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Behaviour and Attitudes in Relation to Electronic Payment Systems: Comparison between the UK and the Czech Republic

Chování a postoje zákazníků ve vztahu k elektronickým platebním systémům: Porovnání Velké Británie a České republiky

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- 1) Prostudování teoretických poznatků o existenci platebních kultur, novodobém vývoji peněžních prostředků a chování zákazníků ve vztahu k hotovosti a elektronickým platbám se zaměřením na platební karty
- 2) Bližší prozkoumání platebních systémů ve Velké Británii a České republice
- 3) Výběr a provedení vhodného typu průzkumu zjišťujícího rozšířenost, oblíbenost a faktory ovlivňující používání různých platebních metod v pozorovaných zemích
- 4) Analýza primárních dat a diskutování závěrů (společné a rozdílné znaky ve vybraných platebních kulturách, převažující platební metody a zjištění překážek při používání elektronických plateb)

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Podpis:

Resumé

Počet elektronických plateb stoupá ve většině rozvinutých zemí po celém světě. Tento trend vyvolává četné představy o rychlém postupu zákazníků k bezhotovostním platbám. Tato práce zkoumá používání a oblíbenost různých platebních metod se zaměřením na hotovost a platební karty ve Velké Británii a České republice. Tato studie se také zabývá hlavními faktory, které mají vliv na používání elektronických platebních metod. Průzkum byl proveden jak ve Velké Británii tak v České republice, což umožňuje srovnání rozdílů a zjištění podobností v těchto dvou pozorovaných zemích. Výsledky této práce poukazují na skutečnost, že existují rozdíly v platební kultuře Velké Británie a České republiky jako je například větší rozšířenost a důvěra v elektronické platby ve Velké Británii. Nicméně hotovost stále zůstává převládajícím platebním instrumentem z hlediska množství transakcí v obou pozorovaných zemích. Analýza dat také odhaluje, že nedostatek bezpečnosti při používání elektronických plateb představuje jeden z největších problémů ve Velké Británii i České republice.

Klíčová slova: platební systém, platební kultura, platební karta, hotovost, bezhotovostní společnost

Abstract

There has been a distinct growth in number of electronic payments in majority of advanced countries all over the world. This trend incited numerous notions of rapid moving toward a cashless society. This paper examines and compares use and acceptance of various methods of payment with focus on cash and payment cards in the UK and the Czech Republic. It also investigates main factors which discourage customers from using electronic payments. The research has been conducted in the UK and the Czech Republic which enables comparison of differences and revelation of similarities in the two observed countries. Findings of this study suggest that there are certain differences in payment cultures of the UK and the Czech Republic such as much greater faith in and widespread of electronic payments in the UK than in the Czech Republic. However, cash remains the most popular and predominant payment instrument in terms of volume in the both observed countries. The data analyses also revealed that lack of security presents one of the three most problematic issues in the UK and the Czech Republic.

Key words: payment system, payment culture, payment card, cash, cashless society

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Chapter 1 Introduction

Use of electronic payment technology has been increasing in majority of advanced countries all over the world. People are using electronic methods of payment in more and more everyday situations. Progressive technological development in data processing, computer and information technology contributes to electronic revolution in banking and diffusion of cashless methods of payment. Numerous studies support the notion that world is moving to eliminate cash.

Many recent studies have focused on development and use of electronic forms of payment in general or they have investigated acceptance of electronic payments in Western European countries or countries in the Far East. However, little attention has been paid to investigations of popularity and acceptance of various payment mechanisms in Central and Eastern European countries such as in the Czech Republic. Development of banking sector in these countries differs from development of banking sectors in other European countries. The period and transformation of centrally planned economies in Central and Eastern Europe presents one of the main reasons. This period did not support development of bank sector and new forms of payment which among other factors such as social and culture variables and customs influenced payment culture in the Czech Republic and other Central and Eastern European countries.

This paper sets out to provide fresh insights into usage and barriers to acceptance of payment instruments with focus on cash and payment cards in two European countries – in the United Kingdom (the UK) and the Czech Republic. These two countries were selected due to different historical evolution and possibility to compare findings of data analyses in the two observed countries. Firstly, the study aims to investigate how popular various payment methods are in each of the countries and to compare the findings. Secondly, it sets out to examine which factors discourage customers from using electronic forms of money and if the factors significantly vary in the UK and the Czech Republic. Thirdly, it aims to analyse if there are any relevant differences or similarities in consumer behaviour in relation to payment methods among different age groups and also among the same age groups in the UK and the Czech Republic. Finally, this paper investigates if there can be observed any relationships

between acceptance of electronic payments and level of income, gender, security fears or number of inhabitants in the place of residence.

The process of learning about customer payment preferences, requirements and reasons for choosing a particular payment option can contribute to development of existing payment instruments and introduction of new payment methods in the future.

This paper is divided into five further sections. The next section reviews various English and Czech literature sources concerning payment methods and consumer behaviour in relation to them. It compares and contrasts major theories and studies which focus mainly on usage of traditional payment instrument cash and acceptance and usage of electronic payment methods. This chapter also highlights numerous factors, such as security or sociodemographic characteristics, which are parts of decision making process and which influence choice of a payment method. Finally, it focuses on and evaluates two European payment systems – the payment methods in the UK and in the Czech Republic – where certain differences in attitudes and behaviour towards means of payment can be observed.

In chapter three the original research procedure is described and also rationale for the research methodology appropriate for this study is provided. Various research approaches and methods are considered carefully and the most suitable research strategy is chosen in this chapter. Consequently, the size and composition of the sample, questionnaire design, pilot study and limitations of the study are discussed.

Chapter four provides results of analysis of the primary data collected in the UK and the Czech Republic. This chapter also contains testing four hypotheses which examine the strength of relationship between variables and test whether the variables are significantly associated. In the next chapter the connections between findings and the literature review are made. The last chapter briefly summarises the main points and findings of the study.

Chapter 2 Literature Review

2.1 Payment cultures and cashless society

Payment cultures are quite clearly distinguishable in European countries (Böhle and Krueger, 2001; Turban et al., 2002). There are various factors which influence the choice of payment method and lead to particular payment culture. Among the most important factors belong social and culture variables and customs, level of development of financial system, legal constraints, technological maturity and use and historical evolution of a country. Worthington (1995) adds that European countries differ in payment instruments and identifies Europe as “a patchwork of markets” characterised by various attitudes towards means of payment.

On the other hand main trends concerning payment instruments can be observed. Singh (2004) highlights raising usage of non-cash payments in much of the Western world. There has been a distinct growth in plastic card payments (Stephenson, 1993; Szmigin and Foxall, 1999) and other kinds of electronic payment methods.

It has been suggested that moneyless or cashless society will become reality a few decades ago. Richardson (1970) argued that “the next step in the innovation in payment system will be the complete elimination of all material forms of money”. Recent studies rather leave this forward conception and put the accent on a lasting dominant position of physical cash. Howard et al. (2006) claims that “the modern trend is for cash and cheques to be replaced by the use of plastic money or funds transfer, which involve a large degree of automation” but also notes that cash remains substantial payment instrument. A number of studies agree with this concept (Buck, 1997; Lefebvre, 1999; O’Mahony et al., 2001; Singh, 2004; Worthington, 1995).

Mehta (1999) defines cashless society as

“a society whose economy’s critical volume is transacted with cashless payment methods such as payment cards, ACH (Automated Clearing House), and on-banking”.

2.2 Reasons for usage of traditional payment method – cash

According to Scott (1991) money can be divided into two basic forms: inventory money and electronic money. The first type includes coins, notes and paper cheques. This traditional means of money is still largely used nowadays.

Previous findings support the notion that the most popular and dominant payment method in volume terms is still cash (Buck, 1997; Lefebvre, 1999; Worthington, 1995; Worthington, 1998). The study of O'Mahony et al. (2001) affirms that “depending on the country involved, somewhere between 75% and 95% of all transactions are made by cash, even though the value of these transactions is for the most part quite low”. The study of Böhle and Krueger (2001) deals with the value of cash transaction and emphasizes that especially small payments still tend to be made in cash.

Payment by coins and notes seems to have a large number of positive aspects which contribute toward its importance and grace. Its typical distinctiveness is a physical and also exchangeable form (Buck, 1997; Howard et al., 2006). O'Mahony et al. (2001) add other advantages of cash. They outline the simplicity, efficiency, quite easy portability (cash in paper form) and no transaction record of this traditional payment instrument. The last feature appears to be linked especially by illegal activity. They also emphasize the invention and usage of cash machines which enable easy access to cash. According to APACS (the UK payments association) “cash machines supply 63% of all cash to individuals” in the UK (Cash Machines in the UK, 2007). The largest number of ATM (Automated teller machine) withdrawals is made by Britons in comparison with other countries in the EU (Quinn, 2006). Mayer et al. (1996) point out extreme liquidity and no charges for cash payments. This benefit can be used for low value payments. However, O'Mahony et al. (2001) continue by emphasizing that there are certain issues, for example larger amount of money or counterfeit issue, which seem to cut the volume of cash payments. Scott (1991) concurs and states some risk factors related to this kind of payment method, clearly theft and hijacking.

These difficulties belong to the most important factors which lead to utilization of financial services and electronic means of payment. Furthermore, progressive technological development in data processing, computer and information technology and

telecommunications contributes to electronic revolution in banking and diffusion of cashless payment instruments.

2.3 Electronic money and electronic banking

Considering advances in technology and electronic era which has already reached the banking industry, it seems to be not necessary to use the physical form of money. There could be only entries instead of coins and notes. This electronic money has been defined by Scott (1991) as “money that exists as credit balances of depositing customers in financial institutions, which may be electronically transferred among banks, without physically circulating”. One of the main characteristics appears to be intangibility and that is the reason why it cannot be physically exchanged or stored. Electronic impulses changes entries - debits and credits – to customer accounts (Scott, 1991).

The rather slow but perceptible move to electronic-based payments might be caused by a large number of factors. Firstly, one of the main advantages which contribute to cash replacement is cost effectiveness and efficiency (Lefebvre, 1999; Scott, 1991). Lefebvre (2001) points out that costs associated with cash handling are averaged by various sources at 5-7 per cent of its value. This fact represents significantly higher level of cash handling costs than for other payment methods. However, there were and still appear doubts about cost effectiveness of electronic payment systems. Kirkman (1987) suggested that there will remain uncertainty about cost effectiveness of cashless payment instruments and acceptance of new technology and its changes in the future. A study of Watson et al. (2000) explains that various technical issues concerning electronic forms of money have not been solved yet but comments that there is a large number of experts who are working at fixing the problems. Watson et al. (2000) incline to the opinion that “electronic money promises efficiencies that will reduce the costs of transactions between buyers and sellers” if the most serious problems will be solved. In spite of a number of reservations, new information, communication and microchip technologies appear to contribute to simplification and effectiveness of electronic payment systems.

