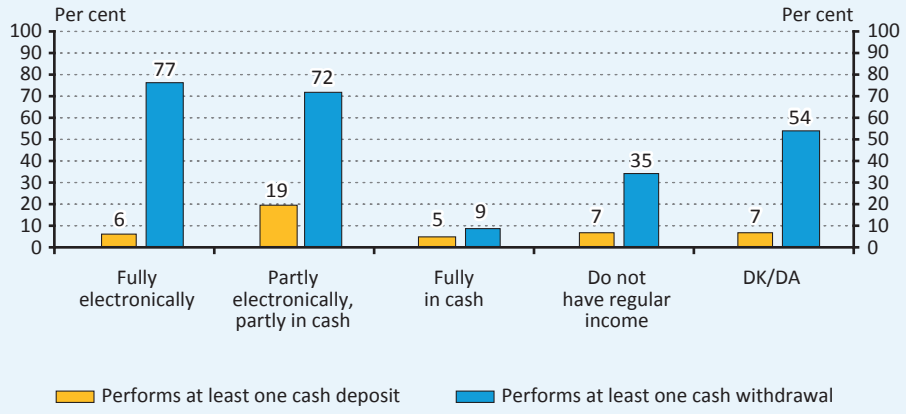
Chart 3
The form of regular income



[4] The category "don't need it" is presented as an aggregate of "don't need it" and "someone else has it in the family" for comparability with the previous survey.

Those who receive their income exclusively by electronic means are required to withdraw cash if they wish to make payments in notes and coins, either because of their personal preferences or out of necessity. The survey also covered the cash withdrawal habits of the population, i.e. how, how often and in what amounts respondents withdraw cash. Nearly a quarter of those with regular electronic income did not make any such transactions in the month before the survey, while the majority of the rest of the population withdrew cash once (36 per cent) or twice (28 per cent). (Chart 4) These results confirm the finding formulated earlier (Végső et al. 2018) that the population carries out these transactions clearly in adaptation to the legally guaranteed monthly two free cash withdrawals[5], as the proportion of those who exceed this frequency is low and shows a slight downward trend compared to 2017. Regarding the value of cash withdrawals, it can be said that respondents have access to an average of HUF 84,500 per month and an average of HUF 59,300 per occasion. It is also worth noting that cash withdrawal nowadays is essentially synonymous with the use of an ATM. The share of the number of withdrawals at bank branches or post offices shows a significant decrease compared to the 2017 survey and can be considered negligible overall (3.8 per cent and 0.6 per cent respectively), with only a few demographic groups (e.g. the elderly or people living in small towns) being exceptions. Looking at cash depositing habits, only 5 per cent of those who receive all their income in cash make deposits, while almost one fifth of those who receive part of their income in cash and part of it by credit transfer make payments to their accounts.

Chart 4
Cash deposit and withdrawal patterns by form of regular income



Looking at the data on the amount of cash kept in wallets from the payment diaries, only 2 per cent of the Hungarian population carry no cash at all, which suggests that the amount of banknotes and coins in our wallets is not determined by our payment preferences only. The background to this phenomenon is likely to be multi-faceted, including the involuntary use of cash, i.e. the occasional need to use cash in everyday transactions by those who would otherwise clearly prefer to pay electronically. On the other hand, the cash held in wallets is probably also an indication that the public still sees the banknotes and coins they carry as a necessary safety reserve. According to the data, the average value of cash in the wallets of Hungarians is HUF 12,800, but the majority of the population, 73 per cent, carry less than this, and 39 per cent have even less than HUF 5,000. The relevance of this issue is illustrated by the research of Arango-Arango et al. (2018), in which the authors explain using data from developed countries that consumers for various reasons tend to spend the cash they carry as quickly as possible, thereby increasing the share of cash payments in the economy.

4.3 USAGE RATE OF DIFFERENT PAYMENT METHODS

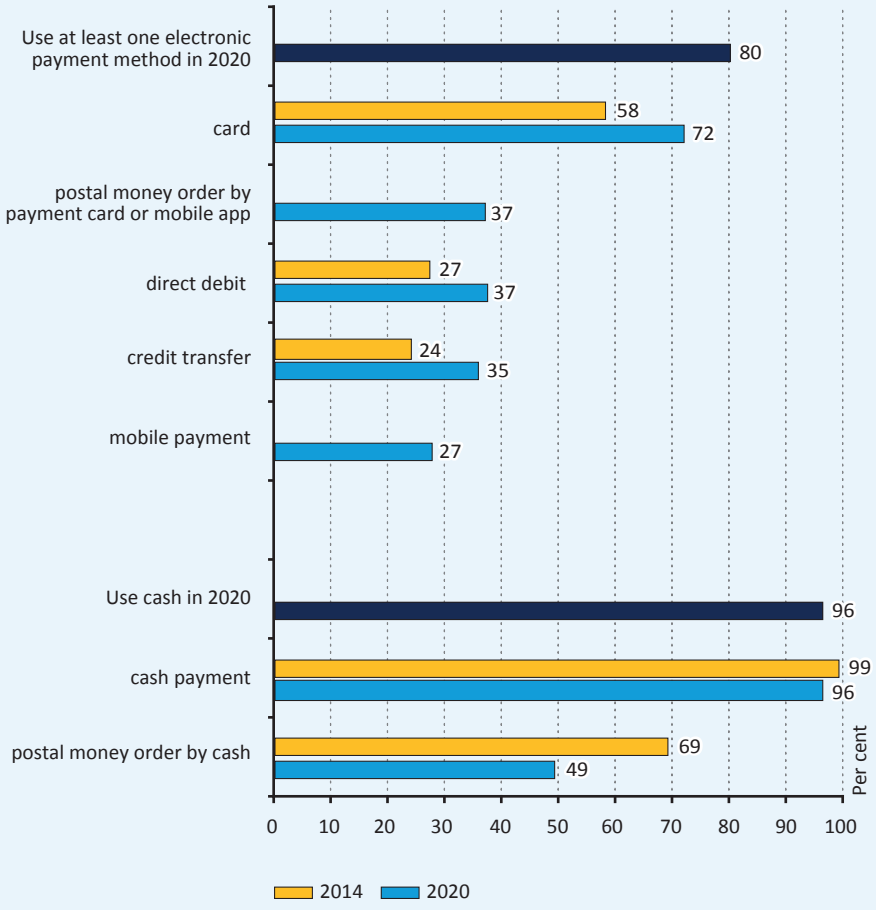
The questionnaire also assessed the use of the main payment methods, cash payment, card payment, credit transfer, direct debit and payment by postal money orders, at aggregate level and in different transaction situations. In the case of card and credit transfer, we asked whether the given payment method was used in the previous month, and if so, we also examined the different situations and ways in which it was used. In the case of utility bill payments and online shopping, the frequency of use (regularly, occasionally or never) of the relevant payment methods in the given payment situations

[5] According to the law, cash withdrawals up to HUF 150,000 per month must be provided free of charge to retail customers up to 2 times a month.

was examined. As the use of mobile phones for payments is becoming more and more common, their use in different situations was also measured. In addition to assessing the current propensity to use, we have also sought to investigate the external reasons for this by asking questions about different payment habits.

The data show that cash remains the most used payment method, with 96 per cent of the adult population using it[6], but that 80 per cent of the population now also use at least one electronic payment method. (Chart 5) Within electronic payment methods, card payments are the most popular, used by almost three quarters of the population, followed not far off by the postal inpayment money orders paid by payment card or mobile payment apps, direct debit and credit transfer, which are used by more than one third of the adult population. Within cash use, cash payment of money orders is used by 50 per cent of the adult population. The proportion of people using card payments has increased by 14 percentage points over the past 6 years, while credit transfers and direct debits have risen by 11 and 10 percentage points respectively, while the proportion of people paying postal money order in cash has fallen by 20 percentage points. It is also important to note that more than a quarter of people now use their mobile phones for payment.

Chart 5
Proportion of payment methods used



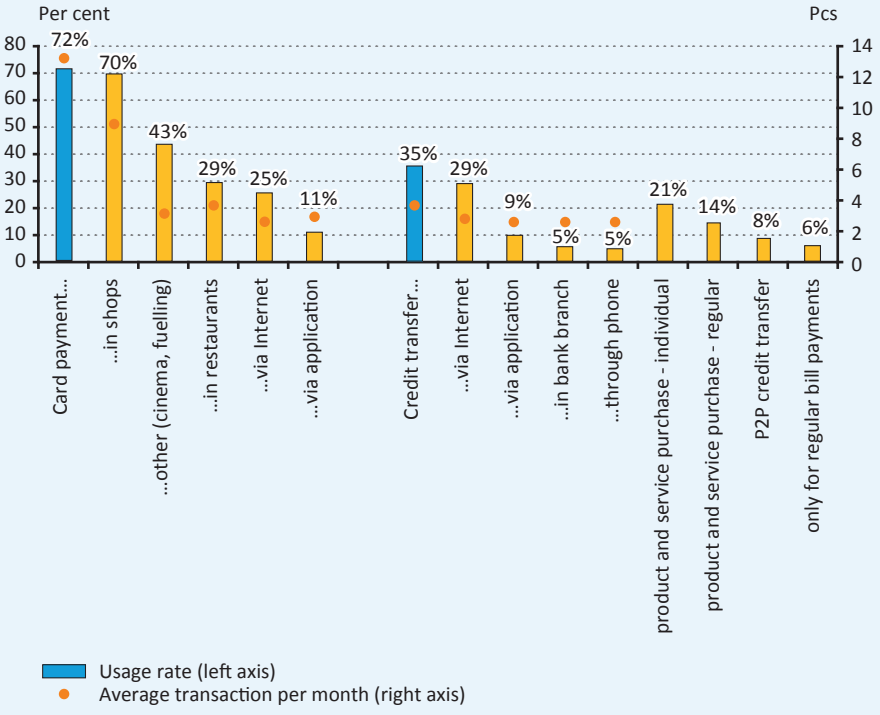
Note: The categories "uses some electronic solution in 2020" and "uses cash in 2020" in dark blue represent the proportion of the adult population who used at least one type of electronic payment solution and cash in any payment situation. The other categories represent the proportion of users of a given payment method within the adult population.

[6] Cash usage rates were estimated based on several questions: (1) if the respondent indicated for all payment situation that they would pay electronically everywhere if they could, and they did not indicate any cash transaction either in the (2) payment diary or (3) in the case of bill payment, then they were marked as a non-cash user, otherwise they were marked as a cash user.

Looking at card use in different payment situations, it can be seen that card use in shops and other card purchases (cinema, fuelling) is the most common, used by 70 and 43 per cent of the population respectively, followed by card payments in restaurants and online, with 29 and 25 per cent of the population respectively. (Chart 6) Credit transfers are used by 35 per cent of the population, according to payment situations, online credit transfers are considered to be the most common, used by 29 per cent of the adult population. This is followed by credit transfer initiated on a mobile application with 9 per cent, and at a bank branch and by phone are each used by 5 per cent of the population. The use of credit transfers was also examined in terms of the purpose of the transaction. Individual (non-regular) credit transfers related to the purchase of goods and services are the most common category, with 21 per cent of the population using a credit transfer in this situation. This is followed by regular credit transfers for the purchase of goods and services used by 14 per cent, and peer to peer credit transfers used by 8 per cent. 6 per cent of the population use credit transfers only for regular bill payments.

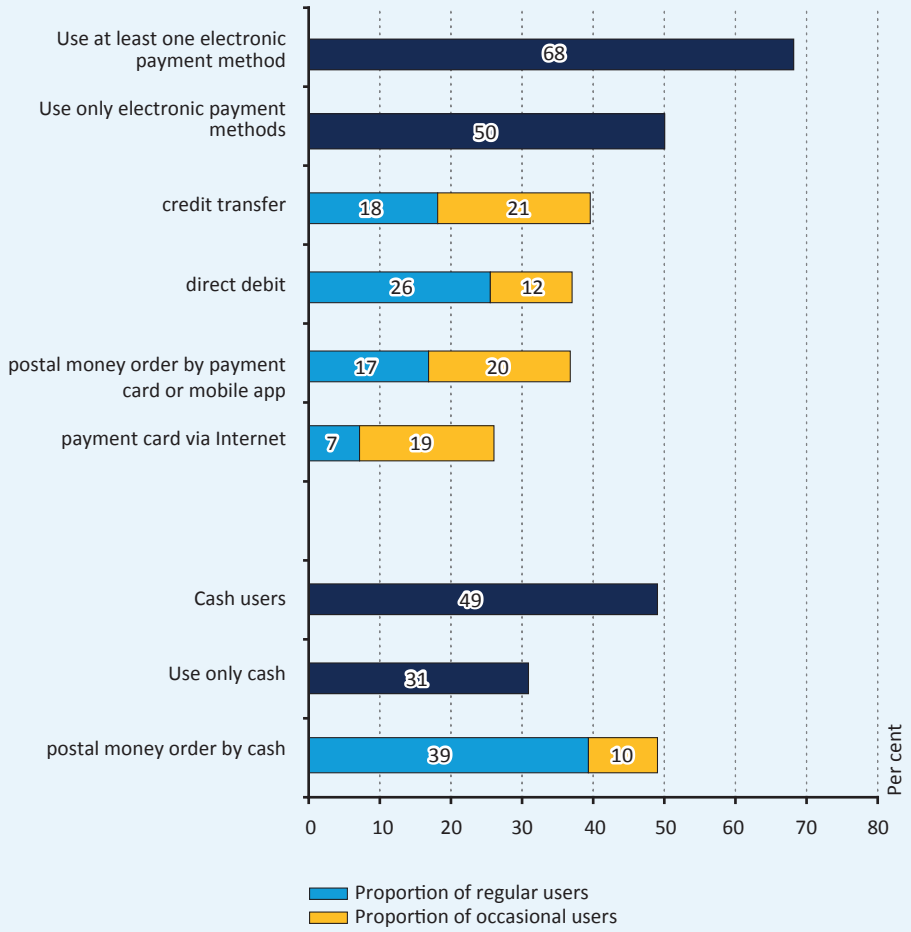
Those who pay by card or credit transfer have been doing so increasingly often in recent years. On average, card payers make 13.3 transactions per month, while the average number of transactions per month for credit transfers is 3.6. (Figure 6) The order of usage rates for each payment situation is slightly different regarding transaction numbers. Shops continue to account for the highest number of card transactions, with the population indicating not only the highest rate of card use here, but also the highest number of transactions for those who use their card in this situation, with an average of 8.9 per month. On average, people who pay by card in restaurants make 3.6 card transactions there per month, which means that although a higher proportion of the population uses a card in other locations (e.g. cinemas, petrol stations), more card transactions are made in restaurants than in other payment situations. The situation is similar for in-app card payments: though the usage rate is lower than for online purchases, the users of this payment method make more transactions per month on average through the app than via online purchases.

