
Factors Affecting the Consumers' Choice of Payment Instrument in Poland

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Beata Świecka¹, Simon Grima²

Abstract:

Purpose: This contribution presents the main findings of a recent survey on consumer payment behavior in Poland. The authors aim to determine the factors influencing the choice of the payment instrument by consumers. This in order to better understand the reason why cash is still the main paying instrument being used by Polish consumers.

Design/Methodology/Approach: A survey was carried out between the 7th and 21st February 2019, using Computer-Assisted Personal Interview (CAPI), administered on a nationwide sample of Polish nationals aged 15 and above. A total of 1005 interviews were conducted. To ensure the representativeness of the collected data, the edge weighting was applied in accordance with the structure of the Polish population, including variables of gender, age, and education and the iterative technique (rim weighting).

Findings: Findings show that despite the development of the cashless payments, the position of cash is still powerful, because it fulfills consumers' expectations and although, the role of cashless payments increases, this is not happening at the fast pace that the institutional stakeholders of the financial market would expect. Cash in many respects has a lead on the market of the consumer payments, both with respect to the ease of use and the cost of transaction.

Practical implications: Understanding consumer trends in their use of payment methods is important for policy makers, the economy in general and the National Central Bank which need reliable statistical data to enable comparison with other countries on the levels of development in their payment systems, the determination of monetary policy and to carry out strategic decisions concerning the cash cycle and the effectiveness of the payment system.

Originality/Value: Without precise knowledge of how people actually pay for goods and services, a country is devoid of solid statistical foundations and will result in speculation.

JEL codes: D10, D14, G2, G11, R20.

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¹Faculty of Economics, Finance and Management, University of Szczecin, Poland,
Email: Beata.swiecka@usz.edu.pl (Corresponding author)

²Head of the Department of Insurance, Faculty of Economics, Management and Accountancy, Email: simon.grima@um.edu.mt

1. Introduction

Understanding consumer trends in their use of payment methods is important for 1) policy makers, 2) the economy in general and 3) the National Central Banks which need reliable statistical data to enable a) comparison with other countries on the levels of development of their payment systems, b) the determination of monetary policy and c) to carry out strategic decisions concerning the cash cycle and the effectiveness of the payment system as a whole. Without precise knowledge of how people actually pay for goods and services, a country is devoid of solid statistical foundations and will result in speculation (Esselink and Hernández, 2017). Often conclusions regarding the payment behaviors in a country are drawn from the data available in other countries without any confirmation of whether they have similar cultures and/or trends. For instance, people can pay differently, depending on whether they make their purchase in a large chain supermarket or in a small bakery or grocer in their street.

Poland is one of the European countries where the dynamics of the cashless turnover is above average. The country is currently witnessing a dynamic growth in the chain of payment terminals accepting cashless payments (mainly those made with a payment card and/or mobile payments), but the changes in consumer habits are not keeping up with this pace. Despite the progress in technology and the resulting development of cashless payments, a large majority share of cash transactions is still observable at retail and at service points (Polasik, 2015) and, in spite of the growth in cashless payments the use of cash is still prevailing. This prompts the need to investigate the determinants of the choice of payment forms by consumers, both in face-to-face and remote transactions.

The choice of payment forms changes over time and is influenced by a number of factors. Furthermore, it should be noted that the concept of cashless payments is broad; its scope includes payments made using plastic money – debit cards, credit cards, charge cards, and contactless card; mobile payments – varied out using mobile phones and mobile applications, and finally the more traditional bank transfers or orders for payment.

Because of the large variety of factors and the broadness of the concept, the scope of the study was confined to the main factors identified from literature but keeping an open mind for any new factors that may come out of this study; while including a wide range of payment instruments, specifically cash, contactless and other plastic money, high-speed online transfers/payments, contactless mobile phone payments, BLIK³, online account transfers, remote payment by phone, bank standing orders, other orders for payment, digital/mobile portfolios, and traditional bank transfers.

³*BLIK is a Polish solution in the area of mobile payments. It is a system of mobile payments that started on the initiative of several banks. It came into being on the basis of the mobile payments. Initially, it operated in one bank – PKO Bank Polski. At present it is*

The research on payment habits of consumers, conducted by the central banks, provide us with answers to the question of how consumers pay in different countries, while the results of this study helps to explain the reason why consumers choose a particular form of payment, complementing former studies. It also helps to provide knowledge to enable Polish policy makers to develop the payment systems and the payment instrument providers who provide the platforms on which payments are processed. It enables public and private institutions to direct policies, education and promotions, to match as much as possible the planned development in the country to consumers' expectations.