Secondly, cashless payment transactions seem to be convenient (Scott, 1991; Stephenson, 1993; Worthington, 1995). The users of electronic payment mechanism do not need to carry

heavy wad of currency or suffer from shortage of cash in their wallets. The users have permanent access to their funds. They can withdraw money from automated teller machines, check account balance or pay bills simply from their homes twenty-four hours a day. The users do not have to deal with opening hours of financial institutions. There is also a drawback to this easy means of electronic payment method spending. Stephenson (1993) emphasizes that continual access to money leads to impulse buying by consumers. This behaviour can represent one of the reasons for insolvency of modern society. Stephenson (1993) continues by pointing out that a majority of these debts is incurred by plastic cards than by the traditional hire purchase.

Another important point to note is reduction of possibility of theft or robbery especially when dealing with large amount of money (Stephenson, 1993) and counterfeit risk (O'Mahony et al., 2001; Puri, 1997).

Finally, Watson et al. (2000) suggest that another positive aspect of electronic payment methods is the internationalization. Electronic systems considerably influence banking markets and enable financial institutions to operate on a global scale (Dietel et al., 2001; Scott, 1991). Banking markets can be broader and that is why new competition among various financial institutions can be created by this step.

2.4 Changes of money

As technology and ways of payment change, the form and general perception of money change as well nowadays.

2.4.1 Virtuality of money

Money becomes more and more non-physical and conceptual. According to Singh (2004) electronic money “cannot be held, touched or seen”. The virtuality of this kind of money is also supported by other features – it cannot be stored or exchanged (Scott, 1991). This virtual money exists as electronic information which is important not only for banks or other financial institutions but also for households. This information largely influences the way of controlling and managing household money (Singh, 2004).

2.4.2 Impersonalisation of money

Another obvious transformation of money represents impersonality of electronic forms of money (Singh, 2004). Forms and channels of money which becomes increasingly virtual contribute to impersonalisation of money transactions (Singh, 2004). Customers have the possibility to pay bills, check account balance, withdraw money etc. without dealing with employee of bank or other financial institutions. They can simply effect numerous transactions themselves. On the other hand the study of Singh (2004) highlights that customers still require personal attention often in need of financial advice or when effecting more complicated financial operations. They tend to seek personal attention when thinking of risky financial operations. In this case customers often require higher level of trust than electronic transfers can yet provide.

2.4.3 Approach to money

The approach to money changes as well. According to the traditional economics definitions, money performs three significant functions. It is understood as a medium of exchange, a unit of account and a store of value (Fialová, 2004; Hladík, 1996; Singh, 2004). The classical sociologists also deal with money and describe relation between money and society but they observe only one way relation – money influences society but money itself remains without changes (Singh, 2004). Nevertheless money does not always have to fulfill these characteristics in modern economies (Scott, 1991; Singh, 2004). This aspect can be observed especially when looking at transactions of cashless forms of money which represent transfer of information. Singh (2004) emphasizes that pieces of plastic, for instance, can be accepted as money “only because they are part of social network of trust”. People generally accept it, call it money and that is why it appears to be money (Singh, 2004). Howard et al. (2006) add that “anything can serve as money that habit or social convention and successful experience endow with the quality of general acceptability”. It tends to show that money is linked not only with market but also with non-market view of social life. It is important to be introduced a well-established “network of trust and meanings” especially around nonphysical electronic form of money (Singh, 2004).

2.4.4 Controlling money in the household

Power over money in the household is also developing. Increasing usage of electronic methods of payment transforms money into information. The power over money more and more depends on control of information. New forms of money and technology tend to be used

more by men (Pahl, 1999; Singh, 2004). It could be explained by men's greater interest in computing and modern technology (Singh, 2004). This influences the gender balance of control of money in the family. According to Pahl (1999) "the man who keeps the accounts for the couple on his computer spreadsheet has more power in financial matters" than woman, who only provides the information which will be entered on that spreadsheet. The work of Singh and Ryan (1999) affirms this notion.

2.5 Possible barriers to adoption of electronic payment systems

There is a large number of factors which influence the acceptance of electronic payment instruments but security appears to be one of the most principal issues (Dietel et al., 2001; Howard et al., 2006; Watson et al., 2000).

2.5.1 Issue of security

It is believed that traditional paper-based money evokes much more trust and security and that this physical form of money is seldom directly linked with the possibility of fraud perpetration than in comparison with electronic forms of money which does not physically circulate (Turban et al., 2002). When customers pay cash, the problem of trust or security seldom arises. High level of security and also authentication is necessary for successful function of any payment system, paper or electronic, otherwise people would refuse to use it (Watson et al., 2000). Howard et al. point out that level of security of payment systems, networks and communication has an essential impact on customer acceptance of electronic payment instruments.

Numerous controls, devices and systems which provide security and minimize risk of payment transaction are installed to forgo unauthorized access to private information such as payment card numbers or social security numbers (control of access), to assure that users of certain service are entitled to effect transactions (authentication), to investigate users' identity (identification) and forgo repudiation of transaction which made rightful account holders (nonrepudiation of transaction) (Howard et al., 2006).

Dietel et al. (2001) concur and add another important security requirement, that is privacy, and explain this factor as certainty that provided confidential information will not be obtained by a third party without users' permission or knowledge.

The study of Buck (1997) divides security requirements from user's viewpoint into three groups – safety of payment, privacy of consumer and also trustworthiness of retailer. Buck (1997) explains that users want to be sure that their funds will not be stolen, lost or used for illegal purposes during electronic payment transactions. Consumers also require privacy of transactions. It can be achieved by removal of any identity information of consumer in the payment transaction itself (Buck, 1997). This requirement seems to be more complicated or unrealizable in some cases, for instance, where the electronic payment process requires the identity check or where third party has to be involved. No transaction record remains one of the advantages of cash in comparison with electronic payment systems (O'Mahony et al., 2001). The last requirement – trustworthy – represents reliability of the payment mechanism and other party or parties involved in transaction (Buck, 1997).

Scott (1991) points out that numerous customers are afraid of the possibility of fraud, theft or interference in confidential information with usage of electronic payment systems.

Customers' fear of the potential identity theft and usage of private information seems to be right. Previous studies support the notion that the number of security attacks is still increasing (Dietel et al., 2001; Turban et al., 2002). Turban et al. (2002) note that among 77 per cent of customers which use Internet but do not buy products or services online, 86 per cent state that the fear of abuse of confidential information or other security issues keep them from purchasing goods and services online.

Security attacks and system and data security seem to considerably influence the acceptance of electronic payment methods. There have been numerous cases across the world in which personal details have been lost or stolen from banks, online retailers or government departments.

Attacks aimed at obtaining payment card numbers appear to be not unusual. 300,000 credit card records from CD Universe Website were stolen by a Russian cracker Maxum in January 2000 (Turban et al., 2002). Another unpleasant attack appeared when a hacker Curador stole

26,000 credit card numbers after breaking into electronic commerce (EC) sites in five countries – the United Kingdom, United States, Canada, Japan and Thailand – in spring 2000 (Turban et al., 2002).

Serious fear of identity fraud caused loss of two computer discs which contained the personal data of 25m British individuals and 7m families in November 2007 (Data protection: Lost in the post, 2007). The discs included names, addresses, bank-account details, dates of birth and other confidential data sought after by identity thieves who could use it to empty bank accounts, produce fake documents or commit fraud.

In the Czech Republic short-term malfunctions of online banking or cash machines seem to be not rare. Majority of Czech banks have to face such problems. The longest recent system breakdown happened in December 2007 when the most popular Czech bank Ceska Sporitelna had serious problems with provision of online banking services. The system breakdown took almost whole afternoon (České spořitelně vypadlo internetové bankovníctví, 2007). Similar problems usually cause waves of doubts about security and reliability of the system.

2.5.2 Issue of perceived risk

Perceived risk can also represent one of the reasons for reluctance against usage of electronic payment methods (Ho and Ng, 1994; Rotchanakitumnuai and Speece, 2003; Szmigin and Bourne, 1999; Wang et al., 2003). The concept of perceived risk was introduced by Bauer (1964).

The term perceived risk applies to “the amount of risk consumers perceive to be present in the purchase decision” (Szmigin and Bourne, 1999).

It represents quantity of uncertainty, perceived by customer, which is involved in available information and volume of possible consequences of certain purchase (Szmigin and Bourne, 1999). The risk tends to increase if a large number of information for effecting a non-cash transaction is needed or missing. Consumer behaviour can lead to unfavourable consequences and that is why risk is a part of consumer behaviour (Ho and Ng, 1994).

Empirical study of Wang et al. (2003) emphasizes that perceived risk presents “customer’s subjective expectation of suffering a loss in pursuit of a desired outcome”. Greatorex and

Mitchell (1994) point out that construct of perceived risk appears to be multidimensional and that risk is divided into “performance, physical, financial, psychological, social loss, and time”. Wang et al. (2003) add that it seems to be relatively complicated to identify, distinguish and measure risk sub-dimensions due to multidimensionality of perceived risk.

2.5.3 Legal support issue

Another barrier to electronic payment adoption appears to be legal aspect. Customers still tend to believe that there is higher probability of system errors, making a mistake, security attacks, misuse of private information or dishonest sellers’ behaviour when effecting payment electronically (Rotchanakitumnuai and Speece, 2003). Howard et al. (2006) suggest that electronic networks seem to be often associated with system failures and breakdowns. These reasons explain why customers require protection otherwise they hesitate to use electronic payment channels.

Transactions which can be effected simply by entering card holder’s details without necessity of physical presence of card or card holder can present significant issue and consumers’ worries due to easy misuse. It also appears to be complicated to adduce evidence in this case. Rotchanakitumnuai and Speece (2003) point out that there is insufficient number of specific legislation governing electronic payment methods, especially payment on the Internet.

Majority of banks issue Internet banking contracts or agreements concerning other electronic payment instruments which limit liability of bank, among other terms of contract (Rotchanakitumnuai and Speece, 2003). Responsibility generally does not lie with bank, which provide the service, when a customer acts without reasonable care and it causes financial loss (Attaran, 2000; Howard et al. 2006).

Legal proof of making an electronic transaction and acceptance of the proof can raise doubts about cashless payment instruments as well (Rotchanakitumnuai and Speece, 2003). Giannakoudi (1999) adds that there are numerous speculations about acceptability of electronic records as suitable proof of transaction. Sufficient evidence of financial transaction sometimes cannot be completely documented, especially when doing shopping on the Internet.

2.5.4 Sociodemographic traits

Various sociodemographic characteristics, such as sex, age, annual income, social class, educational level, marital status, family size, religion, nationality, race and position held, can help to explain why some payment methods are used more intensively than others. It seems to be very useful to consider the sociodemographic differences of consumers when defining a consumer profile (Devlin and Yeung, 2003; Durkin et al., 2007; Flavián et al., 2006; Ho and Ng, 1994). Devlin and Yeung (2003) suggest that demographic traits provide important effect on propensity to usage of banking services.