Chart 6
Usage rate and average number of card purchases and credit transfers per month in each payment situation



For bill payments, 68 per cent of the adult population use some form of electronic payment and 49 per cent use cash. (Chart 7) Within these, about 50 per cent use only electronic payment methods and 31 per cent are committed to cash. Looking at each payment method separately, cash payments by postal money orders remain the most common, with 49 per cent of the adult population using this payment method. This is followed by credit transfer with 40 per cent, then direct debit and postal money orders by payment card or mobile payment app, used by 37 per cent of the population. For online bill payments by payment card, the usage rate is 26 per cent. It is also important to note that, when taking into account the regularity of use, different payment patterns can be observed. Among the regularly used payment methods, cash payment by postal money order and direct debit stand out with 39 and 26 per cent respectively, while in the other cases the share of occasional users exceeds that of regular users.

Chart 7
Use of payment methods for utility bill payments

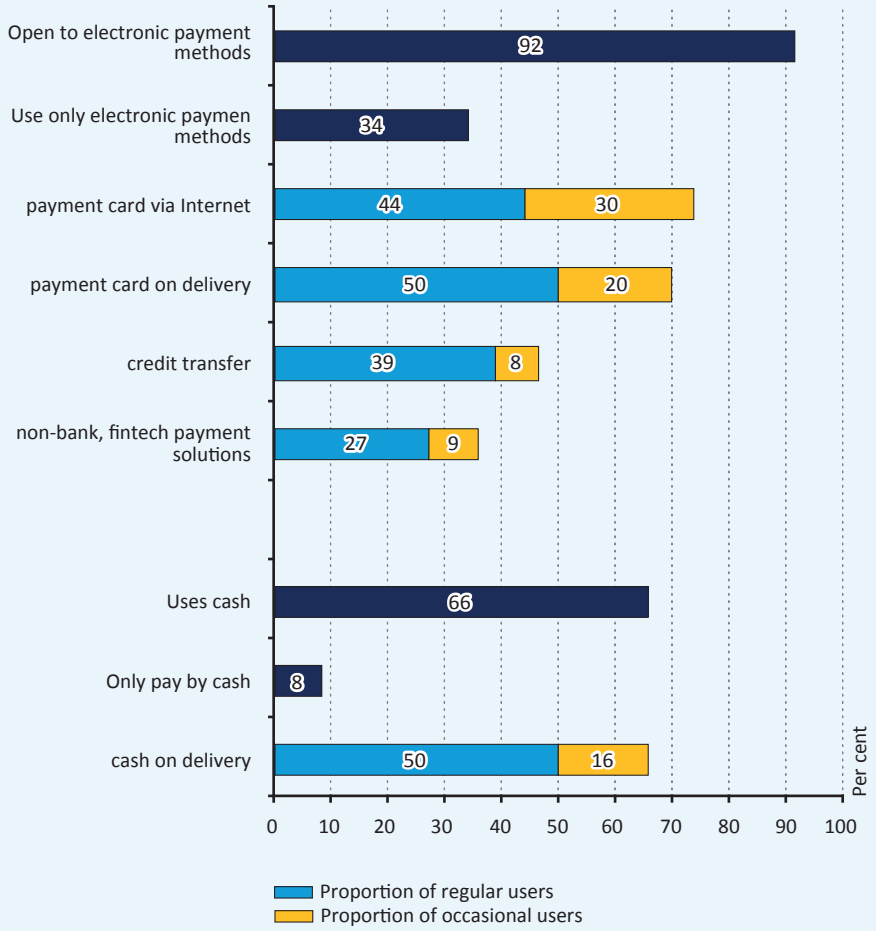


Note: The categories "electronic payment method users" and "cash users" in dark blue represent the proportion of the adult population who used at least one type of electronic payment method to those using cash to pay bills. For "electronic payment only" and "cash only", the proportion of respondents using only electronic payment or cash is indicated. The other categories represent the proportion of users of a given payment method within the adult population.

Looking at online shopping, it can be established that 31 per cent of the adult population shop online. Among internet shoppers, almost everyone uses at least one electronic payment option, while two thirds of people use cash. (Chart 8) One third of the adult population who shop online pay only electronically, while only 8 per cent of online shoppers use cash only. Looking separately at the payment methods relevant to this payment situation, it can be seen that online payment by card is the most popular method, with 74 per cent of online shoppers indicating using it occasionally or regularly, closely followed by payment by card on receipt with 70 per cent and cash on receipt with 66 per cent. 47 per cent use individual

credit transfers and 36 per cent of people who shop online use a non-bank, fintech payment application. Examining the regular use of each payment method, payment by card and cash at the time of receipt take the first place with a usage rate of 50–50 per cent. When shopping online, it is common for some websites not to offer all payment methods, and the distrust of websites can also influence payment preferences. The former may increase the use of different electronic payment methods, while the latter may increase the proportion of cash-on-delivery payments, as POS terminals are not always available at the point of receipt. In addition, evolving mobile apps, more convenient compliance with PSD2 rules and secure payment interfaces could further increase the share of electronic transactions for online purchases.

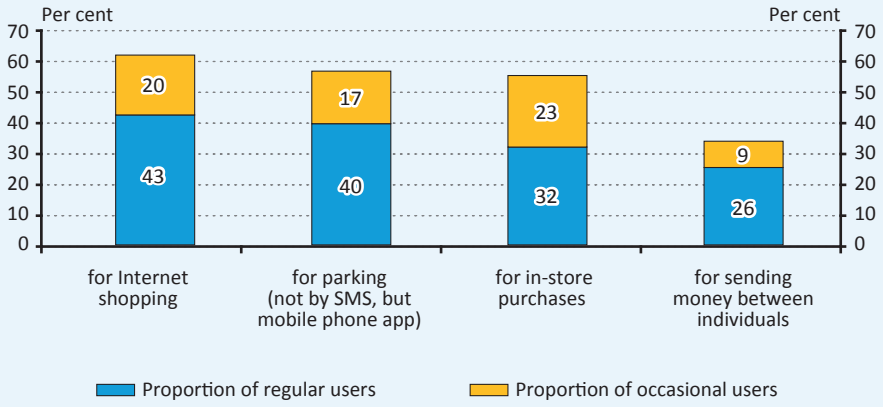
Chart 8
Payment methods used by online shoppers



Note: 31 per cent of the population shopped online; the proportion of people using the payment methods in the table is the proportion within online shoppers. Note: The "open to electronic payment" and "cash user" categories in dark blue represent the proportion of the adult population who used at least one type of electronic payment solution or cash to shop online. For the categories "electronic payment only" and "cash only", the proportion of respondents using only electronic payment or only cash payment is indicated.

27 per cent of the adult population use their mobile phone in at least one payment situation. Looking at the different transaction situations separately, 62 per cent of those who use their mobile phone to make a payment use their smartphone occasionally for online payments, 57 per cent for parking via a mobile app, 56 per cent for shopping in stores and 34 per cent for sending money between individuals. (Chart 9) Regarding the regular use of mobile payments, the same order of popularity can be seen.

Chart 9
Mobile payment usage rates in certain situations



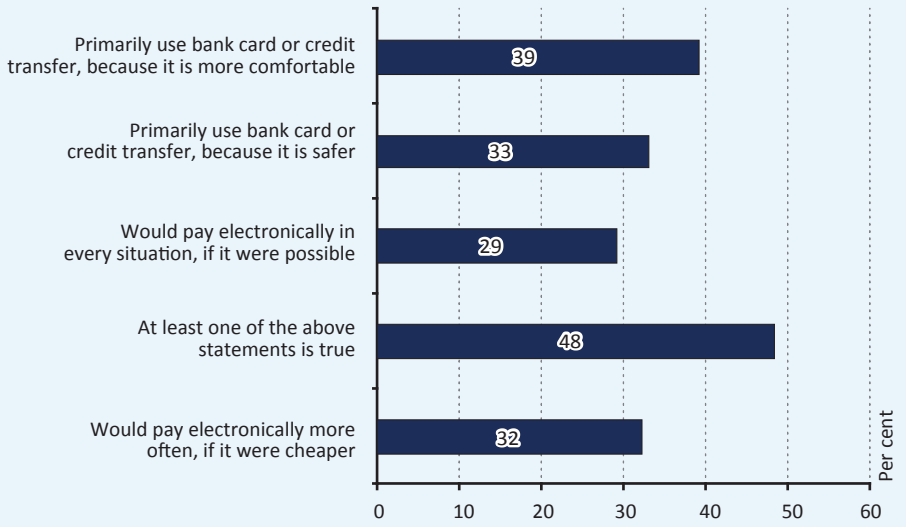
Note: 27 per cent of the population use their mobile phone for payment in at least one payment situation; the table shows within that group the percentage of residents using mobile phone payments in different transaction situations.

To summarise the observations on the use of payment methods, although cash is still the payment method used by most people, electronic payment methods are also used by 80 per cent of the adult population. Compared to the results of previous surveys (Ilyés - Varga 2015, Végső et al. 2018), there was a clear increase in the usage rate of electronic payment methods. While the usage rate of the most important electronic payment methods (card, credit transfer, direct debit) increased by 10 percentage points, the usage rate of postal money orders, which are only used for bill payments, decreased by 20 percentage points. In addition, online shopping and mobile payments are becoming increasingly popular. 31 per cent of the population shop online and almost all of them use some form of electronic payment solution, while two thirds of online shoppers still pay with cash at least occasionally. Mobile payments are used by 27 per cent of the adult population. To a certain extent, the pandemic has also reinforced the trend observed over the years, and the general caution due to the virus and the various restrictions may have influenced the growth rate of electronic payment usage. According to the MNB's 2020 analysis, 40 per cent of the population have changed their payment habits as a result of the coronavirus outbreak, with 22 per cent of the population indicating that the change would be permanent, i.e. that they do not plan to return to their previous payment habits in the future. It is important to note that the use of cash is still almost universal, because even if one is committed to electronic payments, there are payment situations and shops where electronic solutions are not yet available. From this point of view, it is also a big step that from 1 January 2021, merchants obliged to use an online cash register have to offer the possibility of electronic payment to customers, which will affect a large part of the retail sector. As this obligation can also be fulfilled by instant payment solutions in addition to card acceptance, this may also affect the use of credit transfers in the future, in addition to card use.

4.4 SUBJECTIVE PREFERENCES

Since our personal preferences and considerations may play an important role in our payment habits, the survey also included questions on this issue, in order to help us to better understand the current preferences of the Hungarian population. Based on the weighted sample, nearly 39 per cent of respondents prefer to use a payment card or credit transfer if possible because they find it more convenient, and this is followed not far off by the 33 per cent of respondents who clearly prefer electronic payment for security reasons (respondents could select both options at the same time, so the two groups may overlap). (Chart 10) In addition to subjective opinions about electronic payment methods, an important indication of openness to them is that nearly 29 per cent of the population say that they would pay cashless everywhere if they had the opportunity.

Chart 10
Payment method preferences



With 48 per cent of respondents agreeing with at least one of the three statements above, it can be said that almost half of the Hungarian population in general prefers card and credit transfer payments to cash. Although due to the different structure and wording of the questionnaires, the data cannot be directly compared with the last survey, it does suggest that the perception of electronic payment methods in Hungary has clearly improved in recent years, as in 2017 (Végső et al. 2018) only 26 per cent clearly preferred them, while another 28 per cent could not decide on the question. It is also worth noting that the results of the present survey on subjective preferences and the online cash register database are somewhat contradictory, as the latter shows that only 22 per cent of transactions at cash registers in 2020 were card-based, suggesting that the proportion of those who actually choose electronic payments is lower than those who generally prefer cashless transactions. On the one hand, this may be due to the steadily increasing acceptance of electronic payments, which at the time of the survey was only slightly above 50 per cent, and on the other hand, it is likely that sometimes, for various reasons (e.g. habits, savings held in cash), even groups that prefer electronic payments may use cash even in situations where other payment methods are available too.

In order to increase the share of electronic payments, it is essential that their pricing does not represent a significant competitive disadvantage compared to cash. Our survey shows that 32 per cent of people would prefer to pay more often by payment card and credit transfer if it were cheaper. According to the Payment Systems Report 2021 published by the MNB, customers pay an average of HUF 1,600 per month for banking services, and this amount is rising steeply as one's electronic activity increases. Cheaper credit transfers and the introduction of package pricing, which is internationally widespread, could further increase the number of electronic transactions, including from customers who currently choose other forms of payment due to unfavourable pricing.

5 Factors influencing payment behaviour

In the fourth chapter, we looked in aggregate at households' access to electronic payments, the form in which they receive their income, the frequency with which they use different payment methods, the situations in which they use them and their subjective preferences. In this chapter, we examine the payment patterns grouped by different sociodemographic factors using different statistical methods to see the factors that influence them and identify their impact. First, we compare the values of the demographic groups based on each factor separately[7], and then we examine the joint effect of all explanatory variables on the outcome variables using econometric methods, which also shows us which factors have the strongest effect.

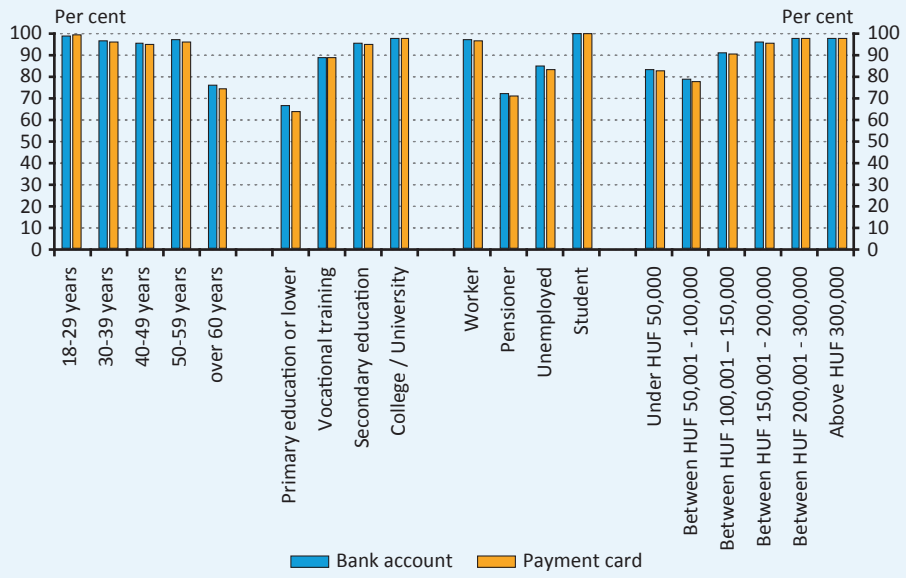
The sociodemographic factors included in the study are age, education, employment status and per capita household income. On this basis, homogenous groups were formed so that they could be analysed in as much detail as possible. We have divided the age range into five groups: 18-29, 30-39, 40-49, 50-59 and 60 years and over, and formed four education groups with primary (8 or less years of primary school), vocational, secondary and higher education. In terms of employment status, we distinguished between active workers, unemployed, students and retired, with all further possible statuses (such as people on childcare leave and homemakers/inactive) grouped as "other".