The main aim of this article is to lay out and discuss our findings on the determinants of the choice of payment methods in transactions with consumers and establishing a hierarchy of their validity (including cash and non-cash payment instruments - traditional and innovative).

2. Literature Review

Bagnall *et al.*, (2016) measured consumers' use of cash, harmonizing the journals of payment from seven countries. Seven journal studies were carried out in the subsequent years: 2009 (Canada), 2010 (Australia), 2011 (Austria, France, Germany and Holland), and 2012 (the United States). The authors found differences among the countries with regard to the level of the use of cash, but emphasized the role of cash particularly in low value transactions. Furthermore, they found that the use of cash is strongly correlated to the amount of the transaction, the demographic data, and the characteristics of the sales point, such as acceptance of the buyers' payment card or the place where transaction is carried out. In spite of the increasing limitation of the use of cash money and the stimulation of the cashless turnover, the position of cash is still powerful. This is confirmed by Rusu and Stix (2017) who found the dominant position of cash in Austria, where it is currently used in 82 per cent of all the direct payment transactions, and didn't change during the last 20 years. Also Harasim and Klimontowicz (2017) found the powerful position of cash in their study conducted in Poland.

When analyzing the choice of the payment form by consumers a number of factors should be taken into account, both economic and non-economic. Payments can be viewed from a macro- and micro-scale. The macro-scale demonstrates the role of such factors as, among others, the affluence of the society, the extent of the use of

available in the mobile applications of several banks. In practice BLIK is a 6-digit code displayed by the application, which can serve to accept a transaction or a withdrawal from an ATM, just like as if one was paying with a payment card. The number of transactions made with BLIK doubled in the space of a year, amounting to 6.1 million users who made 33 million transactions in 2017, while in 2018 there were already 91 million transactions, i.e. three times as much as in 2017.

banking services, the development of the infrastructure for cashless payments, such as the number of ATMs or POS terminals, the level of consumers' general confidence and the confidence on financial institutions, or safety and the development of the cashless turnover in a given country. The micro-scale is the scale taken from the consumer's perspective. It then translates into the macro-scale. It can be the extent of the use of banking services, the income of a given consumer, the cost of a given payment instrument, its availability, the habits of a given consumer, etc. The choice of a means of payment can also be influenced by consumers' education level, their openness to novelty, place of habitation, costs (defined both *sensu largo* (in the broad sense) or *sensu stricto* (in the narrow sense)), etc.

The definition of costs in the broad sense can be found in the works of Brits and Winder (2005) carried out on studies by the Bank of Holland and the National Bank of Belgium and quoted by NBP (2019) and Przenajkowska and Polasik (2018). Here the costs of payments were divided into external⁴, internal⁵, private/total⁶, and social⁷.

In this article we consider costs conceived in the narrow sense, that is, costs of transaction born by consumers. Costs are understood mainly as a direct monthly charge for account maintenance, a charge for a transaction, as well as for a number of transactions carried out using the payment instrument free of charge, cost of a cash transaction made with the cashless instrument, i.e. cost of the ATM withdrawal and the cost of a transaction made at the point of sale accepting cashless payment.

A summary of knowledge on the costs of payment instruments can be found in the work of Przenajkowska and Polasik (2018), who discuss the issue of costs in the broad perspective of the economy, or, more precisely, the economies of the European Union countries. The results of their research demonstrate that despite its large impact on the total social costs, cash incurs the lowest individual costs of payment realization, and with the increase in the number of electronic transactions, their social costs decreases, as a result of which in the countries where a large number of payment cards are used, they are the cheapest form of payment.

⁴*External costs – payment costs (e.g. charges, commissions) paid by a given member of the payment chain to the other members.*

⁵*Internal costs – all the remaining costs of the given member of the payment chain, i.e. original production/manufacturing costs of the payment service (born by the entity offering service) or costs of using the service (in case of consumer); internal costs are equal to private costs minus the external costs.*

⁶*Private/total costs – sum of the internal and external costs of the given member of the payment chain.*

⁷*Social costs – sum of the internal costs of all the entities in the payment chain; social costs are equal to net total costs. Social costs are defined as resource costs in the sense of capital and labor used in the production of payment services.*

Therefore, the development of the cashless turnover and the growth of the scale of activities in particular countries contribute to the decrease of the costs of the electronic payment instruments, which indirectly affects also the consumers and the costs of payments born by them (Polyakova *et al.*, 2019).

Stavins (2001) in their studies, focus on a set of demographic factors, convinced that in the US demography the consumers' personal traits and preferences influence their choices of the form of payment. Hayashii and Klee (2003) claim that the tendency to use specific payment instruments is closely related to the employment of new technologies by the consumers in the US and the choice of a particular payment instrument depends on the function of transaction (its value and method of payment offered by the acceptor, whether there is the presence or absence of a cashier).