The study of Durkin et al. (2007) suggests that users of electronic banking services appear to be younger and have a higher yearly income. Flavián et al. (2006) agree and demonstrate that observed customer was “less likely to conduct banking operations on the internet when his income was less than 24,000 euros” per year, than customer with higher income. The study of Flavián et al. (2006) outlines that propensity of usage of electronic banking services was the highest for people “with an annual income of over 36,000 euros”. Flavián et al. (2006) also highlight that persons between 18 and 25 years of age were most likely to effect transactions via the internet banking services. Devlin and Yeung (2003) and Flavián et al. (2006) emphasize that prevailing gender seems to be male.

According to previous findings mentioned above, the authors concur that users of electronic banking services tend to be men who are younger and have a higher annual income.

2.5.5 Commercial issues

Commercial issues involve especially requirements of users of various payment methods (consumers and retailers). Buck (1997) and Wang et al. (2003) include flexibility, ease of use, cost effectiveness, fungibility and universality among commercial requirements among them. Nonfulfilment of any requirements can decide on popularity of a payment mechanism.

Buck (1997) emphasizes that only cash meets all commercial requirements in comparison with other payment methods. The study of Buck (1997) deals with and compares cash, credit and debit mechanisms and tokens. Table 2.1 shows comparison of chosen payment instruments in terms of commercial requirements.

Table 2.1 Payment methods in terms of commercial requirements

	Debit/Credit	Token	Cash
Flexibility	✗	✗	✓
Ease of use	✓	✓	✓
Cost effectiveness	✗	✗	✓
Fungibility	✗	✗	✓
Universality	✗	✗	✓

Source: Buck (1997)

2.6 Consumer behaviour in relation to payment instruments

One of the most significant success factors for a majority of businesses is “finding and retaining customers” (Turban et al., 2002). A large number of contemporary financial institutions focuses on consumer behaviour and try to understand reasons for usage of different payment mechanisms in order to meet customer requirements and needs. The findings of Ho’s and Ng’s study (1994) highlight that researchers and planners often underestimate or forget about real customers’ needs. This issue can easily lead to creation of separation of theory and practice. Metha (1999) supports this notion and emphasizes that consumer payment options contribute to understanding payment preferences and concerns of users of payment methods. Accepting and preferring only some payment instruments alone (for example, cash and cheques) tend to obstruct objective view of wide range of payment methods and consumer payment preferences (Metha, 1999). The process of learning about users’ needs, requirements and stimuli which trigger decision making process appears to be decisive also for developing and introducing existing and new payment instruments into the future (Metha, 1999; Szmigin and Foxall, 1999; Turban et al., 2002). Statistical evidence might suggest that customers will tend to use cashless payment methods for increasing number of transactions. Nevertheless, it seems to be substantial to understand and learn from consumers’ existing methods of payment. Knowing how and why customers use their contemporary payment instruments could clarify their preferences and requirements (Szmigin and Foxall, 1999). The findings of Guariglia’s and Loke’s study (2004) point out that also past consumer’s habits considerably influence the volume and value of use of cashless payment mechanisms and demonstrate that the volume of card transactions is less affected by past habits than the volume of cheque transactions. One of the possible reasons of this notion could represent much earlier introduction of cheques in comparison with cards. Another reason of this finding could be connected with chosen group of counties where the research was done. This study analyses determinants of cashless payment methods not only in 15 EU

countries but also in North American countries where cheque payments are more common and used.

The study of Szmigin and Foxall (1999) also emphasizes that customers often seek benefits from using a particular payment instrument. Consumers may reject or hesitate to use a specific payment mechanism if the method of payment produces more benefits to suppliers than to themselves (Szmigin and Foxall, 1999). The study of Szmigin and Foxall (1999) gives a clear example of this finding – the way some customers use their credit cards. These cards tend to be used as “a means of payment rather than for taking credit on which interest will have to be paid” (Szmigin and Foxall, 1999). A large number of credit card holders repay the outstanding balance in full every month or at the end of each account period which means that no interest is charged (Worthington, 1995). This trend appears to be distinctive especially for UK credit market (Szmigin and Foxall, 1999; Worthington, 1995). In 1988 40 per cent of credit card holders repaid the sum owed every month (Szmigin and Foxall, 1999). The figure increased to 60 per cent in 1993 (Worthington, 1995). Most of banks expected that credit cards will be used for taking credit and that interest will be charged on the amount. The study of Szmigin and Foxall (1999) points out that banks and other financial institutions do not always determine consumer behaviour correctly and that identifying consumer behaviour appears to be complicated but important process. Lloyds and, consequently, some other banks “introduced a fee” for credit cards as a reaction to such an unexpected behaviour that time and this radical move led to loss of an indispensable number of credit card customers because most of them gained no benefits after the change (Szmigin and Foxall, 1999). Szmigin and Foxall (1999) also highlight that customers do not usually tend to change payment instruments if the existing payment method is convenient and users are satisfied with it.

2.7 Payment systems within Europe

Significant differences in usage of various payment instruments remain one of the characteristics of Europe. Worthington (1995) concurs and identifies Europe as “a patchwork of markets” characterized by various attitudes towards means of payment. Böhle and Krueger (2001) support the notion by saying that “European payment cultures are fairly heterogeneous”. This is the reason why generalization of payment culture in Europe could be treacherous due to evident variations of payment methods within this continent. Below, this paper focuses on usage of payment mechanisms in the UK and the Czech Republic.

2.7.1 The use of various payment methods in the UK

Even though there are differences between various parts of Britain in payment habits of adults, main national trends in payments can be observed.

In term of volume cash still seems to remain prevailing payment method in the UK (Buck, 1997; Worthington, 1995; Worthington, 1998). The study of Worthington (1998) suggests that “many people still believe that a cash payment can secure a better deal for goods and services supplied”. Around three quarters of all transactions above £1 in value were made by cash in forms of coins and notes in 1997 (Worthington, 1998). This feature is underpinned by the fact that cash is usually free and easy to access in the UK. According to Quinn (2006) cash dispensers became “part of everyday life” in Britain. Automated teller machines (ATMs) supplied over 60 per cent of all cash to individuals in the UK in 2006 (Cash Machines in the UK, 2007). In 2005, the British made 2.699 billion cash withdrawals; in 2006, the number was 2.725 billion (APACS Statistical release, 2007). The number of ATM withdrawals increased by just 2 per cent on the previous year. Nevertheless, figures from the year 2005 represent the largest number of ATM withdrawals of any country in the EU – an increase of 6.7 per cent on 2004 (Quinn, 2006). The value of withdrawals from cash machines reached £171.9 billion in 2005 and £179.8 million in 2006 (APACS Statistical release, 2007). This shows the lowest growth rate so far, of only 4.6 per cent on 2005. Table 2.2 presents information about number and value of cash withdrawals from 2000 to 2006 in the UK.

Table 2.2 Cash withdrawals

Year	Number (billion)	Growth rate on the previous year (percentage)	Value (£ million)	Growth rate on the previous year (percentage)
2000	2.015	×	113.2	×
2001	2.123	5.4	123.8	9.4
2002	2.260	6.5	134.5	8.6
2003	2.381	5.4	143.8	6.9
2004	2.529	6.2	161.3	12.2
2005	2.699	6.7	171.9	6.6
2006	2.752	2.0	179.8	4.6

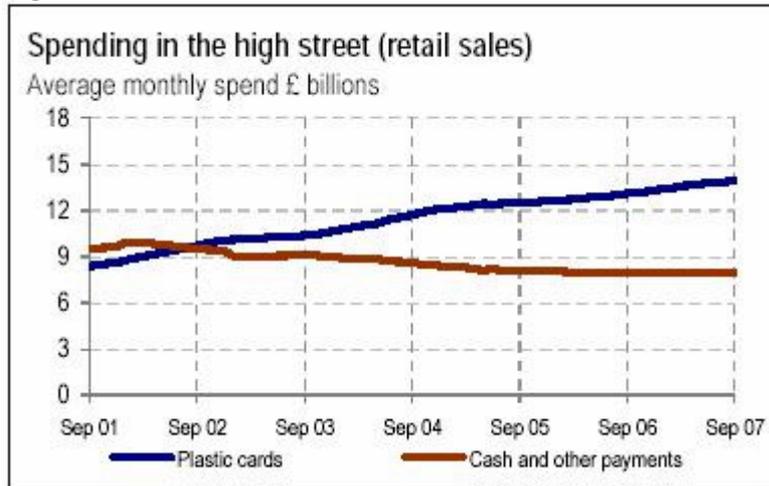
Source: APACS Statistical release (2007)

Almost all of these withdrawals were made from free to use cash machines – 97 per cent of all cash withdrawals (Cash Machines in the UK, 2007). These free cash machines are not always common elsewhere in the world. For example, majority of cash machine owners charge fee for a single cash withdrawal in the Czech Republic. This fact seems to influence number and value of ATM withdrawals. Another advantage which influences the use of ATMs appears to be the widespread availability of British cash machines at locations which are heavily frequented by customers, such as supermarkets and railway stations (Cash Machines in the UK, 2007; Worthington, 1998). The findings of APACS research which compare payment habits of adults in different regions in Britain reveal that adults in the North West visit cash dispensers more regularly and withdraw average total of £5,355 from cash machines each year, more than anywhere else in the UK (The way we pay in Great Britain, 2007).

The world's first cash machine was introduced in the UK and installed by Barclay's Bank in London in 1967 (Bellis, 2008; Cash Machines in the UK, 2007). Nevertheless, some experts do not consider this an ATM (Robat, 2006). Cash dispensers have been around for 41 years but in that time became very popular in the UK. Long range APACS forecast for the year 2016 predicts that the British will acquire 81 per cent of their cash from cash machines in 2016 and ATM withdrawals are expected to peak in 2010 at 2.9 billion (Cash Machines in the UK, 2007).

Despite numerous suggestions about promising future of cash as a key payment mechanism and increasing popularity of cash machines in the UK, the volume of cash transactions for higher-value payments seems to decline. According to Worthington (1998) it is expected that the usage of cash for payments over £1 will gradually fall, due to growth in usage of other payment methods. On the other hand Worthington (1998) continues by suggesting that the volume of low value cash transactions is rising in the UK. The study of Böhle and Krueger (2001) also emphasizes that especially small payments still tend to be made in cash. Quinn (2006) outlines that payment cards (all types together) have already toppled cash as favourite way to pay in Britain without mentioning the value of cash transactions. According to APACS Statistical release (2007) average monthly spending in the high street on all types of plastic cards was higher than cash and other payments since 2002. When comparing the value of all time-based types of payment cards (pay now, pay later and pay before cards) with cash and other payments in the high street, plastic cards appear to be the prevailing payment method in terms of value in the UK since 2002 (see Figure 2.1).