5.1 FACTORS AFFECTING THE PAYMENT CARD AND BANK ACCOUNT COVERAGE OF THE POPULATION

Whether a respondent or at least another member of the household has their own bank account or payment card, depends significantly on whether the person is over 60, has at least a vocational education, has a pensioner or unemployed status and whether the income per head of the household is at least HUF 100,000. While adults under 60 are almost certain to have a bank account and a payment card in their household, only three quarters of those aged 60 and over do. (Chart 11, Annex Table 2) In terms of educational attainment, the largest gap is observed among those with primary education or less: while two thirds of the households in this group have access to a bank account or a payment card, 89, 95 and 98 per cent of households with vocational, secondary and tertiary education respectively have access to a bank account or a payment card. In terms of employment status, pensioners have the lowest coverage, with only 71 per cent of them having a bank account and a payment card in their household, compared to 83 per cent of the second lowest proportion of unemployed people. Regarding the other groups formed on the basis of employment status (worker, student, on childcare leave, disabled pensioner, homemaker/inactive), the coverage rate is 91 per cent or higher for all groups, with 97 per cent for active workers and 100 per cent for students. Looking at income groups, where the income of the household per capita is below HUF 100,000, at least 78 per cent have access to a bank account and a payment card, while for those with income above this level, the access rate is at least 91 per cent.

[7] The main results are summarised in writing and the detailed values can be found in the tables in the annex.

Chart 11
Households' bank account and payment card ownership rates by socio-demographic group



Note: The last grouping in the figure is based on the household's net income per capita.

The effects of the explanatory variables are also examined using logistic regression to determine which variables have stronger effects relative to each other. The dependent variable of the logistic regression is 1 if there is and 0 if there is no bank account or payment card in the respondent's household. The same groups that have been previously examined are included in the regression as explanatory variables with the modification that the category "other" within the employment status (disability pensioner, on childcare leave, homemaker/inactive) is examined in all regressions as a whole for the sake of homogeneity. Table 1 shows the odds ratios of the logistic regressions. If the odds ratio of the given explanatory variable is below 1, it decreases the probability of having a bank account or a payment card, if it is above 1, it increases it. In the case of dummy variables, when the explanatory variable is not a metric but indicates belonging to a particular group, we talk about the probability relative to the reference group. Reference groups are indicated in brackets next to the name of the variable in the first line. These do not have an odds ratio, as they are considered as a reference point. For explanatory variables in the table, ** indicates variables that are significant at 95 per cent confidence level and * indicates variables that are significant at 90 per cent confidence level.

The following equation can be written for the logistic regressions on the population questionnaire data:

$$y = \beta_0 + \beta_1 \text{Age} + \beta_2 \text{Education} + \beta_3 \text{Activity} + \beta_4 \ln(\text{income of household per capita}) + \varepsilon$$

In the equation:

- dependent variables:
  – y: whether the respondent's household has a bank account/payment card (0 or 1)

- explanatory variables:
  – Age (18-29, 30-39, 40-49, 50-59, 60-)
  – School qualification (8 elementary classes or less, Vocational school, Secondary school, Higher education)
  – Labour market activity: respondent's employment status (Worker, Unemployed, Student, Retired, Other)
  – Logarithm of household income per capita.

There is also a significant difference between age groups when examining bank account and payment card ownership using logistic regression, with the probability of having a bank account and payment card in the household decreasing significantly for the older age groups compared to the youngest one, with the largest decrease observed for the age group over 60. (Table 1) An increase in educational attainment also leads to a strong and significant effect; as the level of education increases, so does the likelihood of having a bank account and a payment card. In terms of labour market activity, the retired status shows a significant decrease in probability compared to the active worker status, while the other categories do not differ significantly. Household net income per capita also shows a significant positive relationship for both outcome variables, i.e. as income increases, so does the likelihood of having a bank account and a payment card.

Table 1
Results of logistic regression on household bank account and payment card holdings

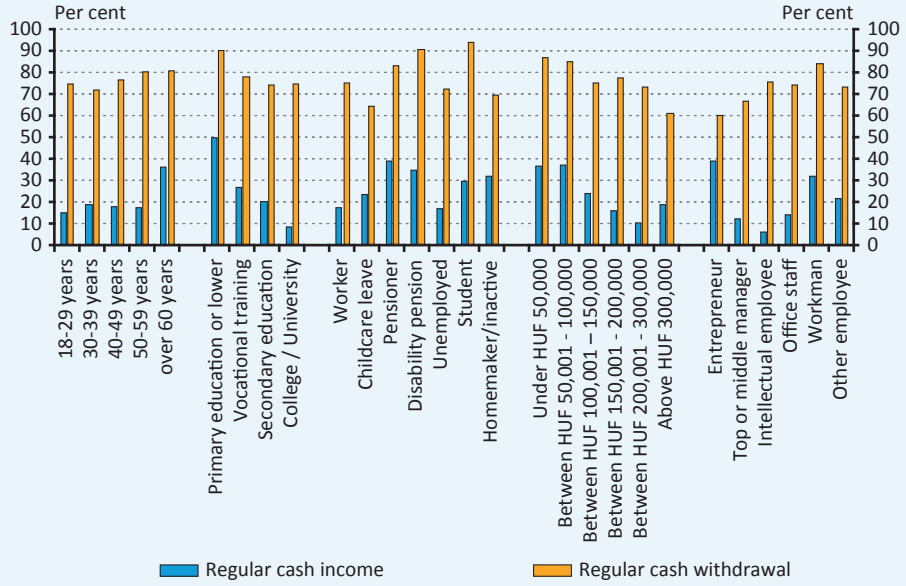
	Bank account	Payment card
Age (18-29)		
(30-39)	0.22*	0.09**
(40-49)	0.17**	0.07**
(50-59)	0.28	0.08**
(60-)	0.07**	0.03**
Education (Primary education or lower)		
Vocational training	2.08**	2.40**
Secondary education	4.85**	4.44**
College/University	9.09**	10.22**
Activity (worker)		
Unemployed	0.55	0.55
Student	1	1
Pensioner	0.29**	0.31**
Other	0.75	1.21
Household income per capita	2.70**	2.95**
Constant	0.00**	0.00**
N	1,466	1,466
R^2	0.3014	0.307

5.2 FACTORS INFLUENCING THE FORM OF REGULAR INCOME AND CASH WITHDRAWAL PATTERNS

Different demographic and sociological characteristics also significantly influence the likelihood that a given respondent receives at least part of their regular income in cash. For groups with the lowest level of education, this is supposedly strongly related to their low access to electronic payment infrastructure, as the share of those with regular cash income is 51 per cent, compared to only 8 per cent for those with tertiary education. (Chart 12) The share of respondents who receive income in cash is also significantly higher than the domestic average in the case of the lowest income groups (below HUF 100,000 per capita in the household, 37 per cent), pensioners (38 per cent), and respondents with entrepreneurial activity (39 per cent) or performing manual labour (32 per cent).

In contrast to the form of regular income, the effect of sociodemographic factors (especially education and income) is less drastic when looking at cash withdrawal habits, but can still be regarded as significant. While 90 per cent of those with only primary school education or less regularly withdraw cash, the proportion for graduates is only 74 per cent. (Annex Table 3) In terms of household income per capita, the difference between the lowest and highest categories is as high as 25 percentage points: while 86 per cent of the former group obtain cash regularly this way, only 61 per cent of the latter group do so. (Annex Table 5) Although higher income is associated with less willingness to withdraw cash, at the same time, those living in wealthier households who do withdraw cash are not only do so in larger amounts, but also more frequently. This confirms the previously reported hypothesis that legally guaranteed free cash withdrawals twice a month continue to have a significant impact on the habits of the domestic population, while such cost-sensitivity is less observed among higher income groups.

Chart 12
Presence of regular cash income and regular cash withdrawal for each sociodemographic group



Note: The last grouping in the figure is based on the household's net income per capita.

A logistic regression with the different sociodemographic factors used as explanatory variables is performed to evaluate their combined effects on cash incomes and cash withdrawals. This analysis confirms that within the domestic population, the higher education and higher income groups are less likely to receive cash incomes, while it is more typical among the over-60s. (Table 2) In terms of labour market status and type of job, students are more likely to have a cash income compared to the active workers (this may be due to regular pocket money from parents or income from informal economic activities), and people in office and intellectual employment are less likely to have a cash income compared to the most populous group of manual workers, while entrepreneurs are more likely to have a cash income. As for regular cash withdrawals, this is also less common in higher education and higher income groups.

Table 2
Results of logistic regression on the presence of regular cash income and regular cash withdrawal

Variable	Regular cash income	Regular cash withdrawal
Age (18-29)		
(30-39)	1.58	0.75
(40-49)	1.26	0.98
(50-59)	1.28	1.28
(60-)	2.35**	0.97
Education (Primary education or lower)		
Vocational training	0.48**	0.49**
Secondary education	0.51**	0.44**
College/University	0.18**	0.52*
Activity (worker)		
Unemployed	1.18	2.06
Student	8.89**	0.50
Pensioner	1.51	1.33
Other	0.80	0.81
Household income per capita	0.55**	0.56**
Type of job (manual worker)		
Entrepreneur	3.47**	
Senior or middle manager	0.87	
Intellectual subordinate	0.40**	
Office employee	0.48**	
Other employee	0.70	
Constant	438.97**	5,929.2**
N	1,443	1,203
R^2	0.15	0.03

5.3 EXAMINATION OF THE PROPORTIONS OF USE OF CERTAIN PAYMENT METHODS AND PAYMENT CHOICES IN DIFFERENT SITUATIONS USING BASIC STATISTICAL METHODS

In the following subsection, similarly to the previous parts of Chapter 5, we present the individual effects of the most important sociodemographic variables (age, highest level of education, labour market status, household income per capita) on the use of different payment methods in general or in specific situations, mainly based on the data from the questionnaires, complemented, where possible, by the findings from the payment diaries. In addition to the variables described above, the diaries also contain a description of transaction situations, so we will briefly discuss the implications of this as well. The combined effect of the explanatory variables is then examined using regression analysis.

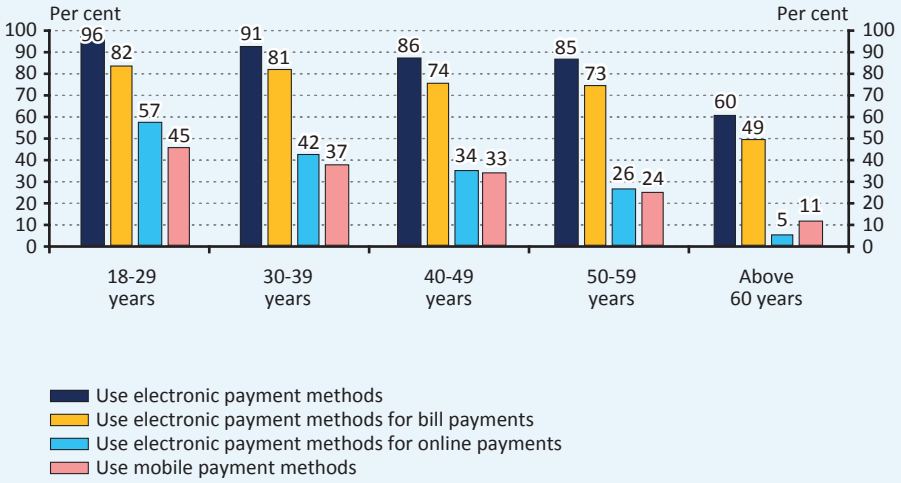
Age groups[8]

As **age** increases, the proportion of the population with at least one bank account or payment card in the household decreases, which implies that the use of electronic payment methods is also decreasing both in general and for specific payment situations. (Chart 13) While 96 per cent of the youngest age group, aged 18-29, use some form of electronic payment, the figure is only 60 per cent for those aged 60 and over. Similarly, the proportion paying bills electronically falls from 82 per cent to 49 per cent as age increases. The share of people using electronic payment methods on the

[8] Detailed data for this group breakdown can be found in Table 2 in the Annex.

internet drops from 57 to 5 per cent and the share of people using mobile phones from 45 to 11 per cent between the youngest and oldest age groups. The rate of decline in usage with the increase of age can be considered steady for the under-60 age groups, but there is a clear break in the trend, with the over-60s showing a greater divergence in the use of electronic payment methods compared to younger groups.

Chart 13
Use of electronic payment solutions by age group



Looking at each payment method in more detail, there is no significant difference in cash use by age, ranging from 93-98 per cent across all age groups. There is a sharp difference, however, in card usage between the under-60s and the over-60s, with the under-60s having a card usage rate of 78-85 per cent, as opposed to that of only 49 per cent in the case of over-60s. Looking at the card usage in different transaction situations, it can be observed that most people use this payment method in shops: The share of people under 60 who pay by card in shops is 75-83 per cent, and 48 per cent for people over 60. In the other payment situations examined, the card usage rate is slightly lower, but similarly shows a downward trend with increasing age. For bill payments, the most popular methods for those under 50 are credit transfers and postal money orders paid by payment card, while cash bill payments are the most popular for those over 50. Credit transfers are mainly used by people aged under 60, with a usage rate of around 38-48 per cent, while the rate for people aged over 60 is only 16 per cent. In terms of payment situations, online credit transfers are the most popular method for all age groups, and there is also a bigger break in usage rates at age 60. While the usage rate for younger people is between 31 and 41 per cent, it is only 10 per cent for people over 60. For credit transfers initiated at bank branches, there is an inverse relationship between age and the usage rate: while only 3 per cent of people under 39 make such transactions, the rate is around 7 per cent above that age. Between 7 per cent and 15 per cent of people under 60 and only 2 per cent of people over 60 use a mobile phone app to pay a purchase by credit transfer. Looking at the purpose of the credit transfer, it can be seen that 22-33 per cent of people under 60 use a single credit transfer to buy a product or service, 10-21 per cent use a regular credit transfer, and in the case of people over 60, both of these rates are 8 per cent. Sending money by credit transfer to private individuals is mostly common in the 40-49 age group, presumably by parents who give their children pocket money.