More recent studies are based on these works in order to better evaluate both the influence of the characteristics of transaction and the value and type of the bought item, type of store, means of connecting (remote or face-to face sales, etc.), as well as the limitations on the supply side (e.g. limited choice of the accepted instruments). Bounie and François (2006) sample French consumers to demonstrate that the characteristics of transaction strongly influence the choice of the payment instrument (including cash).

They find evidence of connection to the type of merchandise and the place of purchase (Ardizzi and Iachini, 2013). Kosse (2010) using the results of a survey conducted among the consumers owning payment cards inferred that their level of confidence in financial institutions and the evaluation of the risk of fraud or data theft are the most important factors determining intention to pay using cashless methods. The same reasoning is highlighted in a study carried out in Germany where there is less cashless turnover and financial institutions are relatively distrusted despite the high technological level of the financial sector. These results prove that the general level of development of the financial sector, i.e. the total number of transactions, positively influences the development of cashless turnover, at the same time demonstrating large delayed effects, probably connected to the existing consumers' habits (Goczek and Witkowski, 2015).

Moreover, research on the determinants of the cashless turnover carried out by Ardizzi and Iachini (2013) highlight the differences among consumers' habits concerning payments in different countries, which is a large concern for central banks (NBP 2017, 2018, 2019) which list factors such as cost of use, comfort/ease of use, speed, and safety presented against the background of other determinants as affecting the choice of the form of payment and increasing the share of the cashless turnover.

3. Sample and Methodology

The empirical data presented in the article are part of a primary survey entitled "Key factors in the selection of the payment form by consumers" carried out for the Foundation for the Development of Cashless Transactions in cooperation with the central bank (Narodowy Bank Polski/National Polish Bank), the Foundation Polska Bezgotówkowa (Poland Cashless), and the Ministry of Infrastructure. The questionnaire survey was implemented using Computer-Assisted Personal Interview (CAPI) in the first quarter of 2019 between the 7th and 21st February 2019.

A total of 1005 interviews were carried out with Polish nationals aged 15 and above in all the 16 voivodeships. A random-quota sampling was employed (randomization according to a geographical criterion and quota sampling in order to ensure the sample representativeness). The sample was chosen on the basis of different age, gender, number of family members, level of income, education, place of habitation, extent of the use of banking services, using cashless payment instruments, level of formal economic education, and alternatively other variables offered by a research agency. To ensure the representativeness of the collected data, the edge rim weighting was applied in accordance with the structure of the Polish sampled population. The weighting was conducted according to the gender, age, and education structure of the population.

The questionnaire was split into 6 section relating to 1) the characteristics of the participants; 2) payment preferences which contained 10 closed-ended questions; 3) perception of each payment system which contained 5 closed-ended questions; 4) the most used payment instrument in carrying out transactions, which contained 8 closed-ended questions; 5) the payment instrument used in online transactions which contained 4 closed-ended questions; and 6) 2 questions to enable the measuring of knowledge on payment systems (see Appendix). The data retrieved was entered into SPSS (Version 21) and analysed using descriptive statistics to determine the frequencies and the mean.

Table 1. Sample distribution (N=1005)

Variables	Description	Overall (%) (n=1005)	Cash (%) ¹ (n=394)	Cashless (%) ² (n=288)
Gender	Female	52	49	55
	Male	48	51	45
Age	15-24	13	10	19
	25-39	28	14	40

	40-59	31	27	31
	60+	28	49	10
Education	Below average	45	56	31
	Average	33	32	37
	Higher	22	12	32
Place of living	Village	39	41	33
	City to 20 th.	13	12	15
	City 20-100 th.	19	19	21
	City 100-500 th.	17	18	17
	City over 500 th.	11	10	15
Marital status	Single	22	18	31
	Married/ with partner	66	62	65
	Widow/ widower	7	14	1
	Divorced	5	5	3
Household size	1	12	19	7
	2	32	43	23
	3-4	50	33	61
	5+	6	6	9
Savings	We save part of our income regularly	13	8	20
	We save part of our income irregularly	42	37	46
	We could save some of our income, but we do not do it	15	14	17
	We do save and we can't save our income	29	42	18
Indebtedness	We do not have any debt	63	74	56
	We have credit card debt	7	14	12

	We have mortgage debt (flat house, mortgage loan)	9	4	16
	We have a car credit	6	2	8
	We have a consumer credit / loan for broadly understood consumption	16	15	18
	We have a loan in a bank account	6	5	8
	We have indebtedness in the work establishment	2	2	1
	Others	2	2	2
Financial service using	I don't have bank account	9	20	22
	I have an account, but I do not have a payment card	5	12	0
	I have an account, I have a payment card, but I do not use it	8	18	1
	I have an account, I have a card and I use it, but I do not use internet banking	18	22	9
	I have an account, I have a card and I use it. I also use internet banking	60	27	88

¹Cash - Consumer using always or more often payments in cash

²Cashless - Consumer using more frequently cashless payments

Source: Primary survey – Authors' Compilation.