Figure 2.1



Source: APACS Statistical release (2007)

The number of cheque payments appears to decrease in the UK year by year (Juřík, 2001; Worthington, 1995; Worthington, 1998). The number of cheque transactions was 3.5 billion in 1993 and the number fell by 49 per cent to 1.8 billion in 2006 (APACS Statistical release, 2007; Worthington, 1995). From comparing different parts of the UK seems to follow that people in the North East are less likely to be regular users of cheques than any other region in the UK (The way we pay in Great Britain, 2007). Although payments by cheque seem to have downward trend not only in the UK but also in the rest of Europe, the number of cheque transactions appear to be still significant in the UK in comparison with other countries. For example, in Finland cheque transactions account only for 0.2 per cent of total noncash transactions (Böhle and Krueger, 2001).

Widespread usage of plastic cards can be observed in the UK. Worthington (1998) represents the UK as “one of the most card centric countries in the world”. Juřík (2001) concurs and adds that the UK belongs among European countries which have the largest number of cards in issue and per adult. All three main time-based types of plastic cards – pay now, pay later and pay before cards – are issued and used in the UK (Worthington, 1995; Worthington, 1998).

Debit card (pay now card) represents the most popular type of payment card in Britain nowadays. According to APACS debit cards accounted for 71.7 per cent of all payment card purchases in the third quarter of 2007 (APACS Statistical release, 2007). Traditionally, across Europe most card payments have been made with debit cards (Böhle and Krueger, 2001).

However, credit cards were used more often in the UK until 1993 (Worthington, 1995; Worthington, 1998). According to Worthington (1998) 85 per cent of all card purchases were made with credit cards in the UK in 1988. Debit cards have been gaining ground since 1994 (APACS Statistical release, 2007; Böhle and Krueger, 2001; Worthington, 1998). This type of pay now card was introduced into Britain in 1987 (Worthington, 1998). Worthington (1995) states that the decreasing usage of cheques was substituted by debit cards. Another study of Worthington (1998) emphasizes that actually cash is being replaced by debit cards nowadays.

The advantage of debit card seems to be its multi-purpose usage. Debit card holder can make a purchase at point of sale (POS), but also access cash through cash machine and take cashback at POS. The British quite often take advantage of cashback at POS. According to Worthington (1998) “two in every five transactions in supermarkets involve an amount of cashback”. This possibility and cash machines make cash very easy to access for debit card holders. Another aspect which underpins the use of pay now cards could be increasing number of retailers which accept debit cards in the UK (Juřík, 2001; Worthington, 1998). All these factors could influence the slow cash substitution in Britain nowadays. The study of Worthington (1998) points out that British debit card holders tend to be younger consumers who no longer use cheques.

Pay later cards – credit cards and charge cards – became popular since their introduction into Britain market in 1966 (Worthington, 1998). In the 1990s some British banks introduced an annual fee for credit cards as a reaction to repayment of outstanding balance in full every month or at the end of each account period because in this case no interest is charged (Worthington, 1995). This step seems to slow down the growth in the volume of transactions. According to APACS Statistical release (2007) the number of UK-issued credit cards (75.5 million) is higher than the number of UK-issued debit cards (68.3 million), even though debit card payments have already overtaken credit card payments in the UK. This fact tends to show how common and popular credit cards were. Charge card purchases represent the smallest percentage (about 5 per cent) of all plastic card purchases (Worthington, 1998). Table 2.3 presents information about card purchases in the UK from 1997 to 2006.

Table 2.3 Spending in the UK on plastic cards

Year	Debit cards		Credit cards	
	Number of purchases (billion)	Growth rate on the previous year (percentage)	Number of purchases (billion)	Growth rate on the previous year (percentage)
1997	1.503	✕	1.128	✕
1998	1.763	17.2	1.224	8.5
1999	2.062	17.0	1.344	9.8
2000	2.442	18.4	1.500	11.6
2001	2.708	10.9	1.584	5.6
2002	2.957	9.2	1.777	12.2
2003	3.248	9.8	1.826	2.8
2004	3.695	13.8	2.023	10.7
2005	4.104	11.1	2.014	-0.5
2006	4.513	10.0	1.942	-3.6

Source: APACS Statistical release (2007); Worthington (1998) and own calculations

Pay before cards represent the last type of time based plastic cards. These cards circulate in various forms in the UK. According to Puri (1997) and Worthington (1995) the telephone card seems to be the most widely known form of pre-payment card in the UK and the rest of world. However smart cards appear to attract the attention nowadays. Numerous previous studies of smart cards outline that this chip card offers many benefits such as multipurpose usage (it could be used to make purchase at outlets, pay for car parking, transport or public telephone call, contain personal details etc.), possibility to effect both high and low value transactions, increased security in comparison with a magnetic stripe card and capability to store 80 times more data than a card with magnetic stripe (Elliot and Loebbecke, 2000; Puri, 1997; Szmigin and Bourne, 1999; Worthington, 1998). Despite numerous advantages, there seems to be some issues and unanswered questions concerning smart cards. Szmigin and Bourne (1999) emphasize that people still tend to prefer cash for most small payments. They also highlight customer protection and privacy issues in connection with smart cards and find important additional development. Böhle and Krueger (2001) state that it could be too early to assess whether British and other markets may create sufficient demand for the scheme to be successful. Several schemes which were established in the UK were not successful and are no longer operational, namely, Mondex and Smart Axis (Böhle and Krueger, 2001). Mondex is restricted to some testing and is not used even in the universities where it had been quite popular (Böhle and Krueger, 2001). General acceptability remains one of the crucial issues

and that is why the use of smart card seems to be quite unusual nowadays (Howard et al., 2006).

In September 2007 MasterCard launched a contactless smart card in the UK which enables the British to buy things costing less than £10 simply by touching their card against a reader (In praise of ... small change, 2007). Even though future will show the success of this contactless smart card, the UK came a step closer to becoming a cashless society with the launch of this payment system.

Online banking became popular in the UK. There is now 26 per cent of UK account holders who use online banking services (Internet and Phone, 2008). According to Howard et al. (2006) one in four bank customers perform banking transactions over the Internet in the UK. Even though the number of customers banking online has been increasing rapidly, the online channel did not surpass traditional channels in the UK and the rest of Europe yet. Security and integrity seem to have major influence on customer acceptance of Internet banking services (Howard et al., 2006; Turban et al., 2002; Watson et al. 2000).

2.7.2 The use of various payment methods in the Czech Republic

Czech payment culture seems to have certain similarities with English payment culture. Prevailing method of payment still remains cash in the Czech Republic (Chváta, 2006; Pánek, 2001). According to Máče (2006) one of the main reasons is later introduction and slower customer acceptance of new payment methods in the Czech market. Přádka (2000) concurs and adds that the Czechs tend to be generally more distrustful to new technology in comparison with other Western European countries. Another factor which affected Czech payment culture appears to be period of centrally planned economy (Juřík, 2003). This period did not support development of bank sector and new forms of payment. Some payment instruments such as cheques and credit cards did not spread in the Czech Republic in contrast to the UK. According to Komerční Banka the Czech economy is known as a “cash economy” which the use of cheques is not usual (Specific aspects of Czech banking, 2007).

First payment card was issued by Živnostenská banka in Czechoslovakia in 1988 (Juřík, 2001). However, its usage was very limited. At first conditions for issue of payment cards were relatively strict (Chváta, 2006). For example account balance for international payment cards was at least CZK 100 000 (Máče, 2006). That is why the number of payment cards was

increasing gradually in the late 1980s and in the early 1990s. According to Juřík (2001) gaining experience and growth of competition reduced the conditions and payment cards became available to larger number of customers in the mid 1990s. Debit cards have become one of the most required banking products in the Czech Republic since the time. During six years (2000 - 2006) the number of cards has increased by 80 per cent in the Czech Republic (Chvátal, 2006). The total number of cards issued in the Czech Republic reached 7.8 million in 2006 (Platební karty v České republice, 2008). According to Chvátal (2006) almost every second Czech has a payment card. Juřík (2003) adds that Czech card owners tend to be men between 30 and 40 years of age with higher income.

The majority of cards has international acceptance and 97 per cent of them present debit cards in the Czech Republic (Chvátal, 2006). Credit cards and charge cards were introduced later in 1998 but they did not spread. Online cash machines were introduced in the Czech Republic in 1992, 25 years later than in the UK (Pánek, 2001). Although for majority of ATM withdrawals is paid a fee, cash withdrawals became widely used and popular banking service. The fee seems to affect value and number of ATM withdrawals. According to Juřík (2003) the Czechs tend to withdraw higher amount of money in order to cut bank charges. The value of average withdrawal was CZK 3 500 in 2005 (Chvátal, 2006). The volume of cash withdrawals (76 per cent) exceeds the volume of cashless payments (24 per cent) in the Czech Republic (Platební karty v České republice, 2008). According to Máče (2006) the Czechs are getting used to payments by plastic cards rather slowly and the volume of payments with plastic is still three times smaller than the volume of cash withdrawals. One of the reasons of this fact appears to be that a large number of retailers still do not accept payment cards in the Czech Republic (Juřík, 2003). Chvátal (2006) concurs and adds that about 28 per cent of Czech population lives in the country where the usage of electronic forms of money is almost nil.

Cashback at POS (point of sale) was introduced in the Czech Republic in 2006. Although users of cashback can save on ATM charges, this new service did not become standard part of payment transaction in the Czech Republic yet in contrast to the UK. Cashback is free but it is offered only by some banks, it functions only in a small number of supermarkets and it is limited to purchases over CZK 300 (Chvátal, 2006).

Online banking used 6.5 per cent of population of the Czech Republic in 2006 (Internetové bankovníctví v české kotlině, 2006). Even though number of online banking users is

increasing there are still numerous obstacles which hinder growth of online banking in the Czech Republic. One of the most essential barriers presents Internet access (Přádka, 2000). About 52 per cent of Czechs do not have access to the Internet (Internetové bankovníctví v české kotlině, 2006). Máče (2006) adds that that a large number of Czechs still prefer traditional personal dealing which is considered as more trustworthy. Pánek (2001) points out the issue of security and also mentions that especially older generation finds it difficult to manage online banking services. The study of Přádka (2000) outlines that online banking users tend to be graduate men with a higher yearly income.

2.8 Conclusion

This chapter reviews various English and Czech literature sources concerning payment methods and consumer behaviour in relation to them. It compares and contrasts major theories and studies which focus mainly on usage of traditional payment instrument cash and acceptance and usage of electronic payment methods. This chapter also highlights numerous factors, such as security or sociodemographic characteristics, which are parts of decision making process and which influence choice of a payment method. Finally, it focuses on and evaluates two payment systems in Europe – the methods of payment in the UK and in the Czech Republic – where certain differences in attitudes and behaviour towards means of payment can be observed.