Online shopping habits and the use of mobile payments depend on age too in some situations. The proportion of Internet shoppers also decreases with age, with 60 per cent of the youngest age group shopping online, compared to 28 per cent of those aged 50-59 and 2 per cent of those over 60. Looking further at online shoppers, it can be seen that they mainly use a card in this payment situation, with 62-81 per cent using an online payment method and 69-74 per cent using a payment card on delivery. When paying for online purchases with a payment card, pre-payment is slightly more popular among people under 50, while older people prefer to pay on receipt. It is also true that when shopping online, under-50s

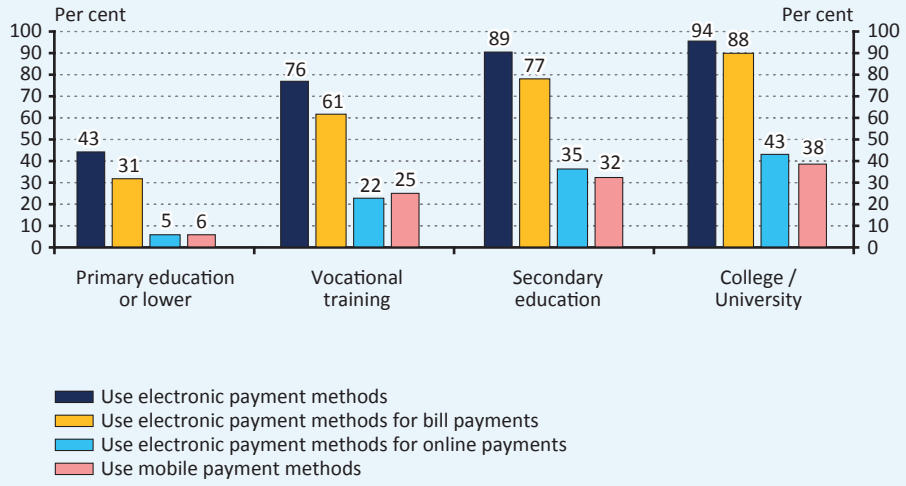
prefer to use non-bank, fintech payment solutions compared to older groups (36-42 per cent), but a fifth of over-50s who shop online also use these services. The use of mobile apps for payment is popular mainly among the young age groups, with the use of mobile payments gradually declining from 45 per cent to 11 per cent, from the youngest age group to the over-60s. Typically, all age groups use their mobile phones when shopping online, parking or in shops, but for the over-60 group, paying for purchases in shops stands out more than other transaction situations.

While younger respondents recorded between 0.8 and 1.0 card transactions per day, the figure for older respondents was only 0.4. In terms of the number of cash purchases, the 1.1 figure for the over-60s is only slightly higher than the 0.9 to 1.0 figure for younger people, but in terms of the use of each payment method, the oldest age group still makes nearly 70 per cent of its transactions in cash, compared with 48 per cent to 53 per cent for the under-60s.

Education[9]

As the highest **level of education** increases, there is a clear increase in the use of electronic payment methods, both aggregated and specific to each payment situation. While only 43 per cent of adults with the lowest level of education use some form of electronic payment, the figure is 94 per cent for those with higher education. (Chart 14) Specifically for bill payments, the share of those using electronic payment increases from 31 to 88 per cent as the level of education increases, while Internet electronic payment increases from 5 to 43 per cent and mobile payment use from 6 to 38 per cent. The gap between groups is larger for those with primary education and below and for those with vocational education and training compared to those with secondary and tertiary education.

Chart 14
Use of electronic payment solutions by level of education



When looking at each payment method in more detail, card usage gradually increases from 34 per cent to 87 per cent as we move from those with 8 or less years of primary education to those with a college or university degree, but even for those with at least a vocational education, card use reaches at least 69 per cent. Regarding credit transfers, while 8 per cent of those with primary or lower education use them, this ratio is 26 per cent, 41 per cent and 56 per cent in the case of those with vocational, secondary school and college or university degrees respectively. Looking specifically at the payment methods in a bill payment situation, it can be seen that paying postal money orders in cash is clearly the most popular payment method for workmen and those with lower education. The use of direct debit ranges from 14 to 50 per cent depending on the level of education, but here it can be said that in the two lowest education groups the use of this payment method is higher than that of credit transfers. Cash payment by postal money order shows a usage rate of 76 and 57 per cent respectively for this group, which represents a 56 and 12 percentage points higher usage rate than the most

[9] Detailed data for this group breakdown can be found in Table 3 in the Annex.

popular electronic bill payment method. However, people with secondary school education or college/university graduates are more likely to use electronic payment to pay their bills. Regarding people with secondary school or higher education, the most popular electronic payment method, credit transfer, is respectively 1 and 13 percentage points ahead of cash payment by postal money order, so the usage rates are 44 and 54 per cent for the respective education level categories.

Online shopping and mobile payments are also becoming more common as the level of education increases. While the share of Internet shoppers ranges from 8 to 44 per cent across education levels, the share of mobile payment users ranges from 6 to 38 per cent. Looking at the methods of payment used for online purchases, it can be seen that the groups with the lowest education tend to prefer cash on delivery (74 per cent), but payment with payment card on delivery represents a similar proportion (56 per cent). In the case of those with vocational training, it can be observed that, although not by much, payment by card on delivery (72 per cent) exceeds the use of cash (68 per cent), and as education levels increase, the use of electronic payments increasingly exceeds the use of cash for online purchases. Cash use is also high at the highest level of education, with 62 per cent, while online payments using a payment card reach 85 per cent. For mobile payments, within the groups, mobile users are most likely to use mobile payment for online purchases, parking and shopping, while this payment method is less common for sending money between individuals. The group with primary education or less differs slightly, in their case using mobile payment for parking is less frequent than in other situations.

For the groups with primary education or lower, an average of 1.3 cash transactions are performed per day compared to only 0.3 card purchases, i.e. the rate of cash use is slightly above 80 per cent, but it drops sharply with increasing education level. The share of logged cash transactions is 64 per cent for those with vocational qualifications, 50 per cent for those with a secondary school-leaving qualification and only 40 per cent for those with higher education, with the latter group recording an average of 1.1 card and 0.8 cash purchases per day.

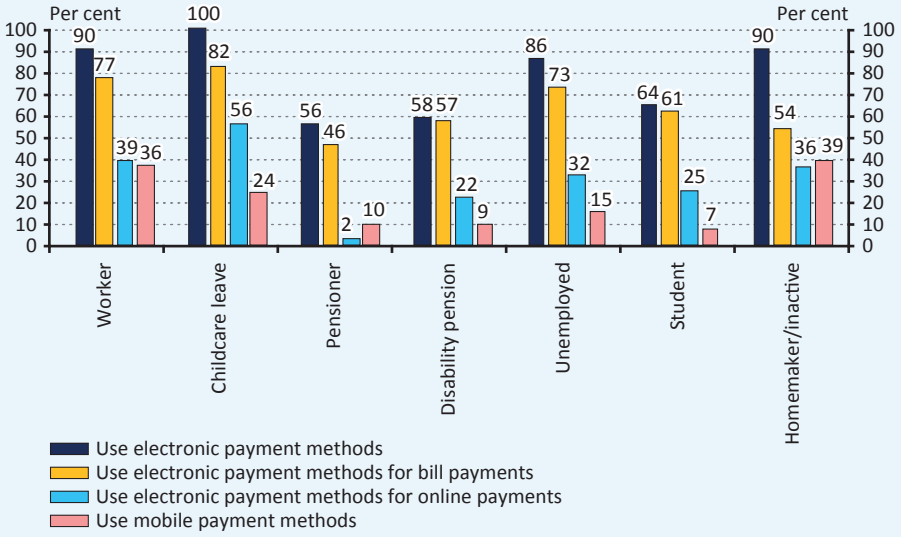
The importance of these differences is underlined by the fact that, according to the latest microcensus of the Hungarian Central Statistical Office (HCSO) in 2016, the population aged 15 and over with at most primary education, although continuously decreasing, still reached 2.2 million, or 26.5 per cent. Since our results clearly show that cash is still the preferred method of payment for these groups, and the lack of secondary education is also significant in the 30-50 age group, it is reasonable to assume that this will lead to a non-negligible role for transactional cash use even in the longer term.

Employment status[10]

In terms of labour market activity, there are also significant differences in payment habits. The active workers and students use electronic payments at the highest proportions, with overall usage at 90 per cent and a minimum of 77 per cent regarding bill payments. (Chart 15) The share of people using electronic payments online is over 39 per cent, while the share of people using mobile payments is 36 per cent or more. By contrast, the group least open to electronic payments is pensioners. 56 per cent of the population with this status generally use at least one electronic payment method, while the same proportion for bill payments is 46 per cent. In this group, 2 per cent pay electronically online, while 10 per cent use mobile phones.

[10] Detailed data for this group breakdown can be found in Table 4 in the Annex.

Chart 15
Use of electronic payment solutions by employment status



Cash is used by 91-100 per cent of respondents in each group, but card ownership shows a more varied picture. While account and card ownership is higher among active workers, students, those on childcare leave and homemakers (94-100 per cent), it is much lower among retired, unemployed and disabled pensioners (71-91 per cent).

The payment habits of active workers and students are similar, presumably because due to their obligations and leisure habits (shopping, paying bills, fuelling, parking, pocket money, restaurants, sports, etc.), and these two groups also perform the highest number of transactions (14-19 card transactions and 3-4 credit transfer transactions per month). They mainly use cards to pay in shops, but they also have a high rate of card use in other transaction situations compared to other age groups, with 35-54 per cent using cards in the payment situations surveyed. 26-45 per cent use credit transfers, mostly online or through a phone app. 41-56 per cent shop online, and employees and students who do so mainly pay by card online (76-77 per cent) or on delivery (63-71 per cent). They typically pay their bills by credit transfer and direct debit, while for the workers, the payment of postal money orders by a payment card or mobile payment app is also a popular choice. 24-36 per cent use mobile payments, mainly for Internet and shop payments. Among the students who use mobile payments, it can be said that, in general, all of them also use this payment method when shopping online. Mobile payers in active working and student status similarly use their mobile phones for parking and sending money to individuals at a rate of 35-61 per cent.

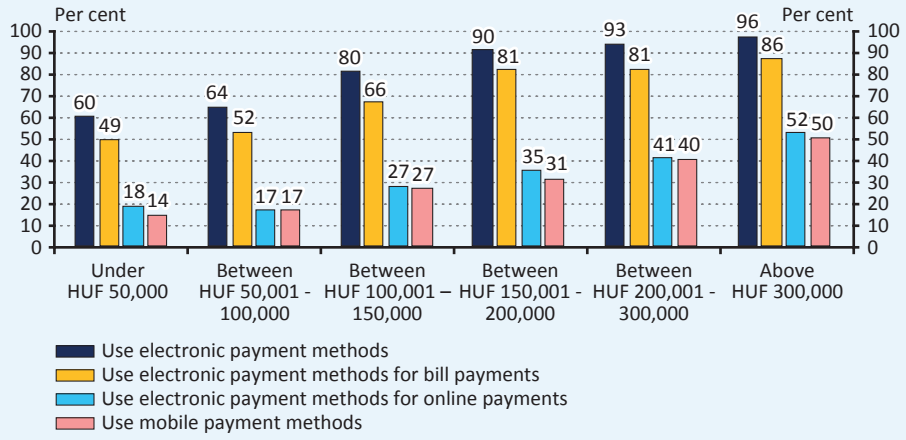
The payment habits of those on childcare leave are similar to those of the workers, as it is typically the employees who go on childcare leave, so their payment preferences do not change much. People in this status are more likely to change their typical transaction situations, they make fewer large purchases, go to the cinema or use various services. Students (pocket money), those on childcare leave and homemakers may also have extra cash income, which may result in a higher proportion of cash transactions. Homemakers prefer cash payment options for both online purchases and bill payments. 39 per cent of them use mobile payments, but only online and in shops, and not at all for parking or sending money. The unemployed, pensioners and disabled pensioners make fewer transactions than the previous groups and prefer cash transactions. Their card usage is around 34-48 per cent, and the proportion of card purchases in different payment situations is also much lower than in the previous groups, and only 14-27 per cent of them initiate credit transfers. They are also the least likely to shop online compared to the other groups, while their bills are typically paid by cash, using postal money orders. They exhibit a low level of mobile phone shopping too.

According to the payment diary, the worker and student groups have similar payment preferences, and compared to them, pensioners and especially the unemployed are significantly more cash-oriented. For the latter two groups, fewer card purchases, and more cash transactions were recorded, with 72 per cent and 80 per cent of cash use respectively, compared to that of 49 per cent and 53 per cent for the workers and students.

Income[11]

As **incomes** rise, so does openness to electronic payments. While 60 per cent of the population living in households with a net income of less than HUF 50,000 per capita use at least one electronic payment method, 96 per cent of those living in households with the highest net income, of at least HUF 300,000 per capita, do so. (Chart 16) For bill payments, the share of electronic payments increases from 49 per cent to 86 per cent between the lowest and highest income groups, while the share of people using electronic payments online increases from 18 per cent to 52 per cent and the share of people using mobile payments increases from 14 per cent to 50 per cent. In terms of neighboring groups, the difference between the per capita income bands between HUF 100,000 and HUF 50,000 is greater in and around them.

Chart 16
Use of electronic payment solutions by category of household income per capita



When looking at payment methods in more detail, the difference between income categories is also noticeable. While the card usage rate is 51 per cent for the population living in households with a net income of less than HUF 50,000 per capita, the highest category, with an income of at least HUF 300,000 per capita, has a card usage rate of 91 per cent. While 35 per cent of the total population use credit transfers, the proportion of people using credit transfers increases from 24 per cent to 70 per cent in the increasing order of income. When examining bill payments, it can be observed that up to the income level of HUF 150,000, cash payment with postal money orders dominates with a usage rate of 67-52 per cent, while in the same income categories the share of the most popular electronic payment method is 28-39 per cent. And from this group upwards, electronic payments are more prevalent, with an increasing gap compared to cash payments. While the electronic use rate is 47-67 per cent, the use of postal money orders paid by cash is down from 41 per cent to 22 per cent. Cash payments are gradually declining as income brackets increase and the use of electronic payments is on the rise, but the use of postal money orders paid by payment card or mobile app is slightly out of step with this trend. The highest usage rate is observed in the income categories between HUF 150,000 and 300,000, with a usage rate of 45-46 per cent.