4. Results

The results show that the most numerous subgroup of consumers includes individuals using cash and cashless payments in equal measure. Among the Polish consumers the best known and the most often used form of cashless payment is contactless card. The least known forms (less than a half of the consumers) include on the one hand a relatively new product, digital portfolio, on the other hand a long existing charge card. The most frequently cited reason for not using innovative forms of payment is the habit of using the old forms. It follows from the primary research that the most often chosen form of payment is cash (39 per cent). 23 per cent pay exclusively with cash, while 22 per cent use exclusively a cashless form of payment. The results demonstrated that consumers most willingly choose a hybrid solution, i.e. they pay with cash as often as cashless (31 per cent). The older a person is the more frequently they pay with cash, on the other hand the younger generation tend to use cashless instruments more frequently. This findings corroborates to the works of Bagnall *et al.*, (2016) who show that the position of cash is still highly in use especially with the older generation.

Among the cashless instruments the best known and the most frequently used are the contactless card (69 per cent) and online account transfer (60 per cent). Our findings corroborate to Klee (2008), who highlight that the likelihood of owning a payment card in a group of parents with 2 children is, *ceteris paribus*, lower than among parents with one child or among people without children. Bergman *et al.* (2007) reached a similar conclusion, although they found the influence of the household size to be negligible. It follows from the results of the primary research and similarly to the study by Klee (2008), that cashless payments are more popular in towns and least popular in rural areas. A relationship between education and the use of payments is also visible – the higher level of education, the larger share of cashless payments. This was also observed by Bergman *et al.* (2007), and Jonker *et al.* (2012) in relation to payment cards, as well as by Klee (2008) in relation to credit cards (see Table 2). Higher level of education, better financial status (objective and subjective), larger financial knowledge are positively correlated with the extent of use of cashless payments (Maison, 2017; Górka, 2013).

Findings from the survey shows that participants feel that 1) ease to pay (48 per cent), 2) safety (48 per cent), 3) speed (43 per cent) and 4) cost of use (41 per cent) in this order are the main influencing factors for payment instrument use.

There is no doubt that all these features are necessary for determining the payment instrument, however one of the most important aspects of accepting and settling payments, both traditional and online is safety. Both the customer and the point accepting payment are exposed to external fraud, therefore great emphasis is put on ensuring that all the criteria of safety are met. However, although suppliers of the cash and cashless forms of payment undertake enormous efforts to make the market of payments secure, sometimes consumers are reckless in making payments and create risks that can be easily avoided.

Table 2. Features of the Ideal Payment Method

Features of payment. Consumers opinion	(%)
Convenience / ease of payment	48
High level of security	48
Velocity	43
Low cost of using	41
Ease of spending control	27
One that I know well is perfect	22
The ability to make payments at any time	17
A large number of points accepting this method of payment	14
Anonymity	13
The ability to make payments without leaving home	9
I don't know	1

Source: Primary survey – Authors' Compilation.

The choice of the forms of payment depends on how consumers evaluate their features. Both the secondary research (NBP 2018; 2019) and the primary research prove that in Poland cash still predominates over the cashless forms. Cash definitely dominates in the settlements between natural persons, while cashless payments (particularly e-transfer) prevail in on-line transactions and in paying bills. Both cash and cashless forms are used for transactions carried out at stationary points of sale.

Although, paying methods must be convenient and safe, of importance is also speed of paying and low cost of use of the paying instrument (Thalassinos and Thalassinos, 2018; Rupeika-Apoga *et al.*, 2018). In addition, every fourth consumer doesn't intend to give up paying in cash, and every fifth declare their readiness to use the cashless forms of payment. Every fourth consumer believes that the fees charged by banks for maintaining an account, using a card and other cashless payment instruments are too high (5% far too high and 20% rather high). 37% believe they are low and 38% have no opinion. Almost half of the respondents (46%) considered the time needed to reach the ATM and the time of cash withdrawal as a cost, while 30% considered this an expense. There were also those who considered important (41%) costs associated with offering and handling payments borne by other entities, such as banks, POS terminal operators, ATM operators and stores. For 30% this was irrelevant and 29% have no opinion in this regard.