This paper sets out to provide fresh insights into usage of payment instruments in the UK and the Czech Republic. Firstly, the study aims to investigate how popular various payment methods are in each of the countries and to compare the findings. Secondly, it sets out to examine which factors discourage customers from using electronic forms of money and if the factors significantly vary in the UK and the Czech Republic. Thirdly, it aims to analyse if there are any relevant differences in consumer behaviour in relation to payment methods among different age groups and also among the same age groups in the UK and the Czech Republic. Finally, this paper investigates if there can be observed any relationships between acceptance of electronic payments and level of income, gender, security fears or number of inhabitants in the place of residence.

The process of learning about customer payment preferences, requirements and reasons for choosing a particular payment option can contribute to development of existing payment instruments and introduction of new payment methods in the future.

On the bases of findings in the literature review and objectives of the study, four hypotheses, which will be discussed later, were stated:

H₀: Acceptance of electronic payment services is not related to age groups.

H₀: Acceptance of online banking is not related to level of income.

H₀: There is no relationship between acceptance of electronic payment and security fears.

H₀: Gender and holding payment card are not dependent.

Chapter 3 Methodology

This chapter describes the original research procedure and provides rationale for the research methodology used in the study. On the bases of aims and objectives of the study reiterated at the end of the literature review various research approaches and methods were considered carefully and the most suitable research strategy was chosen. The reasons will be explained in the chapter. Consequently, the size and composition of the sample, questionnaire design and pilot study will be discussed. The issues of validity, reliability, practicality and ethics will be also described. Finally, the limitations of the study will be discussed.

3.1 Research philosophy, approach and strategy

Research philosophy describes the process of thinking about development of knowledge. The way of thinking consequently influences the way that research is made. Saunders et al. (2000) suggest two dominant views about the research process: positivism and phenomenology. It should be mentioned that research rarely falls into one of the camps. According to Saunders et al. (2000) mixture between positivism and phenomenology approach can be often observed in the practice. However, considering the nature of research positivism approach is preferred in this study. This approach supports working with observable social reality and quantifiable data collection methods which provide statistical analysis (Saunders et al., 2000). According to Denscombe (2003) positivism assumes that there are “patterns and regularities, cause and consequences in the social world, just as there are in the natural world”. Positivists aim to discover the patterns and regularities of the social world in social research.

The chosen research approach is the deductive approach, where the theory already exists as in this study. In contrast, theory follows the data in an inductive way. If the researcher is clear about the theory at the beginning of the original research the deductive approach is used (Saunders et al., 2000). Saunders et al. (2000) add that the deductive approach is more suitable for positivism. This approach involves the development of theory on the basis of a rigorous test. The deductive approach explains relationships between variables which presents one of the objectives of this study. In the deductive way, one or more hypotheses are deduced, expressed and tested. On the bases of outcomes, the theory is confirmed or modified. It should

be noted that the deductive approach enables generalisation about regularities in human social behaviour only if the numerical size of samples is sufficient.

The deduction emphasises highly structured approach and also collection of quantitative data (Moore, 2006). The structured approach is generally classified as quantitative research because aspects of the research process, such as sample or design, are usually predetermined (Kumar, 2005). For the purpose of this study the quantitative type of research from the point of view of the mode of inquiry is preferred to qualitative research. Because of the objectives of the study which involve the extent of utilisation of various payment methods in the UK and the Czech Republic and calculating other indicators which influence the extent of utilisation the quantitative research was chosen. Because quantitative research uses numbers, statistical tests can be undertaken and findings can be presented in forms of tables or graphs. On the other hand, there is a danger that a wrong statistical test can be applied when using quantitative data.

Survey was considered as the most appropriate research strategy for the research objectives. This study can take advantage of the survey method which is connected with the deductive approach. Surveys enable the collection of large amount of standardised data at relatively low cost (Denscombe, 2003). According to Saunders et al. (2000) survey approach usually gives more control over the process of the research. Surveys are also easily understood and population is usually familiar with this research strategy. On the other hand, the data collected by survey do not have to be wide ranging due to, for example, limited number of questions in questionnaire.

3.2 Data collection method

According to Saunders et al. (2000) there are three basic data collection devices which fall into the survey category: structured interview, structured observation and questionnaire.

In structured interview a predetermined set of questions is asked. The structured interview is similar to questionnaire which is administered face to face, by telephone or by other electronic media with respondents (Denscombe, 2003; Kumar, 2005). This kind of interview has the advantage that it gets uniform treatment and that it provides uniform data which

enable the comparability of information. On the other hand, there is no flexibility for follow-up questions. The interviewer can miss the opportunity to explore further some interesting points the interviewee has said and thereby the researcher can miss some interesting information. Interviewing can be also time-consuming and expensive especially when there is need for larger number of respondents as in the case of this research.

Structured observation presents another way to collect primary data which belongs to the survey category. This method of data collection can suffer from numerous problems such as change in behaviour of observed individual or group or the possibility of observer bias. Observation is the best method to collect information when accurate data cannot be collected by questioning (Kumar, 2005). It is not the case of this study.

Self-administered questionnaire was considered as the most appropriate data collection device for the research throughout the strengths and weaknesses of all the three methods of data collection which fall into the survey category. One of the main reasons for the choice of questionnaire is the need for relatively large number of respondents in two countries – the UK and the Czech Republic. The collected data are standardised and allow easy comparison and statistical analyses. The required data tend to be relatively brief and uncontroversial and face-to-face interaction is not necessary. The use of questionnaire is rather inexpensive, especially when it is distributed via e-mail. However, it should be noted that in this case the response rate is usually extremely low (Kumar, 2005). Questionnaires also provide greater anonymity. Some respondents could feel reluctant to discuss in person their payment habits and behaviour in relation to various payment instruments. On the other hand, there are a few disadvantages of questionnaire. The number of questions in questionnaire is limited and there is usually no opportunity to clarify issues. That is one of the reasons why questionnaires should always be piloted. However, piloting and designing the questionnaire is time consuming. Time between delivering the questionnaires and receiving the completed returns should be also taken into account. A self-selecting bias can present another drawback of questionnaire (Kumar, 2005). The respondents who return the questionnaire may not have the same attitudes or behaviour like those who do not. That is why the results may not be representative, especially if the response rate is low.

There are three basic types of self-administered questionnaires: on line, postal and delivery and collection questionnaire (Saunders et al., 2000). Combination of on line and delivery and

collection questionnaire was used for collecting data in this research. One of the main reasons for choice of the on line questionnaire was financial unpretentiousness for distributing and collecting the questionnaire and also large size of sample. However, it should be kept in mind that on line questionnaires are known for low response rate. In order to avoid the possibility of small sample size, delivery and collection questionnaires were used as well.

3.3 Sampling

In this study, the total sampling population involves inhabitants of the UK and the Czech Republic from the age of 18. Because of large total sampling population, identifying each sampling unit would be very difficult, time-consuming and also expensive. That is why cluster sampling was considered as the most appropriate approach to sampling. The total sampling population was divided into five mutually exclusive age groups. By doing this, the researcher can focus on separate clusters and also compare the findings between age groups. However, the process of selecting sampling units from the study population has its positives and negatives. As already mentioned above, the positives are that it saves money, time and also human resources. On the other hand, the negative is that the collected information from the sample “only estimate or predict” characteristics of the population (Kumar, 2005).

Cluster or stratified sampling falls into one of the two types of sampling strategies – probability (random) sampling. According to Kumar (2005) different units in population have equal probabilities of being chosen. The advantage of this method is that the selection is not influenced by human choice or personal preference (Kumar, 2005).

In this process the sample size presents an important aspect. According to Denscombe (2003) “the more instances that are covered the less likely it is that the findings will be biased”. The sample should be large enough to represent the characteristic features of the larger group (Moore, 2006). However, the research takes place with finite time and financial resources. There were also numerous returned questionnaires which were not filled in properly and that is why they could not be used for the purposes of this research. These limitations reflect the size of sample. In this research, 202 samples were involved: 100 completed questionnaires were returned in the UK and 102 in the Czech Republic.

3.4 Questionnaire design

The self-administered questionnaire (Appendix 1 and 2) consists of 23 questions, four A4 sides of paper. The length of questionnaire was considered because it influences people's response. According to Moore (2006) people are usually not willing to complete anything longer than four sides of paper. At the beginning of the questionnaire, the purpose of the questionnaire is explained, assurance about anonymity and confidentiality of collected data is stated and thanks are expressed to the respondents.

The first five questions are designed to obtain demographic information from respondents such as gender, age, level of education, income and number of inhabitants in their place of residence. There are five age groups in the questionnaire: 18-25, 26-40, 41-50, 51-60 and over 60. Dividing the sampling population into age groups enables comparisons with other studies which often also use age categories. Gender distinction allows investigating whether electronic forms of money are used more by men. The studies of Devlin and Young (2003), Pahl (1999) and Singh (2004) support this notion. The questions concerning level of education and income are used to examine whether acceptance of electronic banking services is related to level of income and education. As mentioned in the literature review, the studies of Durkin et al. (2007), Flavián (2006), Juřík (2003) and Přádka (2000) suggest that there is a relationship between acceptance of electronic payments and level of education and income. The question about number of inhabitants in the place of residence is asked in order to find out whether this factor influences the usage of electronic forms of money. The studies of Chvátal (2006) and Juřík (2003) highlight this issue.

Questions from six to eight are used to collect data about use of cash and various types of payment cards. From answers to these questions will result how often people pay cash and with payment cards, the number of payment cards per head and if people pay cash for small amounts of money.

Question number nine consists of six factors which could discourage customers from using payment cards such as issue of security which seems to be one of the most dominant issues (Dietel et al., 2001; Howard et al., 2006; Watson et al., 2000). Respondents can evaluate which factors from the selection are important for them and also space is given for stating

other factors. This question is in connection with section Possible barriers to adoption of electronic payment systems in the literature review.

Questions number ten and eleven are designed to find out relationship between amount of money and method of payment. Question number twelve aims to investigate if customers trust new electronic payment technology. As mentioned in the literature review, the Czechs tend to distrust new technology and accepting it usually takes longer in comparison with West European countries such as the UK (Máče, 2006).

Question number thirteen is designed to find out customer prevailing purpose for carrying a payment card. On the basis of findings of research conducted in the Czech Republic, the volume of cash withdrawals exceeds almost three times the volume of payments with plastic (Máče, 2006; Platební karty v České republice, 2008). Possible causes of this feature are described in section The use of various payment methods in the Czech Republic in the literature review.

Questions from number fourteen to seventeen deal with use of ATM services and visits of bank offices. These questions were designed in order to investigate if fee for a single cash withdrawal, which is common in the Czech Republic in contrast with the UK, influence the volume and value of cash withdrawals and if customers use services of bank tellers in bank offices.