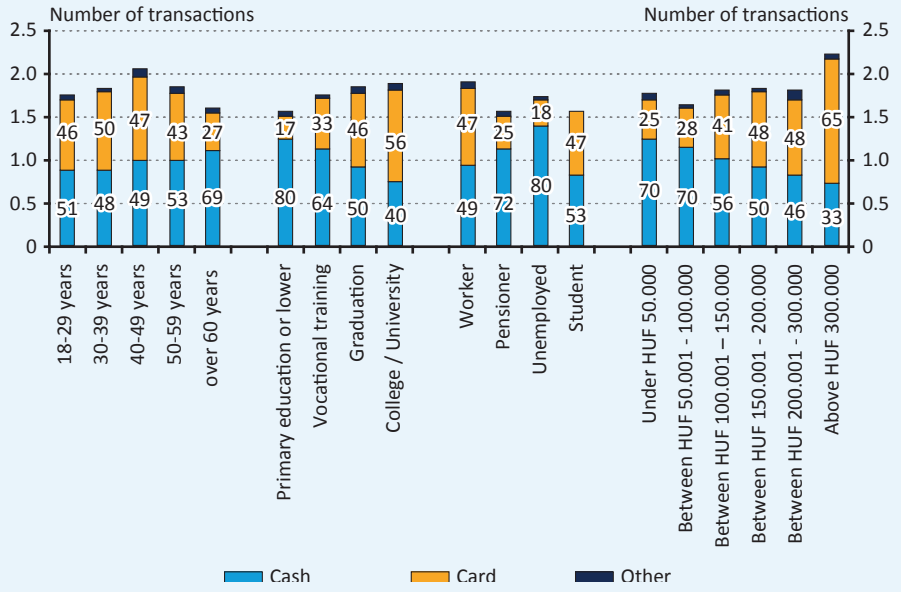
There is also a gradual increase in the proportion of people shopping online as their income rises, with one fifth of the group in the lowest income categories shopping online, compared to more than half of the group in the highest income category. Comparing cash and electronic payment, it can be seen that up to HUF 100,000 income per capita, cash use dominates with a share of between 90 and 72 per cent, while for these income groups the share of those using the most

[11] Detailed data for this group breakdown can be found in Table 5 in the Annex.

popular electronic payment method is around 68 per cent. For the higher income bracket, while the highest electronic payment rate ranges from 75-87 per cent, the cash rate drops from 68 to 40 per cent. Among payment methods, a larger jump in income per capita of around HUF 100,000 is observed for online payments by payment card, which may be consistent with an increase in confidence in the use of online electronic payments. The use of mobile payments increases from 14 per cent to 50 per cent as income rises. In the lowest income bracket, when people use mobile payments, they typically do so for parking and shopping, with 71 per cent and 54 per cent of mobile payment users using mobile payments in these situations, while only 11 per cent and 30 per cent of people use mobile payments for sending money between individuals and paying for online purchases respectively. Among mobile payment users, the lowest usage rate for sending money between individuals was in the income category of HUF 150,000-200,000, at 23 per cent. In the other income categories above HUF 50,000, the share of sending money between individuals was at least 35 per cent, and above 50 per cent in the highest category.

The pronounced role of net per capita household income in payment preferences, similarly to the highest educational attainment, is clearly reflected in the payment diary data. Between the lowest and the highest income groups surveyed, the share of cash use in the diary decreases from 70 per cent to 33 per cent, while the average number of card transactions per day increases from 0.5 to 1.4 and the share of card transactions from 25 per cent to 65 per cent. (Chart 17)

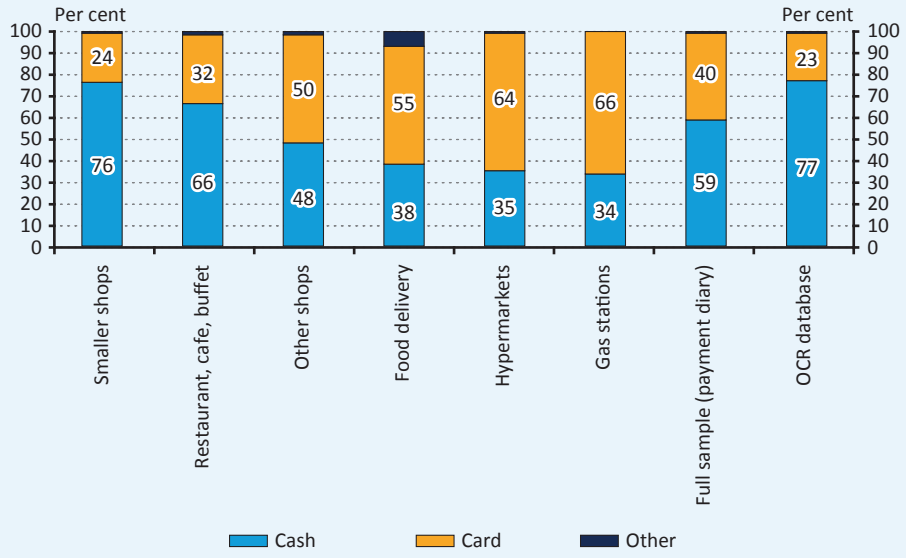
Chart 17
Average daily number and share of cash and card transactions registered in payment diaries in the main sociodemographic groups



Transaction situation

In addition to the role of various sociodemographic characteristics, the payment diary data also clearly support the importance of transaction status in the choice between payment methods. As expected, the survey confirms that the use of cash is more prevalent for day-to-day purchases in small shops as well as for consumption in catering establishments, bars, restaurants etc. (Chart 18) By contrast, card use is more common for major grocery shopping in hypermarkets or when buying fuel at petrol stations, but the same is true for shops selling durable goods (e.g. clothing, electronics) and for ordering food online or by phone. It is worth noting that, looking at the transaction situations described above, the amount paid shows significant variation across categories, which supposedly also influences the choice of payment method, but the regression analysis presented below confirms that the transaction situation has significant explanatory power in itself.

Chart 18
Distribution of transactions in the payment diary between cash, card and other payment methods, grouped by transaction situation



Note: The main reason for the discrepancy between the payment diary and the OCR database is that the former is based on self-reporting, so respondents may have less recall of smaller transactions, mainly in cash (see chapter 2 for more details)

5.4 EXAMINATION OF THE USE OF CERTAIN PAYMENT METHODS AND PAYMENT CHOICES IN DIFFERENT SITUATIONS BY REGRESSION ANALYSIS

In order to understand the combined and interacting effects of the main sociodemographic factors, the previously presented components (cash income, regular cash withdrawals, use of cards, credit transfers and cash payments, openness to electronic payment methods, attitude towards mobile payments) were also examined using regression analysis. The explanatory variables of the regressions are the same as those used in the analysis of access to bank accounts and payment cards.

The following paragraph describes the factors that influence the willingness to use cards, to transfer money and to pay bills electronically. In terms of age, while for card payments there is a significant difference between the age groups 50-59 and over 60 compared to the youngest age group, i.e. they are less likely to use card, for credit transfers there is a significant difference only for the over 60s. (Table 3) When examining the level of education, the probability of using card and credit transfer increases as the highest level of education increases, and when comparing the odds values, it can be seen that the effect of educational attainment is stronger for credit transfers. In terms of activity, the probability of card use is lower for the unemployed and retired status compared to those in active employment, and these groups also show a significantly lower number of card transactions, while for credit transfers, a decrease in use is seen for those with other status. The use of both payment methods is influenced by the per capita income of the household, the positive effect of which is stronger for card use.

Table 3
Results of a logistic regression on willingness to use card, willingness to credit transfer money and openness to electronic payment for bill payment

Variable	Card use	Credit transfer	Bill payment by cash only	Bill payment also electronically	Bill payment electronically only
Age (18-29)					
(30-39)	0.85	1.02	1.16	0.87	1.01
(40-49)	0.60	1.10	1.75*	0.63	1.04
(50-59)	0.46**	0.79	1.86**	0.57*	0.67
(60-)	0.24**	0.36**	3.73**	0.27**	0.49**
Education (Primary education or lower)					
Vocational training	2.29**	2.42**	0.47**	2.25**	1.83**
Secondary education	3.24**	4.44**	0.24**	4.20**	2.81**
College/University	4.96**	7.21**	0.12**	9.40**	4.34**
Activity (worker)					
Unemployed	0.26**	1.16	0.7	1.31	0.86
Student	0.50	0.4	0.94	1.18	0.77
Pensioner	0.55**	0.66	1.3	0.86	0.95
Other	0.82	0.49**	0.85	1.15	0.79
Household income per capita	2.66**	1.70**	0.39**	2.50**	2.07**
Constant	0.00**	0.00**	70,304.6**	0.00**	0.00**
N	1,481	1,481	1,481	1,481	1,481
R^2	0.21	0.14	0.2001	0.1952	0.1012

For bill payments, we analysed the openness to electronic payment in different ways, rather than the underlying reasons for using specific payment methods. The three specific survey questions are: what determines whether someone pays their bills in cash only; what determines whether they are open to electronic payment, i.e. whether they also use electronic payment; and who is likely to pay their bills electronically only. This suggests that age has a clear impact on the choice between cash and electronic payment methods. Compared with the youngest age group, those aged 40 and over tend to pay their bills in cash only, and the difference increases with age. In terms of openness to electronic payments, only the over-50s show a significant difference compared to the youngest age groups, while the older age groups are less likely to use an electronic payment method for bill payments. If we look at the set of people who pay their bills exclusively electronically, only those aged 60 and over show a difference compared to the reference group. In terms of education, people with higher education are less likely to pay their bills in cash only; they are more likely to use electronic solutions and more likely to pay their bills electronically than people with lower education. As income increases, the likelihood of paying bills in cash also decreases and the likelihood of paying bills electronically increases, and it is also more common to pay bills electronically only.

Choice between card and cash payment

Since the payment diary contains transaction data for only one day, as opposed to the one-month time interval of the questionnaire survey, it is somewhat less suitable for representing respondents' overall payment behaviour. Nevertheless, because it includes not only electronic but also cash transactions, it still provides a good basis for comparing the combined effects of different sociodemographic factors on cash and card use. Using the logistic regression model presented above (where the dependent variable is 1 if the respondent has recorded cash or card spending in the payment diary and 0 if he has not) and similar explanatory variables, the following conclusions can be drawn.

For the use of card purchases, the results confirm the significant role of education and income, with higher education and income groups being more likely to have recorded at least one card transaction, while the opposite relationship can be observed for cash payments (Table 4). Retired people are also less open to card use, but age itself is not a significant factor in this case, contrary to the regression based on the questionnaire data. Estimating the number of cash or card transactions per day rather than the likelihood of using these payment instruments, education and income remain clearly significant in both cases. The results show that, on average, people with secondary level education make by 0.4 more card payments and by 0.2 fewer cash payments per day than those with a primary school education or lower, and the same differences increase to 0.5 and 0.4 for higher education graduates. The household income per capita also increases the expected number of card transactions and, to a slightly lesser extent, decreases the expected number of cash transactions. This confirms that the effects of education and income on the use of electronic payments are not only due to different consumption habits (e.g. higher income earners spend more and perform a higher number of transactions), but also to different payment preferences.

Table 4
Results of logistic regression on cash and card usage

Variable	Using cash when shopping	Using card when shopping
Age (18-29)		
(30-39)	0.90	1.00
(40-49)	1.00	1.14
(50-59)	1.17	0.87
(60-)	1.38	0.65
Education (Primary education or lower)		
Vocational training	0.58**	1.95**
Secondary education	0.34**	3.73**
College/University	0.29**	4.83**
Activity (worker)		
Unemployed	1.21	0.53
Student	1.07	0.58
Pensioner	0.97	0.54**
Other	1.13	0.98
Household income per capita	0.62**	1.64**
Constant	1,362.62**	0.00**
N	1,481	1,481
R^2	0.0585	0.1126

Since the payment diary contains the exact amount of the recorded transactions and also a brief description of the transaction situation, it is also possible to use regression analysis to investigate to what extent these, together with the sociodemographic factors mentioned above, influence the decision between payment methods. The dependent variable in the logistic regression takes a value of 1 if the transaction was settled in cash and 0 if it was settled by any other electronic means (i.e. unlike before, the explanatory variable is not related to the respondents but to the individual transactions they logged). In addition to age, education, labour market status and income, which were used previously, the list of explanatory variables was extended to include the amount paid and a categorical variable describing the transaction status.

The results show that education and net household income per head continue to have significant explanatory power as described above, i.e., if the transacting consumer has higher education or income, they are less likely to pay in cash. (Table 5) In addition, however, both the amount paid and the transaction situation are significant at the 95 per cent confidence level. As expected, the likelihood of using cash decreases for higher value transactions, and cashless payments are more common for Internet purchases and utility bill payments than for traditional POS purchases, but cash is more likely to be used for the payment of services and for transactions between individuals.

Table 5
Results of logistic regression on the choice of cash for shopping

Variable	Cash transaction
Transaction situation (POS purchases)	
Internet shopping	0.55**
Payment for services	6.60**
Bill payments	0.52**
Money given to private individuals	47.41**
Other	2.04
Amount paid (thousand forint)	0.96**
Age (18-29)	
(30-39)	1.03
(40-49)	0.99
(50-59)	1.20
(60-)	1.73**
Education (Primary education or lower)	
Vocational training	0.59**
Secondary education	0.36**
College/University	0.28**
Activity (worker)	
Unemployed	1.96
Student	1.10
Pensioner	1.32
Other	1.19
Household income per capita	0.62**
Constant	806.97**
N	2,676
R^2	0.132

Internet shopping

For online shoppers, we also look at openness to electronic payment methods and the reasons behind using cash exclusively. In the case of overall openness to online shopping, all of the variables tested are significant and the direction of the relationships is the same as in the previous subsection, i.e. the likelihood of online shopping decreases with age compared to the youngest group. Compared to those with primary or lower education, the propensity to shop online increases as the level of education increases. Income is also positively related to the outcome variable examined, and in terms of activity, it can be established that retired people are significantly less likely to shop online compared to the population in active employment. (Table 6) Our analysis included an examination of the factors that explain the exclusive use of cash for online purchases and the openness to electronic payment methods. Our results show that regarding age, only the 30-39 year group shows a significant difference at 10 per cent level compared to the youngest age group, as they are more likely to be cash users. Regarding the labour market status, the trends are similar to those observed in the case of general attitudes towards online shopping, but the coefficients suggest that their effect is stronger. There is a very significant difference between pensioners and the active working population in terms of both the exclusive use of cash and openness to electronic payment methods, with pensioners who shop online almost certainly using cash.

Table 6
Results of logistic regression on the use of Internet shopping and the payment methods within that

	Internet shopping	Internet shopping with cash only	Internet shopping with electronic payment
Age (18-29)			
(30-39)	0.60**	3.62*	0.28*
(40-49)	0.39**	1.45	0.69
(50-59)	0.26**	3.2	0.31
(60-)	0.11**	0.75	1.34
Education (Primary education or lower)			
Vocational training	2.34**	0.27**	3.71**
Secondary education	3.42**	0.22**	4.62**
College/University	4.61**	0.09**	11.36**
Activity (worker)			
Unemployed	1.66	5.41	0.18
Student	0.93	1.00	1.00
Pensioner	0.29**	31.10**	0.03**
Other	0.89	0.35	2.89
Household income per capita	1.68**	0.43**	2.33**
Constant	0.00**	3715.10	0
N	1,481	407	407
R^2	0.2075	0.2041	0.2041

Use of mobile payment

In the case of sociodemographic factors influencing mobile phone use, labour market activity has less explanatory power, with age, education and income being more relevant in this case. (Table 7) Comparing the effect of the latter explanatory variables with the regression results on openness to online shopping, it can be seen that the older age groups differ slightly less from the youngest age group. In terms of education, the effects are also very similar; only the difference between those with vocational education and those with the lowest education increases when using mobile payments compared to being open to online shopping.