Cash is definitely associated with the lowest cost, which is no surprise. As to the cashless forms of payment, the lowest cost option is the contactless card, essentially intended for everyday transactions, including those of low value, which is why cost is a significant determinant of its choice. The most expensive, according to the consumers, is traditional bank transfer. The most difficult to determine was the cost of payments made using the phone, which was assessed by consumer as medium cost, i.e. neither high nor low.

With regard to the level of security of the cashless payments, consumers evaluate the following payments systems as the most secure: 1) traditional bank transfer, 2) bank standing order, 3) order for payment, and 4) online account transfer, i.e. those forms of payment realized by banks and that have been long established payment systems, to which consumers have been accustomed too for years.

They also evaluate highly the security level of cash, although it does not rank in the first place, but, quite surprisingly, features second after the traditional bank transfer. With regard to the ease of use, cash leads followed by the contactless card. The most complicated are digital mobile portfolios and remote payment using the phone. With regards speed, the contactless card is seen as the fastest means of payment, ahead of cash, with traditional bank transfer seen as being the slowest means of payment (see Table 3). The traditional bank transfer can be instant, but it requires additional costs, although this is now minimal when compared to previous years.

Table 3. Features of consumer payments in relation to selected forms of payment

	Cost ¹			Security ²			Convenience ³			Velocity ⁴		
	Form of payment	T2B (%)	Mean	T2B (%)	Mean	Mean	T2B (%)	Mean	T2B (%)	Mean	Mean	
Remote payment by phone												
55	63	71	55	59	77	58	65	79	88	88	88	
3	6	3	19	3	3	3	6	2	1	1	1	
4.08	4.07	4.22	3.64	4.19	4.30	4.25	4.2	4.42	4.63	4.63	4.63	
48	77	69	85	44	75	50	66	62	78	78	78	
12	0	6	1	14	5	10	6	13	4	4	4	
3.78	4.4	4.08	4.44	3.65	4.22	3.9	4.18	3.87	4.26	4.26	4.26	
67	67	77	75	66	79	67	79	88	93	93	93	
5	5	2	5	6	2	2	1	2	1	1	1	
4.06	4.06	4.15	4.11	4.20	4.22	4.3	4.41	4.6	4.7	4.7	4.7	
65	67	77	58	74	79	67	79	87	87	87	87	
2	5	2	18	1	2	2	1	2	3	3	3	
4.26	4.06	4.15	3.63	4.40	4.22	4.3	4.41	4.58	4.43	4.43	4.43	

Direct debit	63	6	4.05	75	1	4.36	72	3	4.17	68	4	4.05
Digital / mobile wallet	43	4	4.04	41	5	3.92	48	5	3.99	53	3	4.17

Legend:

¹Assessment of payment methods in terms of cost: 5-step scale, where 1 = very low cost level 5 = very high cost level; B2B - two lowest answers; T2B - two highest answers.

²Assessment of payment methods in terms of security level: 5-step scale, where 1 = very low level of security 5 = very high level of security; B2B - two lowest answers; T2B - two highest answers.

³Assessment of payment methods in terms of convenience: 5-step scale, where 1 = very simple 5 = very complicated B2B - two lowest answers; T2B - two highest answers.

⁴Assessment of payment methods in terms of velocity: 5-step scale, where 1 = very slow 5 = very fast; B2B - two lowest answers; T2B - two highest answers.

Source: Primary survey – Authors' Compilation.

As can be seen in Table 3, ease of payment is a significant feature of almost all payment instruments. Basically, in general, it can be said that convenience and ease of payment is the most significant influencing required feature for the more traditional forms of payment (such as cash on delivery, high-speed transfer, online account transfer with the account number required, payment online with payment card using CVV2, payment with payment card on delivery, or BLIK). Regarding the innovative forms of payment, such as payment using the phone (but using applications other than BLIK) or using a digital/mobile portfolio, the essential feature is safety. However, consumers' choice is effected also, by the length of time the payment instrument has been in use on the market.

Although, the cost factor resulted important, consumers evaluated it as the least significant of all the features. This may be since one of the main considerations when designing innovative payment instruments is lowering costs, therefore making this feature insignificant when comparing to the remaining features.

It can be inferred from Table 4 that the features of the paying instruments or the forms of payment play a significant role in comparison to the other determinants influencing the choice of the form of payment, both cash and cashless. While all the four features of paying instruments mentioned above are the most significant for the consumers making cashless payments online, for cash payers low cost is less significant than habit.