Questions from number eighteen to twenty aim to examine if experience with computer technology is in relationship with acceptance and use of internet banking. Question number twenty-one is designed for nonusers of internet banking. There are six factors which could present reasons for not using internet banking. The last two questions are designed for online banking users. They find out the frequency of usage of internet banking and if customers only view account balance or transfer money, pay bills etc.

The majority of questions in the questionnaire are closed and where it is appropriate, respondents are given space to write down their own answers if it does not belong to one of the listed factors. The closed questions reduce the chance of ambiguous questions. There are also a few open questions where respondents are required to write down their own answers.

3.5 Pilot study

Both versions of questionnaire – the English (Appendix 1) and the Czech (Appendix 2) – were piloted. They were tested on a few British and Czech students before distributing them via e-mail and in public places. After receiving a feedback and consultation with tutor of the author several questions were altered and order of the questions was changed.

Options to questions concerning monthly income were altered according to author's tutor recommendation. Space for writing own answers was added to options which have been established in advance by the researcher. Czech version of questionnaire was modified by defining different types of payment cards due to uncertainty about their usage.

3.6 Reliability of the research

Reliable research gives consistent and stable results. The questionnaire is reliable to the extent that gives the same results when making the same research under constant conditions (Kumar, 2005). For improving reliability data were collected on different occasions. Except sending English and Czech questionnaires via email they were delivered by hand to respondents at different times of week and day in different public places such as a shopping centre, school or health centre. This could minimize the possibility that the results will be influenced by one variable such as time of day.

Reliability could be improved by using different data collection methods. However, due to collecting data in the two countries - in the UK and the Czech Republic - lack of time did not enable use of different data collection devices.

3.7 Validity of the research

Validity measures the extent to which research is really measuring what it says it is (Saunders et al., 2000). A link between questions and objectives of the study was established to support the validity of the study. The extent to which results of the research are generalisable was also considered. The sample should be both carefully selected and the size of sample should be adequate (Denscombe, 2003). In this research, 202 samples were involved: 100 questionnaires

were collected in the UK and 102 in the Czech Republic. Limited time and financial constraints did not allow larger size of sample which could achieve greater accuracy.

3.8 Ethics of the research

Ethical issues in relation to participants of research process were taken into account. Respondents were made aware of the purpose of the study. The consent to participation in the study was voluntary and without any pressure. Respondents were also assured of anonymity and confidentiality of collected data and thanks for time and willingness were expressed to them.

3.9 Limitations of the study

Before considering the results of this research, there are several limitations which should be taken into account. Some limitations were already mentioned in sections relating to reliability and validity of the research.

If time and financial resources had allowed it would be preferable to enlarge the size of sample and use more data collection methods so that the findings would be more accurate. It is due to this lack of time and financial resources that each age group is represented by about twenty respondents. This sample may be insufficient to draw a strong inference.

Although participants were intended to be selected randomly, human judgement could not be excluded. Furthermore, respondents for the English version of questionnaire presented mainly people from one region – Huddersfield and its surroundings. The Czech version of questionnaire was distributed in two towns – Hradec Kálové and Dobruška. Due to insufficient geographical distribution of questionnaires, the samples may not be representative and findings may not allow generalisation to all inhabitants of the UK and the Czech Republic.

Considering the length of the questionnaire, it is possible that some respondents became bored and ticked boxes without thinking. A few questionnaires could not be included because all questions were not answered.

It is with these limitations in mind that the results of this study should be interpreted with caution.

Chapter 4 Research and Analysis

This chapter provides results of analysis of the primary data collection. There are a number of tables and charts which support clarity of respondents' characteristics and the main findings. First part of this chapter focuses on demographic profile of respondents, second part analyses customer behaviour in relation to payment methods in the UK and the Czech Republic. Finally, four hypotheses examining the strength of relationship between the variables are tested.

This study aims to investigate how popular various payment methods are in terms of volume and value in the UK and in the Czech Republic and what factors discourage and do not discourage customers from using electronic payment methods in the two observed countries. This paper also investigates relationships between acceptance of electronic payments and age groups, level of income, gender and security fears. Classifying respondents into age groups enables focus on single groups and identification of differences.

4.1 Demographic profiles of respondents

From all distributed questionnaires total number of 202 questionnaires was involved in this study – 100 questionnaires collected in the UK and 102 in the Czech Republic (Table 4.1 Nationality). Several returned questionnaires could not be used because some key questions were not answered.

Table 4.1 Nationality

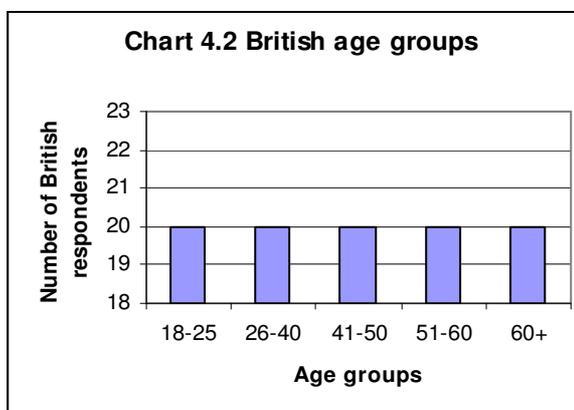
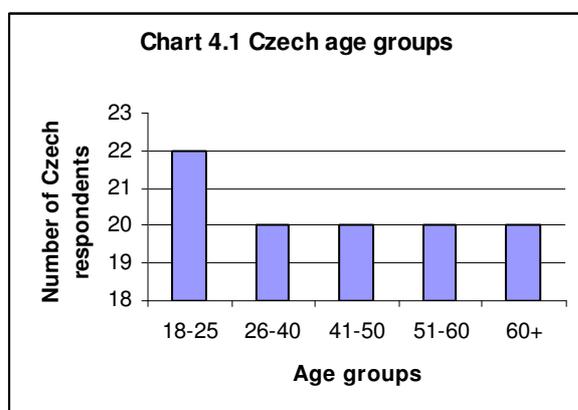
Nationality	Frequency	Percentage (%)
Czech	102	50.5
British	100	49.5
Total	202	100

Table 4.2 presents information about gender distribution of all respondents together and also respondents only from the Czech Republic and only from the UK.

Table 4.2 Gender

Gender	Respondents in total		Czech		British	
	Frequency	%	Frequency	%	Frequency	%
Male	97	48	47	46	50	50
Female	105	52	55	54	50	50
Total	202	100	102	100	100	100

Participants were divided into five age groups. After elimination of several uncompleted questionnaires the number of participants in each group was adjusted to twenty. Larger number of Czech respondents between 18 and 25 enabled usage of 22 properly completed questionnaires in this study (Chart 4.1 Czech age groups and Chart 4.2 British age groups).



Another demographic profile of respondents presents level of education. Because of dissimilarity of the Czech and English education system there were used slightly different categories in the Czech and English version of questionnaire. The level of education of Czech and English respondents is shown in tables Table 4.3 and Table 4.4.

Table 4.3 Level of education of Czech respondents (Sample size = 102)

Level of education	Primary school	Vocational school		Secondary school	Higher education	
		With vocational certificate	With leaving exam			
F	18-25	1	0	1	14	6
	26-40	1	1	1	6	11
	41-50	1	3	3	6	7
	51-60	3	2	2	7	6
	60+	3	3	2	7	5
Total	9	9	9	40	35	
Percentage %	8.82	8.82	8.82	39.22	34.32	

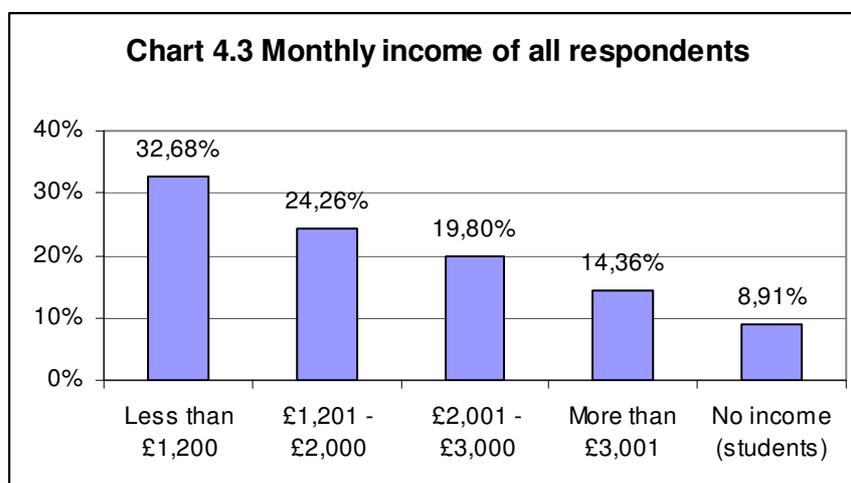
Table 4.4 Level of education of English respondents (Sample size = 100)

Level of education		Primary school	Secondary school	Sixth form/Further education	Higher education
F	18-25	0	6	9	5
	26-40	0	8	2	10
	41-50	1	7	3	9
	51-60	2	7	3	8
	60+	3	8	2	7
Total		6	36	19	39
Percentage %		6	36	19	39

Another demographic question asked in the questionnaire was monthly income of respondent. Due to disparity of currencies in the UK and the Czech Republic different amounts had to be used in the Czech and English version of questionnaire. However, the amounts and its ranges were designed to enable comparability of Czech and English income categories (Table 4.5 and Chart 4.3). There was also group of respondents without income – students. They were also taken into account.

Table 4.5 Monthly income

Monthly income	Respondents in total		Czech		British	
	Frequency	%	Frequency	%	Frequency	%
Less than £1,200	66	32.68	31	30.39	35	35
£1,201 - £2,000	49	24.26	27	26.47	22	22
£2,001 - £3,000	40	19.80	12	11.76	28	28
More than £3,001	29	14.36	19	18.63	10	10
No income (students)	18	8.91	13	12.75	5	5
Total	202	100	102	100	100	100



4.2 Customer behaviour in relation to payment methods in the UK

According to analysis of data collected in the UK, the most popular payment method in terms of volume is cash in the UK. Table 4.6 compares average weekly frequency of payments in cash with other methods of payment. The table indicates that people over sixty tend to pay cash most often in the UK (more than seven times per week). This feature can be explained by the fact that customers over 60 have the lowest number of cards per adult (1,1) and also use the cards at least in comparison with other observed age groups.

Table 4.6 Average weekly frequency of payments according to age groups in the UK

Method of payment	Age groups				
	18-25	26-40	41-50	51-60	60+
Cash	6,85	6,1	6,3	6,7	7,75
Debit card	4,6	4,4	3,3	2,0	1,25
Credit card	1,5	1,2	1,4	1,5	1,6
Charge card	0	1	0	0	0
Prepaid card	0	0	0	1	0
Cheque	0	0	0	1	0

Although cash prevails in terms of volume, debit and credit cards are also used very often in the UK. 89 per cent of all English respondents carry at least one payment card. The UK has on average about 2,61 payment card per adult according to data acquired in the UK. Table 4.7 contains information about average number of cards per adult and modes in relation to age groups. 87 per cent of all participants have at least one debit card and 83 per cent at least one credit card in the UK. Majority of customers holds both types of payment cards.