Looking in more detail into mobile phone use in different payment situations (online payment, shopping in stores, sending money between individuals and parking), we find that the effects of individual explanatory variables differ for each situation. While the likelihood of using a mobile phone to pay in a shop steadily decreases with age compared to the youngest age group, a significant difference can be seen for online shopping only from the age of 40, for parking from the age of 50 and for sending money between individuals from the age of 60. The effect of education can be identified most strongly for payments in shops and parking, to a lesser extent for online shopping, and no significant difference between groups can be observed for transactions between individuals. In terms of employment status, while there is no difference in the overall use of mobile payments, unemployed and retired people are clearly less likely to use mobile phones to pay for parking, and regarding mobile phone use when shopping online, a significant difference is seen in particular for retired people compared to those in active employment. The amount of income has the largest effect in the case of mobile payments on the Internet, but it also significantly increases the likelihood of mobile payments for parking and in transactions between individuals.

Table 7
Results of logistic regression on willingness to pay by mobile phone

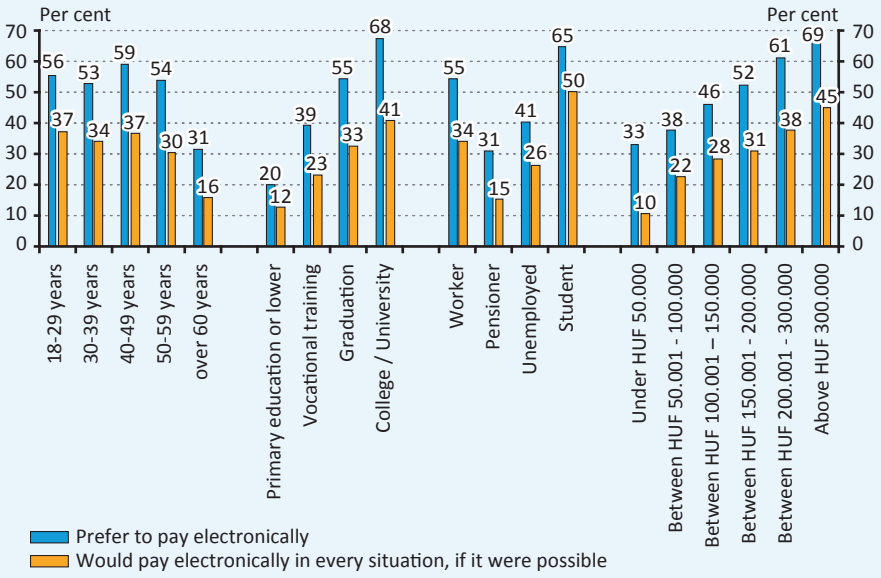
	Use of mobile payment	Use of mobile payment for Internet payments	Use of mobile payment in shops	Use of mobile payment for transactions between individuals	Use of mobile payment for parking
Age (18-29)					
(30-39)	0.59**	0.95	0.54**	1.32	0.90
(40-49)	0.51**	0.54**	0.47**	0.84	0.95
(50-59)	0.31**	0.37**	0.36**	0.65	0.55**
(60-)	0.20**	0.29**	0.30**	0.33*	0.29**
Education (Primary education or lower)					
Vocational training	3.28**	2.52**	3.06**	1.33	2.54*
Secondary education	3.83**	2.22*	3.17**	1.24	4.02**
College/University	4.63**	2.36*	3.97**	1.2	5.03**
Activity (worker)					
Unemployed	0.33	0.60	1	1	0.11**
Student	0.33	0.88	0.48	0.7	0.30
Pensioner	0.62	0.33**	0.67	0.6	0.22**
Other	0.50*	0.80	0.47	0.38	0.46
Household income per capita	1.77**	2.06**	1.15	1.66*	1.80**
Constant	0.00**	0.00**	0.03	0.00**	0.00**
N	1,481	1,481	1,450	1,450	1,481
R^2	0.13	0.12	0.0733	0.0836	0.15

5.5 SUBJECTIVE PAYMENT PREFERENCES

In addition to actual payment habits, the subjective perception of each payment method is also strongly related to both the highest level of education and the household income per capita, and in some cases also to age and labour market status. Based on the statements presented in sub-section 4.4 (preference for electronic payment because it is more convenient/safer, would always prefer to pay electronically if they could), only 20 per cent of those with 8 or less years of primary school and 33 per cent of those in the lowest income group prefer electronic payment to cash, while the same proportion is 68 per cent for those with higher education and 69 per cent for those in the highest income group. (Chart 19) In terms of age, the main difference can be observed between the over-60s and younger people: while 53-59 per cent of the latter prefer to pay by card, the older age groups are clearly prefer cash, with only 31 per cent favouring electronic payment methods. The impact of labour market status also varies accordingly, with 55 per cent of the workers, 31 per cent of retired people and 65 per cent of students preferring to pay by card or credit transfer.

In terms of openness to the exclusive use of electronic payments per se, there are also many more people in higher education and income groups, and among those under 60, who would make all their payments this way if they had the opportunity, but their proportion nowhere exceeds 50 per cent. It can therefore be concluded that for the majority of the Hungarian population it is important that cash as a means of payment remains available in the future, even for those social groups where card use or credit transfer is the preferred method of payment.

Chart 19
Subjective preferences for electronic payment by socio-demographic group



27 per cent of the population responded they would pay more often electronically if banking services were cheaper. There is a significant difference between the groups by household income per capita, with only 24 per cent of lower income households (less than HUF 100,000 per capita income) saying they would prefer to pay more often electronically if payment services cost less, compared to 35 per cent of higher income households (more than HUF 200,000 income per capita). This suggests that the higher someone's income, the more electronic transactions they make, resulting in significantly higher overall costs. Based on the results presented in the previous chapters, higher income groups also carry out the most retail transactions and they are the most open to electronic services. This may suggest that, in the case of more favourable pricing, those who already pay mainly electronically would use such services even more. In line with these findings, the latest data from MNB (2021) show that as the number of electronic transactions increases, banking costs rise significantly, which may hinder the further adoption of electronic payments.

5.6 CLUSTER ANALYSIS

Cluster analysis or clustering can be used to calssify the data according to the variables available, providing additional information. The algorithm combines those retail customers into one group who are the closest to the centre of the same group based on variables such as number of card payments, number of credit transfers, number of cash withdrawals, per capita income and age. For the cluster analysis, only the part of the sample who receive their payments electronically is included to avoid distortion in the clustering of the sample when examining cash withdrawals.

The optimal number of clusters based on the algorithm is three, so the results of the three-centre cluster analysis are presented below. Of the three groups, the most active from a payment perspective is the group of frequent electronic payers with 230 elements. Table 8 also shows that on average 22.7 card purchases, 3.9 credit transfers and 1.9 cash withdrawals are made per month. This group has the highest income per capita. The average age of the group is 46.1 years, which is in line with the results presented in the previous chapters, i.e., the middle-aged population performs the most transactions (presumably this age group goes shopping the most often, pays the most bills, gives pocket money to children, pays for parking, etc.). The group of occasional electronic payers, with 439 elements, makes the fewest cash withdrawals, and the average age and income are the lowest in this group, suggesting that this group includes the vast majority of students and young working population. They are less active in terms of payments than the group of frequent electronic payers, but still, they pay electronically (by card or credit transfer) on average 10 times a month. The members of the occasional electronic payers group (around 40 per cent of the sample) have a bank account and a card, are familiar with the electronic services available and use them. It is for this group that favourable pricing, the development of innovative services (e.g. instant payment services) and various government measures may be the most

important, as there is considerable scope for increasing the number of transactions in their case. The average age of the group of infrequent electronic payers with 435 elements is 64 years, which suggests that the majority of pensioners are classified in this group. While the number of cash withdrawals they make is slightly higher than that for the occasional electronic payers group, the number of card and credit transfer transactions they make is much lower, around half of that. For the group of infrequent electronic shoppers, it is likely that the growth in electronic transactions will not be driven by favourable pricing and innovative services, but other supportive measures will also be needed. The results of the cluster analysis confirm the correlations between age, income and payment activity found in the previous chapters. There are small overlaps between the three groups, for the same reasons as described in the previous chapters. Several different factors can influence payment preferences and hence the transaction and payment patterns of retail customers may differ considerably, even if they are of the same age and income.

Table 8
Groups of the adult population with electronic income by transaction patterns and other sociodemographic characteristics

Cluster name	Number of elements	Average number of card payments	Average number of payments by transfer	Average number of cash withdrawals	Average income per capita (HUF)	Average age (year)
	435	5,8	0,34	1,27	143,108	64,1
rare electronic payers	435	5.8	0.34	1.27	143,108	64.1
occasional electronic payers	439	9.1	0.95	1.25	133,142	38.9
frequent electronic payers	230	22.7	3.9	1.9	213,412	46.1

6 International comparison

Between March and December 2019, the European Central Bank conducted a comprehensive survey in the euro area countries (ECB 2020), which included an analysis of the use of cash and various electronic payment methods for both purchases (also including, for example, online shopping and bill payments) and private transactions as well as an exploration of the factors influencing the choice between payment instruments. The research consisted of a questionnaire survey and a payment diary, similarly to the domestic survey presented above, but the exact methodology differed slightly from that used by the MNB at some points. In this chapter, we attempt to compare the results for Hungary and the euro area, and thus to put the lessons learned into an international context, where possible.

In terms of access to electronic payments, the 90 per cent domestic coverage rate of payment cards (including those who do not have a card themselves but have access to one their household) is slightly below the euro area average of 94 per cent, and a similar conclusion can be drawn when looking at the size of the group that does not have access to any payment method other than cash. According to the ECB survey, this proportion is only 2 per cent in the euro area, while in Hungary 9 per cent of the population live in a household where no one has a bank account. While it is possible that someone has access to cashless payment through an electronic payment method outside the banking system (e.g. non-bank, fintech payment solutions or cryptocurrencies), given that this group in the country is mainly composed of people aged 60+ and with low education levels, it can be assumed that the vast majority of the 9 per cent have the possibility to use cash only when making payments. The domestic figure is still better than the 10-11 per cent figure for Greece, Cyprus or Malta, while at the other end of the scale there are Germany, Finland and Belgium, where the share of people without access to electronic payment systems is less than 0.5 per cent. In the case of the Baltic States or Slovakia, which are more comparable to Hungary, the indicator is around 4 per cent. It is also true at international level that electronic coverage is strongly correlated with educational attainment and, especially for older age groups, with age.

The group of people with regular cash income (either all or a part of their income comes in this form) in the euro area is 11 per cent, less than half of the 23 per cent in Hungary, but with a significant variation across countries. In this respect, the domestic data does not show significant differences compared to similarly situated euro area countries (e.g. Slovakia: 24 per cent; Lithuania: 20 per cent), while the extremes are represented by Greece (32 per cent) and Finland (4 per cent). In terms of cash withdrawals, international data confirm our earlier findings that the Hungarians withdraw larger amounts of cash at a time, but do it less often compared to European standards. The average euro area one-off amount of 88 euros (calculated at the mid-rate of 2019, the time of the ECB survey) is only 28,000 forints in nominal terms, less than half of the 59,000 forints in Hungary, and the difference is even larger in terms of purchasing power. If we take the Irish (124 euros) or Greek (121 euros) figures, which represent the upper extremes rather than the euro area average, the difference is still significant.

According to the Hungarian data in the payment diaries, the average amount of 12,800 forints in our wallet may seem a lot at first glance, but the euro area average of 76.5 euros is almost double that in nominal terms. Calculated in terms of purchasing power parity[12], both the 121 euros in Austria and the 74 euros in Slovakia are equivalent to a good approximation of 20,000 forints, while the average of 45 euros in France, at the other end of the scale, is equivalent to just under 8,000 forints. It can therefore be said that our country is in the middle of the European scale in this respect. An interesting finding of the ECB study is that the amount of cash held in wallets is not only correlated with the payment habits of the country, but also shows a strong correlation with the average value of cash transactions: where it is more common for customers to pay larger amounts in cash, they tend to hold higher amounts of banknotes.

[12] Source of data used for the calculations: IMF World Economic Outlook 2019 October

For the reasons described in Chapter 2, the transaction data from the domestic payment diary cannot be considered sufficiently accurate to provide a relevant international comparison, and the comparison is also hampered by methodological differences: in the domestic diary, respondents had to count retrospectively the payments of the last day on which they could recall at least one transaction, while in the ECB survey they had to log all their transactions during a fixed day, regardless of the number of transactions. However, the average of 0.44 card transactions per day calculated from the presumably more reliable monthly data from the survey questionnaire puts Hungary among the cash-oriented countries in Europe, with a cash usage rate of 70-80 per cent, comparable to Austria and Germany, among others. At the extremes of the euro area, there are the Netherlands and Malta: in the former only 34 per cent of transactions are made in cash, compared to 88 per cent in the latter. It is true in all the cases studied that the average value of card transactions is 2 to 3 times higher than that of cash transactions, and Hungary is no exception to this. The ratio calculated on the basis of the payment diary data is significantly distorted by the inaccuracies described earlier, but the multiplier of 2.3 to 2.4, which is based on the OCR database and hence considered reliable, suggests that compared to the European average (2.86), it is somewhat less common in Hungary for small-value payments to be dominated by cash and large-value transactions to be dominated by card payments. It is worth mentioning that regarding transaction situations a similar phenomenon can be observed both in Hungary and at a European level: cash is used more often in smaller shops and restaurants, while in large shops selling durable goods and petrol stations, card payments are more common.

The ECB's research examined specifically the payment methods used for online purchases, finding that only 4 per cent of such transactions in the euro area were made in cash, 49 per cent by card, 10 per cent by credit transfer and 27 per cent by other electronic means. Although data at a similar level of detail is not available for Hungary, the questionnaire survey included the monthly number of card payments made for online purchases, which is comparable with European data. The average monthly volume of 2.5 transactions, which is equivalent to 0.08 transactions per day, is broadly in line with the euro area average, although it should be noted that while the European data is from 2019, the domestic data was collected in autumn 2020 after the emergence of the coronavirus pandemic and the associated surge in online trade.