Table 4. Features of payment instruments compared to other determinants of the choice of payment methods in transactions for purchases over the internet (%)

Form of payment Determinants	Features of payment instruments				Other determinants				
	Convenience	Security	Velocity	Cost	Habits	Expenditure control	Prefering payment by seller	Anonymity	Other reasons
Cash	64	58	36	16	32	11	6	6	1
Fast transfer/ on - line payment	79	52	73	31	18	6	11	4	0
Banking transfer from internet account	96	57	48	32	25	13	6	2	0
Payments cards (via Internet)	68	44	59	34	23	5	9	6	0
Payment card on delivery	73	38	59	37	25	6	5	8	0
BLIK	70	39	65	33	11	4	0	2	2
Payment vi phone (with application without BLIK)	53	29	65	38	12	6	12	12	0
Cyber/ mobile wallet***	39	30	48	30	30	17	4	17	0

Legend: For each form of payment, the respondent could choose 3 reasons, therefore the results do not add up to 100%. Percentage basis: respondents who most often choose a given payment method $N = 218/248/212/111 / N = 63/46 * / 34 * / 23 **$; * low base; ** very low base; *** (Apple Pay, Google Pay, Master Pass) and others.

Source: Primary survey – Authors' Compilation.

5. Conclusions

The above presented analysis demonstrated the results of the primary research conducted in 2019 among the consumers in Poland. The purpose of this research

was to show the factors influencing consumers' choice of the form of payment when carrying out transactions.

Findings show that despite the development of the cashless payments, the position of cash is still powerful, because it fulfills consumers' expectations and although, the role of cashless payments increases, this is not happening at the fast pace that the institutional stakeholders of the financial market would expect. Cash in many respects has a lead on the market of the consumer payments, both with respect to the ease of use and the cost of transaction.

Costs along with safety, speed and ease of use are found to be the main factors that determine the choice of the payment instrument, but aren't the most significant determinant of the choice of both the cash and cashless forms of payment. As regards the cashless payments, the contactless card has a lead. Consumers choose it because of the speed of transaction and ease of use, particularly in the low value transactions (up to approximately 10-12 euro) without entering the PIN.

However, although fears concerning safety arise among the users of the contactless card, it is the most popular form of cashless operations. These fears are to some extent justified, although they concern all the payment instruments. Where money is involved, there is always fear of a loss. The fears concerning safety can also be connected to the relatively short period that cashless payments have existed on the Polish market. Consumers need time to get accustomed to a new product and accept it.

To establish a hierarchy among the analyzed features of all the payment forms – both cash and cashless – the most significant feature is ease of carrying out transactions, and the least significant is low cost of transaction. As to the two remaining features – safety and speed – they are both important depending on the instrument.

Overall, the four features of payment are significant both in the choice of the cash and cashless forms of payment. The most significant feature is ease of carrying out transaction, then its speed, safety, and the least important is cost. Somewhat surprisingly, safety is not a top priority for all payment systems chosen. This may be because consumers feel secure when carrying out transactions, as they have no knowledge on financial frauds, since such information is not always advertised by the financial institutions.

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**Appendix:
Interview Schedule**

Section 1 -Participants' Characteristics	
Sex	Male Female
Age	Between 15-24 Between 25-39 Between 40-59 60 and above
Education	Primary and Secondary School and below Undergraduate Post Grad
Place of Residence	Village City to 20 thousand persons City 20-100 thousand persons City 100-500 thousand persons City over 500 thousand persons
Section 2 - Payment Preferences	
Which payment method do you choose most often?	<ul style="list-style-type: none"> • I pay only / almost exclusively in cash, • I pay more often in cash than cashless, • I pay in cash, as often as cashless, • I pay more often cashless than in cash, • I don't remember
How did you pay for your last purchase?	<ul style="list-style-type: none"> • cash, • with a contactless card • by traditionally (contact) card contactless using a telephone • Bank transfer • Other • I do not remember
Reasons for not using innovative forms of cashless payments Respondent could choose up to 3 reasons.	<ul style="list-style-type: none"> • I am satisfied with the forms of payment that I use • I do not like new products • I am afraid that they are not as secure as traditional forms of payments • I have no Knowledge about them • I rarely shop online • Technical problems, lack of experience in using them • A small number of places where they are accepted • No one offered them to me • Different reasons • High price of the device needed to make the payment
a) Most frequently used methods When: <ul style="list-style-type: none"> • Shopping at service and retail outlets (stationary) • Internet shopping • Paying bills (electricity, gas, telephone, etc.) • Settlements with other natural persons 	<ul style="list-style-type: none"> • Traditional bank transfer • Cash • Debit card • Credit card • Charge card • Proximity card • Bank transfer from an online account (in the online