Table 4.7 Average number of cards per adult and mode according to age groups in the UK

Age group	Average number of cards per adult	Mode
18-25	3,55	4
26-40	3,8	4
41-50	2,75	2
51-60	1,85	1
60+	1,1	0

Consideration is also given to the value of payments (Appendix 3). Customers tend to pay for larger sums of money with payment cards and for smaller amounts cash. None of the English respondents pay for amounts below £10 with plastic. This feature is also supported by the fact that 91 per cent of respondents always pay cash for payments below £5 in the UK.

Various factors influencing use of payment cards will be discussed now. 47 per cent of all English respondents agreed (strongly agree or agree) that lack of security presents the main problem in connection with payment with plastics. This answer occurred most often in age group between 26 and 40 (Table 4.8). 90 per cent of English respondents between 26 and 40 selected this factor. However, although the respondents between 26 and 40 consider security fears as the most problematic factor, this age group has the highest number of cards per adult (3,8) (Appendix 4) and use them very often (Table 4.6). Popularity of electronic payment technology with age group between 26 and 40 supports the fact that 65 per cent of customers between 26 and 40 always trust and easily accept electronic payment technology in the UK (Appendix 5). Even though majority of respondents stated that they trust and accept electronic methods of payment, as the age is increasing, number of distrustful people is also increasing.

Table 4.8 The most discouraging factor in the UK according to age groups

Age group	Lack of security	
	Number of respondents (number of respondents in each age group is 20)	Percentage of respondents in appropriate age group
18-25	8	40%
26-40	18	90%
41-50	9	45%
51-60	6	30%
60+	6	30%

On the other hand, there are two very often selected factors which do not discourage English customers from using payment cards. 95 per cent of all English respondents disagreed (strongly disagree or disagree) with statement that payment with plastic takes longer than payment in cash. The second most often ticked not discouraging factor presents acceptability of payment cards in shops. 74 per cent of all English respondents disagreed (strongly disagree or disagree) with notion that numerous shops do not accept payment cards. However, it should be explained that customers who agreed with the notion that numerous shops do not accept payment cards (14 per cent) live in place of residence up to 5,000 inhabitants where

payment with plastic is limited. In contrast, these two factors present significant issues in the Czech Republic.

Research findings also indicate that Britain is cash machine friendly nation. English respondents use ATM services at average six times in a month and withdraw on average £55 at a visit to a cash machine. One of the reasons of this feature is that majority of cash withdrawals from bank’s cash machines is free in the UK. Nevertheless, 56 per cent of all English respondents who have at least one card stated that they have a payment card for purpose of purchase at POS (Table 4.9).

Table 4.9 Main purpose of using a payment card in the UK

Purpose	Percentage of cardholders
ATM withdrawals	11,24%
Purchase at POS	56,18%
Purchase at POS together with cashback	32,58%
Total	100,00%

84 per cent of English card holders are registered for internet banking. All of them have some experience with IT. 69 per cent of registered for internet banking use a computer at home or at work more than two hours per week. Majority of English internet banking users (91 per cent) not only view account balance or bank statement but also make transfers of money and pay bills. Large number (66 per cent) of nonusers of internet banking services has no experience with IT. Among the most often mentioned reasons for not using internet banking belong lack of security, no need to use internet banking and lacking human touch (Appendix 6).

4.3 Customer behaviour in relation to payment methods in the Czech Republic

Analysis of data collected in the Czech Republic indicates that cash remains the most often used payment instrument also in the Czech Republic (Table 4.10). People over sixty tend to pay cash most often. This is supported by the fact that 85 per cent Czech respondents over sixty does not have any payment card and prefer payment in cash. Customers over sixty have also only 0,15 card per adult in the Czech Republic.

Table 4.10 Average weekly frequency of payments according to age groups in the CR

Method of payment	Age groups				
	18-25	26-40	41-50	51-60	60+
Cash	6,54	7,3	8,19	8,42	7,04
Debit card	1,81	2,90	2,08	1,31	1,18
Credit card	0	1	0	0	0
Charge card	0	0	0	0	0
Prepaid card	1	0	0	0	0
Cheque	0	0	0	0	0

In the Czech Republic debit cards strongly overweight other types of payment cards. 54 per cent of all Czech respondents carry at least one debit card. Other types of payment cards are not widespread in the Czech Republic. Only one Czech respondent (one out of 102 respondents) stated that has a credit card and one has a prepaid card. The Czech Republic has on average about 0,74 payment card per adult according to acquired data.

Table 4.11 Average number of cards per adult and mode according to age groups in the CR

Age group	Average number of cards per adult	Mode
18-25	1,09	1
26-40	1,45	2
41-50	0,8	1
51-60	0,25	0
60+	0,15	0

Value of payment in the Czech Republic was also analysed (Appendix 7). Respondents from all age groups tend to pay cash for smaller amounts of money and with card for larger amounts. This feature, which can be observed in the UK and also in the Czech Republic, supports the notion that cash will not be replaced by other payment methods in near future.

There are three often selected factors which discourage customers from using payment cards in Czech conditions. The most problematic factor which ticked 81 per cent of all Czech respondents is notion that payment with plastic takes longer than payment in cash. This factor is often selected regardless of type of age group (Table 4.12). The second most often selected discouraging factor presents not acceptance of payment cards in shops (Table 4.13). This factor was ticked no matter what number of inhabitant in respondents' place of residence is.

The third very often selected factor is lack of security. 58 per cent of all Czech respondents agreed that lack of security presents serious problem in connection with payment with plastics. Although 85 per cent of respondents between 26 and 40 consider lack of security as main problem, respondents belonging to this age group have the highest number of payment cards per adult (1,45) (Table 4.11) and use them the most often (Table 4.10). 15 per cent of Czech respondents also stated another important discouraging factor and filled in the questionnaire high fees in connection with holding and using a card.

Table 4.12 The most discouraging factor in the CR

Age group	Payment with plastic takes longer than payment in cash	
	Number of respondents	Percentage of respondents in appropriate age group
18-25	15 (out of 22)	68%
26-40	17 (out of 20)	85%
41-50	18 (out of 20)	90%
51-60	16 (out of 20)	80%
60+	17 (out of 20)	85%

Table 4.13 The second most discouraging factor in the CR

Age group	Numerous shops do not accept payment cards	
	Number of respondents	Percentage of respondents in appropriate age group
18-25	13 (out of 22)	59%
26-40	12 (out of 20)	60%
41-50	15 (out of 20)	75%
51-60	17 (out of 20)	85%
60+	16 (out of 20)	80%

Table 4.14 The third most discouraging factor in the CR

Age group	Lack of security	
	Number of respondents	Percentage of respondents in appropriate age group
18-25	9 (out of 22)	41%
26-40	17 (out of 20)	85%
41-50	12 (out of 20)	60%
51-60	11 (out of 20)	60%
60+	11 (out of 20)	55%

Czechs tend to be rather distrustful of electronic payment technology (Appendix 8). This finding supports the fact that only 54 per cent of Czechs use a payment card. 68 per cent of

Czech card holders use their card for purpose of ATM withdrawals (Table 4.15). None of the Czech respondents use debit card for purchase at POS together with cashback.

Table 4.15 Main purpose of using a payment card in the CR

Purpose	Percentage of cardholders
ATM withdrawals	68,12%
Purchase at POS	31,88%
Purchase at POS together with cashback	0%
Total	100,00%

Czech respondents use ATM services at average only twice in a month and withdraw on average 2 500Kč at a visit to a cash machine. The higher value and lower volume of cash withdrawals is most likely influenced by the fact that majority of cash machines in the Czech Republic involve a fee for withdrawals.

78 per cent of Czech card holders are registered for internet banking. All of them have some experience with computer technology. 72 per cent of customers who use internet banking services more than three times per week use computer at home or at work more than 10 hours per week. Majority of Czech internet banking users (89 per cent) always view account balance or bank statement and usually also pay bills and make transfers of money. Three main reasons for not using internet banking present no need to use internet banking, lack of security and inaccessibility to the Internet in the Czech Republic (Appendix 9).

4.4 Analysis of hypotheses

On the bases of the aims of this study and findings in the literature review there were stated four hypotheses which examine the strength of relationship between the variables and test whether the variables are significantly associated. Software Statgraphics Centurion and own calculations were used for analysis of the hypotheses.

4.4.1 Hypothesis 1

H_0 : Acceptance of electronic payment services (usage of payment cards) is not related to level of income.

H_1 : Acceptance of electronic payment services (usage of payment cards) is related to level of income.

Analysis of variance (ANOVA) was considered as the most suitable statistics to examine this kind of relationship. ANOVA tests the variations between and within groups of data – different levels of monthly income and numbers of payment cards in our case – by comparing means (Saunders et al., 2000). The F-Ratio presents the differences. If there is a significant relationship, which means that the means are significantly different, it will be represented by probability (P-Value) of less than 0,05 (significance level).

It should be noted that before using ANOVA a number of assumptions has to be met. Firstly, data values need to be independent. Secondly, number of observations is bigger than number of groups. Thirdly, the data are normally distributed. Finally, the variance of data for each group is the same (Saunders et al., 2000). All the assumptions of ANOVA were satisfied in this case.

This hypothesis was analysed using data collected only in the UK and only the Czech Republic separately. This approach enables comparison of dependences of number of payment cards on level of income in the two payment cultures.

Firstly, relationship between number of payment cards and level of income in the UK was tested. Appendix 10 contains all the used data. The output of statistical analysis software Statgraphics Centurion included the following:

Table 4.16 ANOVA Table: Hypothesis 1 analysing data collected in the UK

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-Value
Between groups	140,678	4	35,1696	31,79	0,0000
Within groups	105,112	95	1,10644		
Total (Corr.)	245,79	99			

Source: Statgraphics Centurion

This output shows that P-Value of the F-test (P-Value = 0,0000) is less than significance level 0,05 ($\alpha = 0,05$). It means that there is a statistically significant difference between the means of the variables at the 95% confidence level. That is why hypothesis H_0 is rejected and H_1 is accepted. It can be concluded that number of payment cards is dependent on level of income at 5% significance level in the UK.

The strength of relationship can be assessed using Determinant Ratio P^2 ($P^2 = \text{Sum of Squares between Groups} / \text{Total Sum of Squares}$). The Determinant Ratio is 0,5723 ($P^2_{UK} = 0,5723$) in the UK. It means that dependence of number of payment cards on level of income is quite high in the UK (57%). 57% of total variability of number of payment cards is explainable by level of income.