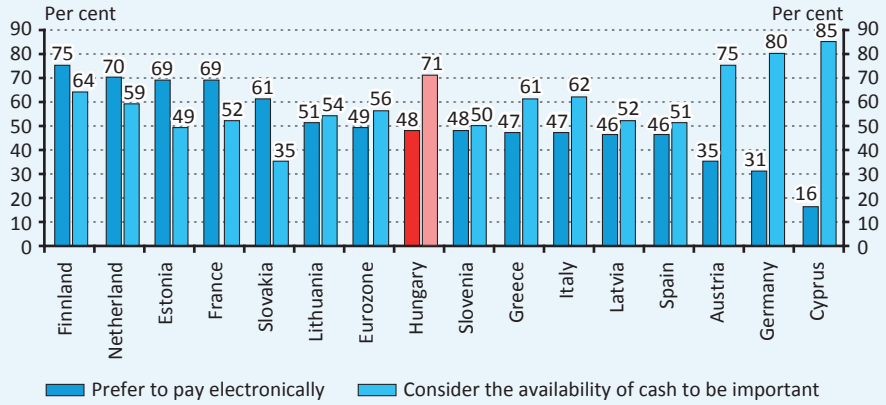
The ECB's study also includes the summary results of a questionnaire survey conducted in July 2020 focusing on the impact of the coronavirus pandemic, which showed that 40 per cent of the euro area population changed their payment habits as a result of the pandemic, exactly in line with the domestic figures, but while only 22 per cent plan to continue to pay more electronically after the pandemic has passed, the figure is close to 35 per cent at European level. Somewhat surprisingly, the most frequently cited reason for the increase in the popularity of electronic payment methods among European respondents was not the fear of infection, but the convenience of contactless payments, mainly due to increased contactless thresholds.

In terms of subjective preferences within the euro area, almost half of the respondents (49 per cent) prefer to use a card in a shopping situation, 27 per cent prefer to use cash, while 24 per cent cannot make a clear choice. The figures show a wide variation between countries, with 76 per cent and 70 per cent of people in Finland and the Netherlands respectively preferring to use a card, compared to only 16 per cent in Cyprus and 31 per cent and 35 per cent in Germany and Austria. The Hungarian data are almost exactly in line with the euro area average, exceeding, for example, the Austrian, German and Spanish figures, but lagging behind the Finnish, Estonian, French and Slovakian data, having determined the domestic rate of those preferring card use as described in subsection 4.4[13]. In terms of sociodemographic correlations, the increase in educational attainment is associated with a preference for card use in the euro area, as in Hungary, but, regarding the age, there is a much smaller difference between the age groups above and below 60. It is also worth mentioning that the phenomenon observed in Hungary, where actual measured cash use is somewhat higher than subjectively reported preferences would suggest, can be considered general at the European level, too.

[13] A respondent is considered to have a preference for card use if they agreed with at least one of the following three statements: "I will always prefer to use a bank card or credit transfer if I can because I find it much safer", "I will always prefer to use a card or credit transfer if I can because I find it much more convenient", "If I had the opportunity, I would pay everywhere electronically".

The ECB survey also included an explicit question on the importance respondents attach to the general availability and acceptance of cash as a means of payment. An important lesson is that more than half of the respondents (54 per cent) consider it important or very important to have cash available as a payment option, meaning that even those who prefer to use cards do not necessarily consider banknotes and coins unnecessary and would not support their disappearance. (Chart 20) Interestingly, the lowest proportion in this regard, 31 per cent, was measured in the neighbouring Slovakia, while the proportion of people who consider cash important was 74 per cent in Germany and 71 per cent in Austria. Although the statements cannot be regarded as fully equivalent, the proportion of respondents who consider the availability of cash to be important can be estimated from the domestic questionnaire: respondents who would not pay electronically everywhere even if they had the opportunity to do so probably belong to this group. At 71 per cent, the proportion of such respondents is high also at European level, but it is not exceptional, as it is lower than in Germany or Austria.

Chart 20
International comparison of subjective payment preferences



7 Conclusion

Almost all households now have at least one bank account or payment card, meaning that electronic payments are easily accessible to most people. Over the past 6 years, bank account and payment card coverage for households has risen by nearly 10 percentage points to over 90 per cent. Those without a bank account or payment card are typically retired, over 60 years of age, with low education level and low income. While between 76 and 75 per cent of households in the age group over 60 have at least one bank account or payment card, coverage is at least 95 per cent for the lower age groups and close to complete coverage for the youngest group, aged 18-29, at 99 and 100 per cent respectively. Overall, coverage rates are high and this creates the right conditions for the further expansion of electronic payments.

Although in decreasing proportions, cash incomes are still present in the Hungarian economy today, especially for those engaged in manual labour and entrepreneurial activities. Our results show that while 75 per cent of the domestic adult population with a regular income receive their income electronically, 15 per cent receive it entirely in cash, and a further 8 per cent receive a mix of electronic and cash incomes. The possibility to withdraw cash free of charge twice a month continues to have a significant impact on cash withdrawal habits, with the Hungarian population withdrawing cash less often, but in significantly larger amounts than the European average.

An increasing proportion of the population, 80 per cent, use electronic payments with some frequency, but almost everyone still uses cash. Nearly three quarters of the total adult population use payment cards, and more than a third of the population use credit transfers. In addition, for bill payments, direct debits and postal money orders paid by payment card or mobile payment app are also popular payment methods, with usage rates approaching 40 per cent for both. The proportion of people using card payments at least occasionally has increased by 14 percentage points over the past 6 years, while credit transfers and direct debits have risen by 11 and 10 percentage points respectively. The rise in popularity of electronic payment options can also be explained by changes in customer preferences, the development of the acquiring network and the impact of the coronavirus pandemic. In the case of credit transfers, the introduction of instant payments in March 2020 could also have an impact on growth, where the wider availability of services built on instant payment and more favourable pricing could lead to a higher increase in the future. It is important to underline that cash is used by almost everyone, despite the fact that a third of the population would prefer to carry out all their transactions electronically. One reason for this may be that there are places and situations where even the population preferring to settle their transactions without cash are forced to use banknotes and coins. This could change, for example, with the introduction on 1 January 2021 of the mandatory acceptance of electronic payment for those obliged to use an online cash register, which will largely cover the retail sector. In addition to the possibility of accepting cards, merchants can also benefit from an instant payment solution that offers cheaper acceptance.

Electronic payments are also popular for bill payments and online purchases. When paying their bills, 68 per cent of the adult population use at least one electronic payment method, and 50 per cent only pay their bills electronically. In contrast, 48 per cent of the population use cash to pay their bills, while 31 per cent pay their bills exclusively this way. Looking at each payment method in more detail, credit transfer, direct debit and payment of postal money orders by payment card are used by nearly 40 per cent of the population in equal proportions, just slightly below the nearly 50 per cent usage rate of the most popular payment method, postal money order paid by cash. As technological advances have made online shopping convenient and fast for an increasing number of people, it is no surprise that nearly a third of the population is now using it. For online purchases, almost everyone uses at least one electronic payment method with some frequency, while two thirds of online shoppers pay occasionally or regularly in cash. The most common method of payment among Internet shoppers is by payment card either online or on delivery, but the share of the users of non-bank fintech payment solutions is also outstanding. Mobile payment is also an increasingly popular payment method, with more than a quarter of the population using it with some frequency. Mobile payers mainly use it online, when parking and in shops. Online and smart phone shopping is particularly popular among young people.

It can be said in general that the use of different payment methods is also significantly influenced by different socio-demographic factors (age, education, employment status, household income per capita). As the level of education and household income per capita increase, the use of electronic payment methods also increases. In terms of employment status, population in active employment and students are the most open to these forms of payment, while the retired are the least open. There are differences of tens of percentage points, sometimes up to 50 percentage points, in the use of each payment method between groups based on different sociodemographic factors. Within these groups, the most extreme preferences are observed in the case of those aged 60 and over, those with primary or vocational qualifications, those with pensioner status and those living in households with a per capita income of less than HUF 100,000. Typically, these groups are the least likely to use electronic payment methods for either purchases or bill payments, and the least likely to shop online and pay by mobile phone. Among those with only electronic income, the highest levels of bank account and card-related payment activities—average number of credit transfers, card payments and cash withdrawals—are associated with the highest income earners.

People with higher levels of education and income per capita as well as younger age groups, also subjectively prefer to pay by card rather than cash, but even so, most would not pay electronically everywhere even if they had the option, and almost all carry some cash in their wallets. There are drastic differences between groups with different levels of education and income: although card usage is steadily increasing in Hungary and is not low by European standards, cash is still the preferred method of payment for respondents with no secondary school qualification or who can be considered poor.

It can also be said that, in addition to sociodemographic characteristics, the transaction situation also affects how we pay. Cash is more common for transactions between individuals, while electronic payments are more popular for online purchases and utility bill payments. When shopping on the spot, it does matter where one does it: in smaller shops and restaurants we are much more likely to use cash than in hypermarkets or at petrol stations.

Based on the results of the cluster analysis, the adult population with electronic income can be divided into three distinct groups based on transaction patterns and other sociodemographic characteristics. Around 20 per cent of them belong to the most electronically active group. The group members carry out around 25 electronic transactions per month. Members of the moderately electronically active group (around 40 per cent of the population with electronic income) use electronic payment solutions 10 times a month. The members of the moderately electronically active group are open to electronic payment solutions, so in their case a significant increase in electronic transactions can be achieved by offering favourable pricing and convenient services. Members of the less electronically active group (around 40 per cent of the sample) make significantly fewer electronic transactions (around 6 per month) than those in the other two groups, so it is likely that in their case factors other than pricing and service sophistication are holding back the surge in electronic payment usage.

In addition to the availability of electronic payments, different sociodemographic factors and the transaction situation, the cost of each payment method may also influence its use. The results of the questionnaire show that nearly a third of the total population would pay more electronically if banking services were cheaper, and the proportion is even higher for more electronically active retail consumers with higher incomes. At the same time, nearly a third of the population said they consider their bank charges too high. Appropriate pricing is essential for the attractiveness of instant payment services to reduce the competitive disadvantage of credit transfers compared to cash. Our survey therefore suggests that a favourable pricing structure could further increase the share of electronic transactions, which could also support the expansion of instant payment services.

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Annex

Table 1
Weighted distribution of the population groups surveyed

18-29 years	30-39 years	40-49 years	50-59 years	over 60 years		
17%	17%	19%	15%	32%		
8 or less years of primary school	Vocational school	Secondary education	College/ university			
13%	32%	34%	21%			
Worker	Student	Pensioner	Unemployed	On childcare leave	Disability pensioner	Homemaker/ inactive
64%	2%	26%	2%	3%	2%	1%
less than HUF 50,000	between HUF 50,001 – 100,000	between HUF 100,001 – 150,000	between HUF 150,001 – 200,000	between HUF 200,001 – 300,000	above HUF 300,000	
5%	22%	34%	20%	15%	3%	

Table 2
Proportion of people with bank accounts and payment cards and use of payment methods, Internet shopping and mobile payments in aggregate and in specific payment situations by age group

The proportion of people with bank account and payment card					
	18-29 years	30-39 years	40-49 years	50-59 years	over 60 years
Bank account	99%	97%	96%	98%	76%
Payment card	100%	96%	95%	96%	75%
Form of regular income and cash withdrawal habits					
	18-29 years	30-39 years	40-49 years	50-59 years	over 60 years
Regular cash income	15%	19%	17%	17%	36%
Regular cash withdrawal	74%	71%	76%	80%	80%
Use of payment methods					
	18-29 years	30-39 years	40-49 years	50-59 years	over 60 years
Cash	93%	95%	97%	97%	98%
Card	84%	85%	80%	78%	49%
Card purchases in shops	83%	81%	78%	75%	48%
Other card purchases (cinema, fuelling)	48%	54%	61%	49%	21%
Card purchases in restaurants	42%	37%	39%	31%	11%
Internet card purchases	47%	36%	31%	23%	5%
Card purchases through applications	17%	18%	15%	8%	2%
Postal money order by cash	42%	40%	42%	50%	63%
Postal money order by payment card or mobile app	41%	41%	44%	42%	25%
Direct debits	43%	40%	42%	42%	28%
Credit transfer	43%	48%	47%	38%	16%
Online credit transfer	36%	41%	39%	31%	10%
Purchase by credit transfer via application	15%	18%	11%	7%	2%
Credit transfer initiated at a bank branch	3%	3%	7%	6%	7%
Credit transfer initiated through phone	9%	5%	5%	2%	3%

Table 2
Proportion of people with bank accounts and payment cards and use of payment methods, Internet shopping and mobile payments in aggregate and in specific payment situations by age group

Individual (non-regular) credit transfer for the purchase of goods and services	26%	27%	33%	22%	8%
Regular credit transfers for the purchase of goods and services	10%	21%	21%	15%	8%
Peer to peer credit transfer	8%	9%	15%	10%	3%
Credit transfer only for regular bill payments	10%	8%	4%	5%	4%
Use of payment methods for bill payments					
	18-29 years	**30-39 years**	**40-49 years**	**50-59 years**	**over 60 years**
Postal money order by cash	42%	40%	42%	50%	63%
Credit transfer	42%	55%	53%	44%	20%
Direct debit	43%	40%	42%	42%	28%
Postal money order by payment card or mobile app	41%	41%	44%	42%	25%
Payment card via Internet	35%	36%	35%	29%	9%
Use of payment methods via Internet					
	18-29 years	**30-39 years**	**40-49 years**	**50-59 years**	**over 60 years**
Made online purchase	60%	47%	36%	28%	6%
by payment card via Internet	78%	70%	81%	66%	62%
by payment card on delivery	69%	69%	69%	74%	71%
by cash on delivery	63%	67%	68%	66%	69%
by credit transfer	43%	45%	55%	49%	39%
using non-bank, fintech payment solutions	36%	39%	42%	28%	18%
Mobile use in certain payment situations					
	18-29 years	**30-39 years**	**40-49 years**	**50-59 years**	**over 60 years**
Used mobile phone	45%	37%	33%	24%	11%
for Internet shopping	63%	78%	55%	60%	47%
for parking (not by SMS, but mobile phone app)	51%	63%	71%	64%	29%
for in-store purchases	59%	51%	50%	53%	70%
for sending money between individuals	27%	44%	33%	38%	29%
Average monthly transaction numbers					
	18-29 years	**30-39 years**	**40-49 years**	**50-59 years**	**over 60 years**
Card purchases	14.82	12.86	15.53	12.80	10.33
Card purchases in shops	9.01	8.04	10.17	9.08	8.29
Other card purchases (cinema, fuelling)	3.50	2.97	3.24	2.49	2.79
Card purchases in restaurants	3.86	3.44	3.83	3.36	3.24
Internet card purchases	2.41	2.88	2.10	2.74	2.13
Card purchases through applications	3.56	2.99	2.47	2.63	1.44
Credit transfers	3.99	3.86	3.90	2.90	3.03
Online credit transfer	2.71	2.80	3.13	2.52	2.21
Credit transfer via application	2.86	2.65	2.52	1.96	1.33
Credit transfer initiated at a bank branch	1.53	1.22	2.63	2.90	2.83
Credit transfer initiated through phone	2.89	2.96	2.21	1.86	1.65
Cash withdrawals	1.35	1.35	1.44	1.48	1.37

Table 3
Proportion of people with bank account and payment card and use of payment methods, Internet shopping and mobile payments in aggregate and in specific payment situations by education