<p>b) Please, rate your knowledge and use of the following cashless forms of payment Rate as: I don't know = 1, I know but I don't use it = 2, I know and I use it = 3</p>	<p>banking service)</p> <ul style="list-style-type: none"> • Contactless payment by phone • Remote payment by phone (transfer) • BLIK • Fast transfer / online payment (PayU, Przelewy 24, DotPay etc.) • Digital / mobile wallet (Apple Pay, Google Pay, MasterPass etc.) • Standing order • Direct debit
<p>What are the ideal features of that a payment system should have – respondents can choose up to 3 features</p>	<p>a) Velocity b) Ease of use c) Cost d) Safety</p>
<p>How do you assess the fees you are charged by the bank for keeping an account and using the card or other non-cash payment instruments?</p>	<ul style="list-style-type: none"> • They are definitely high • They are rather high • Neither high nor low • They are rather low • They are definitely Low
<p>a) Is the time necessary to reach the ATM and the time to withdraw cash a cost for you? b) Is it important for you what costs related to offering and handling payments, are paid by other entities, such as, for example, banks, POS terminal operators, ATM operators, stores</p>	<ul style="list-style-type: none"> • Definitely yes • Rather yes • Difficult to say • Rather not • Definitely not
<p>Which feature best describes your attitude towards cash and cashless payments</p>	<ul style="list-style-type: none"> • I am used to paying in cash and I do not intend to change it • I am used to paying in cash, but I am ready (willing) to change it, if I have (almost) anywhere the possibility of paying cashless • I prefer to pay cashless, but sometimes I use cash (for example when shopping for small purchases) • I prefer to pay cashless and pay in cash only when there is no possibility of paying cashless • I definitely prefer to pay cashless and I could do without cash if it was possible • It is difficult to say
<p>Section 3 - Perception of each payment system</p>	
<p>a) Please, assess the level of satisfaction with these forms of payment, from which you are using, using a scale from 1 to 5, where 1 means that you are very unhappy and 5 that you are very happy b) Please rate each of the features listed below on the scale of 1 to 5 in terms of velocity, where, 1 – very slow, c) Please rate each of the features listed below on the scale of 1 to 5 in terms of ease of use, where, 1 – very simple, 5- complicated d) Please rate each of the features listed below on the scale of 1 to 5 in terms of cost, where, 1 – very low cost, 5- very high cost e) Please rate each of the features listed below on the scale of 1 to 5 in terms of safety, where, 1 – very low safety level, 5- very high safety level</p>	<ul style="list-style-type: none"> • Traditional bank transfer • Cash • Debit card • Credit card • Charge card • Proximity card • Bank transfer from an online account (in the online banking service) • Contactless payment by phone • Remote payment by phone (transfer) • BLIK • Fast transfer / online payment (PayU, Przelewy 24, DotPay etc.) • Digital / mobile wallet (Apple Pay, Google Pay, MasterPass etc.) • Standing order • Direct debit
<p>Section 4 - The most used payment instrument in carrying out transactions</p>	
<p>Which of the payment methods do you most willingly choose at service and retail outlets?</p>	<ul style="list-style-type: none"> • Traditional bank transfer • Cash • Debit card • Credit card • Charge card • Proximity card • Bank transfer from an online account (in the online

	<ul style="list-style-type: none"> • banking service) • Contactless payment by phone • Remote payment by phone(transfer) • BLIK • Fast transfer / online payment (PayU, Przelewy 24, DotPay etc.) • Digital / mobile wallet (Apple Pay, Google Pay, MasterPass etc.) • Standing order • Direct debit
Why do you usually choose this form of payment? Respondent could choose 3 reasons	<ul style="list-style-type: none"> • Convenience/Ease of payment • Velocity • Habit • Security • Low cost of use • Better control of expenses • No cash payment possible • Anonymity/ Willingness to avoid transaction registration • Preference for this form of payment by the seller • Other reasons
Which of the payment methods you think is faster for the customer?	<ul style="list-style-type: none"> • Difficult to say • Cash is faster than proximity card • Their Speed I comparable • The proximity card is faster than cash
If you had the option of paying with cash and a contactless card, how would you pay?	<ul style="list-style-type: none"> • Certainly in Cash • Rather in Cash • Difficult to say • Rather with proximity card • Definitely with proximity card
What payment method you choose most often depending on the amount that you are paying? a) Up to 10zł, b) 11-50zł, c) 51-100zł d) 101-500zł e) 500-1000zł f) Over 1000zł	<ul style="list-style-type: none"> • Traditional bank transfer • Cash • Debit card • Credit card • Charge card • Proximity card • Bank transfer from an online account (in the online banking service) • Contactless payment by phone • Remote payment by phone (transfer) • BLIK • Fast transfer / online payment (PayU, Przelewy 24, DotPay etc.) • Digital / mobile wallet (Apple Pay, Google Pay, MasterPass etc.) • Standing order • Direct debit
Which payment method you choose most often for the following purchases?	<ul style="list-style-type: none"> • Public transport Tickets • Household help • Home/flat renovation • Healthcare • Education goals • Recreational, culture • Purchase of food • Using the car • Larger purchases • Clothing, shoes • Other
What form of payment do you most often use in the following places (situations)?	<ul style="list-style-type: none"> • Bazaar/Market • Hairdresser • Public Transport • Doctors Clinic • A small estate shop • Offices – public administration • Fast food • Cinema, Theatre, etc. • Restaurant