The proportion of people with bank account and payment card				
	8 or less years of primary school	Vocational school	Secondary education	College/ University
Bank account	67%	89%	96%	98%
Payment card	64%	89%	95%	98%
Form of regular income and cash withdrawal habits				
	8 or less years of primary school	Vocational school	Secondary education	College/ University
Regular cash income	49%	26%	20%	8%
Regular cash withdrawal	90%	78%	74%	74%
Use of payment methods				
	8 or less years of primary school	Vocational school	Secondary education	College/ University
Cash	100%	99%	94%	94%
Card	34%	69%	79%	87%
Card purchases in shops	33%	66%	77%	84%
Other card purchases (cinema, fuelling)	12%	40%	50%	57%
Card purchases in restaurants	8%	24%	34%	42%
Internet card purchases	6%	19%	30%	39%
Card purchases through applications	1%	9%	13%	15%
Postal money order by cash	92%	57%	43%	31%
Postal money order by payment card or mobile app	20%	34%	43%	41%
Direct debits	14%	33%	41%	50%
Credit transfers	8%	26%	41%	56%
Online credit transfer	6%	20%	34%	47%
Purchases by credit transfer via application	1%	7%	11%	15%
Credit transfer initiated at a bank branch	2%	5%	6%	7%
Credit transfer initiated through phone	0%	3%	5%	8%
Individual (non-regular) credit transfer for the purchase of goods and services	4%	17%	24%	33%
Regular credit transfers for the purchase of goods and services	2%	9%	18%	21%
Peer to peer credit transfer	2%	4%	11%	13%
Credit transfer only for regular bill payments	1%	4%	7%	10%
Use of payment methods for bill payments				
	8 or less years of primary school	Vocational school	Secondary education	College/ University
Postal money order by cash	76%	57%	43%	31%
Credit transfer	14%	35%	44%	54%
Direct debit	14%	33%	41%	50%
Postal money order by payment card or mobile app	20%	34%	43%	41%
Payment card via Internet	9%	19%	27%	46%

Table 3
Proportion of people with bank account and payment card and use of payment methods, Internet shopping and mobile payments in aggregate and in specific payment situations by education

Use of payment methods via Internet				
	8 or less years of primary school	Vocational school	Secondary education	College/ University
Made online purchase	8%	25%	38%	44%
by payment card via Internet	28%	64%	75%	85%
by payment card on delivery	56%	72%	67%	73%
by cash on delivery	74%	68%	67%	62%
by credit transfer	13%	40%	45%	59%
using non-bank, fintech payment solutions	12%	31%	36%	43%
Mobile use in certain payment situations				
	8 or less years of primary school	Vocational school	Secondary education	College/ University
Used mobile phone	6%	33%	24%	38%
for Internet shopping	75%	60%	58%	68%
for parking (not by SMS, but mobile phone app)	36%	59%	67%	46%
for in-store purchases	65%	54%	55%	57%
for sending money between individuals	59%	33%	31%	37%
Average monthly transaction number				
	8 or less years of primary school	Vocational school	Secondary education	College/ University
Card purchases	7,54	12,32	13,81	14,95
Card purchases in shops	5,88	8,37	9,33	9,68
Other card purchases (cinema, fuelling)	1,88	3,38	2,90	3,00
Card purchases in restaurants	2,70	3,92	3,36	3,75
Internet card purchases	2,09	2,23	2,53	2,66
Card purchases through applications	3,44	2,20	2,91	3,49
Credit transfers	2,56	3,46	3,53	3,94
Online credit transfer	1,98	2,71	2,78	2,81
Credit transfer via application	2,99	2,46	2,32	2,79
Credit transfer initiated at a bank branch	2,19	1,85	2,14	3,67
Credit transfer initiated through phone	3,00	2,98	2,28	2,36
Cash withdrawals		1,42	1,33	1,45

Table 4
Proportion of people with bank account and payment card and use of payment methods, Internet shopping and mobile payments in aggregate and in specific payment situations by employment status

The proportion of people with bank account and payment card							
	Worker	Student	Pensioner	Unemployed	On childcare leave	Disability pensioner	Homemaker/ inactive
Bank account	97%	100%	72%	85%	94%	91%	94%
Payment card	97%	100%	71%	83%	97%	91%	94%
Form of regular income and cash withdrawal habits							
	Worker	Student	Pensioner	Unemployed	On childcare leave	Disability pensioner	Homemaker/ inactive
Regular cash income	17%	23%	38%	34%	16%	29%	32%
Regular cash withdrawal	75%	64%	83%	90%	72%	93%	69%
Use of payment methods							
	Worker	Student	Pensioner	Unemployed	On childcare leave	Disability pensioner	Homemaker/ inactive
Cash	96%	100%	98%	91%	98%	96%	100%
Card	84%	78%	45%	34%	74%	48%	90%
Card purchases in shops	81%	78%	44%	34%	70%	48%	90%
Other card purchases (cinema, fuelling)	56%	54%	17%	10%	33%	20%	35%
Card purchases in restaurants	39%	55%	7%	1%	15%	11%	30%
Internet card purchases	35%	42%	3%	15%	20%	7%	15%
Card purchases through applications	16%	6%	0%	0%	6%	11%	0%
Postal money order by cash	41%	50%	65%	65%	47%	65%	92%
Postal money order by payment card or mobile app	42%	34%	24%	27%	49%	28%	4%
Direct debits	42%	61%	26%	24%	24%	33%	40%
Credit transfers	45%	26%	14%	27%	27%	15%	14%
Online credit transfer	38%	11%	9%	27%	23%	15%	14%
Purchase by credit transfer via application	13%	18%	2%	11%	2%	0%	0%
Credit transfer initiated at a bank branch	6%	0%	6%	0%	2%	0%	0%
Credit transfer initiated through phone	6%	6%	1%	9%	1%	0%	0%
Individual (non-regular) credit transfer for the purchase of goods and services	28%	20%	6%	14%	24%	6%	0%
Regular credit transfers for the purchase of goods and services	18%	2%	7%	4%	9%	10%	14%
Peer to peer credit transfer	12%	0%	2%	2%	6%	0%	4%
Credit transfer only for regular bill payments	7%	6%	4%	9%	2%	0%	0%
Use of payment methods for bill payments							
	Worker	Student	Pensioner	Unemployed	On childcare leave	Disability pensioner	Homemaker/ inactive
Postal money order by cash	41%	50%	65%	65%	47%	65%	92%
by transfer	49%	52%	18%	31%	33%	27%	28%
by direct debit	42%	61%	26%	24%	24%	33%	40%

Table 4
Proportion of people with bank account and payment card and use of payment methods, Internet shopping and mobile payments in aggregate and in specific payment situations by employment status

Postal money order by payment card or mobile app	42%	34%	24%	27%	49%	28%	4%
by payment card via Internet	35%	22%	8%	3%	21%	20%	4%
Use of payment methods via Internet							
	Worker	**Student**	**Pensioner**	**Unemployed**	**On childcare leave**	**Disability pensioner**	**Homemaker/ inactive**
Made online purchase	41%	56%	4%	37%	32%	25%	41%
by payment card via Internet	76%	88%	49%	30%	69%	69%	44%
by payment card on delivery	71%	63%	49%	51%	75%	94%	77%
by cash on delivery	64%	59%	87%	100%	65%	47%	90%
by credit transfer	49%	35%	31%	23%	46%	29%	0%
using non-bank, fintech payment solutions	39%	19%	13%	0%	16%	29%	44%
Mobile use in certain payment situations							
	Worker	**Student**	**Pensioner**	**Unemployed**	**On childcare leave**	**Disability pensioner**	**Homemaker/ inactive**
Used mobile phone	36%	24%	10%	9%	15%	7%	39%
for Internet shopping	63%	100%	37%	84%	62%	100%	100%
for parking (not by SMS, but mobile phone app)	62%	38%	18%	16%	80%	53%	0%
for in-store purchases	54%	70%	73%	0%	31%	53%	82%
for sending money between individuals	35%	38%	30%	0%	31%	47%	0%
Average monthly transaction number							
	Worker	**Student**	**Pensioner**	**Unemployed**	**On childcare leave**	**Disability pensioner**	**Homemaker/ inactive**
Card purchases	14,21	18,84	9,34	6,06	10,39	13,33	9,88
Card purchases in shops	9,08	11,73	8,08	4,33	8,69	11,52	6,69
Other card purchases (cinema, fuelling)	3,14	3,88	2,30	1,50	2,76	1,81	1,33
Card purchases in restaurants	3,71	4,49	2,55	1,00	1,66	1,20	3,08
Internet card purchases	2,52	2,15	2,75	2,57	1,43	2,62	1,00
Card purchases through applications	0,80	0,11	0,05	0,25	0,44	0,00	4,10
Credit transfers	3,73	2,94	2,76	4,15	2,99	5,01	4,69
Online credit transfer	2,76	2,00	2,10	3,38	2,96	5,01	4,69
Credit transfer via application	2,63	2,00	1,76	1,15	4,00		
Credit transfer initiated at a bank branch	2,64		2,28		1,00		
Credit transfer initiated through phone	2,61	3,00	1,62	1,00	2,00		
Cash withdrawals	1,45	0,87	1,22	1,98	1,23	1,73	1,58

Table 5

Proportion of people with bank account and payment card and use of payment methods, Internet shopping and mobile payments in aggregate and in each payment situation by group based on household income per capita

The proportion of people with bank account and payment card						
	Less than HUF 50,000	between HUF 50,001 – 100,000	between HUF 100,001 – 150,000	between HUF 150,001 – 200,000	between HUF 200,001 – 300,000	above HUF 300,000
Bank account	83%	79%	91%	96%	98%	98%
Payment card	83%	78%	91%	96%	98%	98%
Form of regular income and cash withdrawal habits						
	Less than HUF 50.000	between HUF 50,001 – 100,000	between HUF 100,001 – 150,000	between HUF 150,001 – 200,000	between HUF 200,001 – 300,000	above HUF 300,000
Regular cash income	36%	37%	24%	16%	10%	19%
Regular cash withdrawal	86%	85%	75%	77%	73%	61%
Use of payment methods						
	Less than HUF 50,000	between HUF 50,001 – 100,000	between HUF 100,001 – 150,000	between HUF 150,001 – 200,000	between HUF 200,001 – 300,000	above HUF 300,000
Cash	99%	97%	96%	98%	93%	92%
Card	51%	53%	71%	83%	86%	91%
Card purchases in shops	49%	52%	69%	81%	84%	90%
Other card purchases (cinema, fuelling)	19%	27%	45%	51%	57%	59%
Card purchases in restaurants	10%	15%	29%	38%	39%	55%
Internet card purchases	12%	12%	25%	32%	35%	53%
Card purchases through applications	2%	4%	10%	10%	20%	30%
Postal money order by cash	67%	63%	52%	41%	34%	22%
Postal money order by payment card or mobile app	22%	27%	36%	45%	46%	40%
Direct debits	17%	24%	39%	39%	51%	56%
Credit transfers	26%	24%	32%	37%	53%	70%
Online credit transfer	24%	17%	25%	29%	47%	61%
Purchase by credit transfer via application	8%	6%	8%	9%	16%	28%
Credit transfer initiated at a bank branch	2%	6%	5%	5%	6%	5%
Credit transfer initiated through phone	0%	2%	3%	8%	7%	17%
Individual (non-regular) credit transfer for the purchase of goods and services	13%	13%	19%	22%	32%	53%
Regular credit transfers for the purchase of goods and services	9%	9%	14%	13%	21%	29%
Peer to peer credit transfer	5%	5%	7%	9%	13%	26%
Credit transfer only for regular bill payments	4%	4%	5%	6%	7%	6%
Use of payment methods for bill payments						
	Less than HUF 50,000	between HUF 50,001 – 100,000	between HUF 100,001 – 150,000	between HUF 150,001 – 200,000	between HUF 200,001 – 300,000	above HUF 300,000
Postal money order by cash	67%	63%	52%	41%	34%	22%
Credit transfer	28%	29%	37%	47%	48%	67%
Direct debit	17%	24%	39%	39%	51%	56%

Table 5
Proportion of people with bank account and payment card and use of payment methods, Internet shopping and mobile payments in aggregate and in each payment situation by group based on household income per capita

Postal money order by payment card or mobile app	22%	27%	36%	45%	46%	40%
Payment card via Internet	14%	14%	27%	29%	39%	44%
Use of payment methods via Internet						
	Less than HUF 50,000	**between HUF 50,001 – 100,000**	**between HUF 100,001 – 150,000**	**between HUF 150,001 – 200,000**	**between HUF 200,001 – 300,000**	**above HUF 300,000**
Made online purchase	25%	20%	29%	37%	43%	56%
by payment card via Internet	20%	57%	80%	75%	82%	87%
by payment card on delivery	69%	67%	73%	74%	63%	71%
by cash on delivery	90%	72%	67%	68%	61%	40%
by credit transfer	15%	35%	39%	51%	57%	77%
using non-bank, fintech payment solutions	29%	20%	38%	34%	43%	47%
Mobile use in certain payment situations						
	Less than HUF 50,000	**between HUF 50,001 – 100,000**	**between HUF 100,001 – 150,000**	**between HUF 150,001 – 200,000**	**between HUF 200,001 – 300,000**	**above HUF 300,000**
Used mobile phone	14%	17%	27%	31%	40%	50%
for Internet shopping	30%	68%	57%	60%	69%	73%
for parking (not by SMS, but mobile phone app)	71%	45%	58%	47%	62%	91%
for in-store purchases	54%	61%	59%	54%	49%	55%
for sending money between individuals	11%	41%	37%	23%	35%	56%
Average monthly transaction number						
	Less than HUF 50,000	**between HUF 50,001 – 100,000**	**between HUF 100,001 – 150,000**	**between HUF 150,001 – 200,000**	**between HUF 200,001 – 300,000**	**above HUF 300,000**
Card purchases	9.32	10.87	14.39	13.64	12.23	18.61
Card purchases in shops	7.57	8.09	9.75	8.96	8.00	10.04
Other card purchases (cinema, fuelling)	2.64	2.65	3.27	3.12	2.53	4.20
Card purchases in restaurants	3.27	3.59	3.46	3.33	3.63	5.53
Internet card purchases	1.83	1.73	2.79	3.02	1.90	2.11
Card purchases through applications	1.00	2.96	3.66	2.42	1.81	4.50
Credit transfers	2.94	3.34	3.59	3.73	3.27	5.47
Online credit transfer	2.78	2.89	2.76	2.89	2.41	3.21
Credit transfer via application	1.00	2.11	2.60	2.54	2.19	4.17
Credit transfer initiated at a bank branch	1.00	2.66	3.26	1.95	1.56	2.77
Credit transfer initiated through phone		1.45	2.07	2.83	2.18	3.58
Cash withdrawals	1.37	1.42	1.39	1.31	1.47	1.49

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