	<ul style="list-style-type: none"> • Shopping abroad in stationery stores • Supermarkets • Shopping Centre • Gas station
<p>How many times in the last month did you resort to cash payment instead of cashless in the following situations?</p> <p>a) Not even once b) 2 to more times c) Difficult to say d) 1 time e) I always pay in cash f) Not applicable</p>	<ul style="list-style-type: none"> • To high purchase amount • Too long a time needed to pay cashless • Too low purchase amount • Failure of terminal • Lack of terminal
Section 5. The payment instrument used in online transactions	
Do you carry out purchases online?	<ul style="list-style-type: none"> • I never bought Via the Internet • Yes, but very rarely • Yes, relatively often • Yes, I buy most things on the internet
<p>Please specify how often you use the following payment methods when paying for internet shopping?</p> <p>1. Often 2. Sporadically 3. Never</p>	<ul style="list-style-type: none"> • Traditional bank transfer • Debit card • Credit card • Charge card • Proximity card • Bank transfer from an online account (in the online banking service) • Remote payment by phone BLIK • Fast transfer / online payment (PayU, Przelewy 24, DotPay etc.) • Digital / mobile wallet (Apple Pay, Google Pay, MasterPass etc.) • Standing order • Direct debit
Why do you most often choose this form of payment for online shopping? respondent could choose up to 3 reasons	<ul style="list-style-type: none"> • Convenience/Ease of payment • Velocity • Habit • Security • Low cost of use • Better control of expenses • No cash payment possible • Anonymity/ Willingness to avoid transaction registration • Preference for this form of payment by the seller • Other reasons
Which payment method do you usually use for the following online purchases?	<ul style="list-style-type: none"> • Building and Finishing Materials • Culture, Recreational • Cars, Parts, Accessories • Food • Cosmetics, Medicines • Larger Purchases (e.g. Household appliances, furniture..etc.) • Electronic equipment and software • Clothing, Footwear • Children's necessities • Financial services • Sports equipment • Travels, trips
Section 6. Knowledge and financial skills in the field of payment	
How would you rate your level of knowledge and finance skills?	<ul style="list-style-type: none"> • I have a general Understanding • Good • Very Good • Difficult to say • I don't have any knowledge at all
Which of these statements are true, false, and I do not know?	<ul style="list-style-type: none"> • Payment Cards are only used to withdraw money at an ATM • A credit card is no different than a debit card

	<ul style="list-style-type: none">• Only adults are allowed to use payment cards• Debit cards give you're the opportunity to borrow when you need it, and pay back when you want – up to 54 days without interest• The cash-deposit machine is a device used to accept payments to the customer's bank account• For contactless payments up to PLN50, you do not need to enter your PIN code• Paypal allows you to make payments via the internet• BLIK is a Polish mobile payment system, it is a six-digit code displayed by the bank's mobile application, which can be used to accept transactions or withdrawals from an ATM, exactly as if we were paying with a card• A prepaid card is a card which use requires prior cashing• PayU is a service that allows you to make a payment with one click - by bank transfer or card, without each login to the bank and rewriting SMS passwords or entering card details• The charge card is the card the user can manage with the credit limit set by the bank and spend money up to the amount, however, at the end of the settlement period, usually 30 days, he must repay the entire amount borrowed• Acquiring data from the card, ie card number, expiry date and CVV2 / CVC2 code, is sufficient to make online payments• The virtual card is used only for online purchases• The PayByLink service is about a full integration of the payment process with the banking system. When finalizing the purchase, all transfer details are filled in automatically and their edition is blocked. As a result, the buyer does not have to enter data manually• The Pay Per Call service enables the customer to obtain the access code for a specific service - e.g. film, web content - by calling a special number 0-70x-yyy-yyy
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