Secondly, relationship between number of payment cards and level of income in the Czech Republic was analysed. Appendix 11 contains all the used data. The output of statistical analysis software Statgraphics Centurion included the following:

Table 4.17 ANOVA Table: Hypothesis 1 analysing data collected in the Czech Republic

<i>Source</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F-Ratio</i>	<i>P-Value</i>
Between groups	23,8404	4	5,9601	12,84	0,0000
Within groups	45,0321	97	0,464249		
Total (Corr.)	68,8725	101			

Source: Statgraphics Centurion

This output shows that there is a statistically significant difference between the means of the variables at the 95% confidence level. That is why hypothesis H_0 is rejected and H_1 is accepted also in Czech conditions. The analysis indicates that number of payment cards is dependent on level of income at 5% significance level in the Czech Republic.

However, Determinant Ratio P^2 calculated with using data collected in the Czech Republic is different from Determinant Ratio P^2 calculated with using English data. The Determinant Ratio is only 0,3461 ($P^2_{CR} = 0,3461$) in the Czech Republic. The dependence of number of payment cards on level of income is rather lower in the Czech Republic (35%). The lower

strength of relationship in Czech conditions can be explained by greater diversity of number of payment cards between and within income groups.

4.4.2 Hypothesis 2

H_0 : *Acceptance of electronic payment services (usage of payment cards) is not related to age groups.*

H_1 : *Acceptance of electronic payment services (usage of payment cards) is related to age groups.*

Analysis of variance (ANOVA) can be used in this hypothesis testing as well. The aim of this testing is to discover whether there are significant differences in number of payment cards across five age groups. All the assumptions of ANOVA mentioned above were met in this case. The hypothesis was tested using data collected only in the UK at first and then also using information acquired in the Czech Republic. This double testing enables comparison of the results.

Firstly, relationship between number of payment cards and various age groups in the UK was tested. The output of statistical analysis software Statgraphics Centurion included the following:

Table 4.18 ANOVA Table: Hypothesis 2 analysing data collected in the UK

<i>Source</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F-Ratio</i>	<i>P-Value</i>
Between groups	103,54	4	25,885	17,29	0,0000
Within groups	142,25	95	1,49737		
Total (Corr.)	245,79	99			

Source: Statgraphics Centurion

Hypothesis H_0 is rejected and H_1 is accepted in English conditions because the P-value of the F-test (P-Value = 0,0000) is less than significance level 0,05 ($\alpha = 0,05$). The test demonstrates that there is significant relationship between number of payment cards and age groups at the 5% significance level in the UK.

The strength of relationship was assessed using Determinant Ratio P^2 . The Determinant Ratio is 0,4213 ($P^2_{UK} = 0,4213$) in the UK. The result P^2_{UK} indicates that dependence of number of payment cards on age groups is medium-sized (42%). In other words, 42% of total variability of number of payment cards is explainable by age groups.

Secondly, relationship between number of payment cards and various age groups in the Czech Republic was analysed. The output of statistical analysis software Statgraphics Centurion included the following:

Table 4.19 ANOVA Table: Hypothesis 2 analysing data collected in the Czech Republic

<i>Source</i>	<i>Sum of Squares</i>	<i>Df</i>	<i>Mean Square</i>	<i>F-Ratio</i>	<i>P-Value</i>
Between groups	24,6044	4	6,15109	13,48	0,0000
Within groups	44,2682	97	0,456373		
Total (Corr.)	68,8725	101			

Source: Statgraphics Centurion

Since the P-value of the F-test (P-Value = 0,0000) is less than 0,05 ($\alpha = 0,05$), there is a statistically significant difference between the means of the 5 variables (age groups) at the 95,0% confidence level. That is why hypothesis H_0 is rejected and H_1 is accepted also in Czech conditions. It can be concluded that number of payment cards is dependent on age groups at 5% significance level also in the Czech Republic.

Determinant Ratio is 0,3573 ($P^2_{CR} = 0,3573$) in the Czech Republic. 36% of total variability of number of payment cards is explainable by age groups in Czech conditions. The strength of relationship P^2_{CR} is lower than P^2_{UK} . It can be concluded that dependence of number of payment cards on age groups is greater in the UK.

4.4.3 Hypothesis 3

H_0 : There is no relationship between acceptance of electronic payment (having and using a payment card) and security fears.

H_1 : There is relationship between acceptance of electronic payment (having and using a payment card) and security fears.

The aim of this testing is to examine what is the attitude towards security fears such as identity theft and real customers' behaviour in relation to use of payment cards. Chi square (χ^2 - Test) test of independence in contingency table was considered as the most appropriate test for analysis of this hypothesis because needed information about two categorical variables can be easily arranged into contingency table and analysed. If there is a relationship between variables the strength of relationship can be assessed using Cramer's Coefficient (C_C) or Contingency Coefficient (C_P).

Firstly, relationship between using a payment card and security fears in the UK was analysed. Data collected in the UK were arranged into contingency table (Table 4.20).

Table 4.20 Contingency Table: Hypothesis 3 analysing data collected in the UK

Payment cards	Lack of security discourage me from using payment cards					n_{i0}
	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	
No	0	0	0	6	5	11
Yes	7	25	33	17	7	89
n_{0j}	7	25	33	23	12	100

Table 4.21 Test of Independence

Test	Statistic	Df	P-Value
Chi-Squared	24,909	4	0,0001

Source: Source: Statgraphics Centurion

Table 4.22 Summary Statistics

Statistic	Value	P-Value	Df
Contingency Coefficient	0,4466		
Cramer's V	0,4991		

Source: Source: Statgraphics Centurion

Table 4.21 shows the results of a hypothesis test run to determine whether or not to reject the idea that the rows and columns of contingency table are independent. Since the P-value is less than 0.05, we can reject the hypothesis H_0 at the 95% confidence level. It is proved that

there is a relationship between use of payment card and security fears at 5% significance level in the UK.

Table 4.22 presents the strengths of relationship between the two categorical variables. The Cramer's Coefficient is 0,4991 ($C_{C\ UK} = 0,4991$) in the UK. The result $C_{C\ UK}$ indicates that the strength of relationship between having a payment card and security fears is medium-sized (0,4991).

Secondly, relationship between using a payment card and security fears in the Czech Republic was tested. Data collected in the Czech Republic were arranged into contingency table (Table 4.23).

Table 4.23 Contingency Table: Hypothesis 3 analysing data collected in the Czech Republic

Payment cards	Lack of security discourage me from using payment cards					n_{i0}
	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	
No	0	2	12	18	15	47
Yes	1	13	19	12	10	55
n_{0j}	1	15	31	30	25	102

Table 4.24 Test of Independence

Test	Statistic	Df	P-Value
Chi-Squared	12,295	4	0,0153

Source: Source: Statgraphics Centurion

Table 4.25 Summary Statistics

Statistic	Value	P-Value	Df
Contingency Coefficient	0,3280		
Cramer's V	0,3472		

According to results demonstrated in Table 4.24, hypothesis H_0 is rejected and H_1 is accepted in Czech conditions. It is proved that there is a relationship between use of payment card and security fears at 5% significance level in the Czech Republic.

However, the strengths of relationship between variables in the UK and the Czech Republic vary. Table 4.25 represents the strengths of relationship between having a payment cards and security fears. The strength of relationship is relatively low in Czech conditions ($C_{C\ CR} = 0,3472$). Comparison of Cramer's Coefficients in the UK and the Czech Republic indicates that dependence of holding a payment card and security fears is greater in the UK.

4.4.4 Hypothesis 4

H_0 : Gender and holding payment card are not dependent.

H_1 : Gender and holding payment card are dependent.

Testing this hypothesis aims to discover whether the values for the two variables – gender and holding a payment card – are independent or associated. Both variables take only two variations and that is why data can be arranged to frequency table. Chi square (χ^2 - Test) test of independence in frequency table was considered as the most suitable statistics in this case. Probability (P-Value) smaller than 0,05 ($\alpha = 0,05$) indicates that there is 95% certainty that the two variables are significantly associated. The strength of relationship and its direction can be assessed using Association Coefficient (r_{AB}). If value of Association Coefficient ($r_{AB} < -1; +1 >$) is a positive number approaching value one (+1), dependence is direct. In contrast, if the value is a negative number approaching value minus one (-1), the dependence is indirect. If value of Association Coefficient is a number close to zero (0), there is independence between variables.

Firstly, relationship between gender and holding a payment card in the UK was analysed. Data collected in the UK were arranged into frequency table (Table 4.26).

Table 4.26 Frequency Table: Hypothesis 4 analysing data collected in the UK

Gender	Do you have a payment card?		n_{i0}
	Yes	No	
Male	46 (46%)	4 (4%)	50 (50%)
Female	43 (43%)	7 (7%)	50 (50%)
n_{0j}	89 (89%)	11 (11%)	100 (100%)

Table 4.27 Test of Independence

Test	Statistic	Df	P-Value
Chi-Squared	0,919	1	0,3377

Source: Source: Statgraphics Centurion

Since the P-value (P-Value = 0,3377) is greater than significance level 0,05 ($\alpha = 0,05$), we cannot reject the hypothesis H_0 that rows and columns are independent at the 95% confidence level. Association Coefficient is 0,0959 ($r_{AB} = 0,0959$) which supports the idea of

independence between observed characters. Therefore, the observed row (gender) may bear no relation to its column (holding a payment card) in English conditions. It was not proved that gender and holding a payment card are significantly associated in the UK.

Secondly, relationship between gender and holding a payment card using data collected in the Czech Republic was analysed. Data collected in the UK were arranged into frequency table (Table 4.28).

Table 4.28 Frequency Table: Hypothesis 4 analysing data collected in the Czech Republic

Gender	Do you have a payment card?		n _{i0}
	Yes	No	
Male	26 (25,49%)	21 (20,59%)	47 (46,08%)
Female	29 (28,43%)	26 (25,49%)	55 (53,92%)
n _{0j}	55 (53,92%)	47 (46,08%)	102 (100%)

Table 4.29 Tests of Independence

Test	Statistic	Df	P-Value
Chi-Squared	0,069	1	0,7935

Source: Source: Statgraphics Centurion

According to results demonstrated in Table 4.29, hypothesis H_0 cannot be rejected in Czech conditions because the P-value (P-Value = 0,7935) is greater than significance level 0,05 ($\alpha = 0,05$). Association Coefficient is 0,0259 ($r_{AB} = 0,0259$) in the Czech Republic which also indicates rather independence between rows (gender) and columns (holding a payment card). It means that it was come to the same conclusion as using information acquired in the UK. It was not proved that gender and holding a payment card are significantly associated in the Czech Republic or in the UK.

Chapter 5 Discussion

In this chapter findings from analysis of primary data and findings from reviewing literature sources concerning payment methods and consumer behaviour in relation to them are brought together and discussed.

According to analysis of data collected in the UK and the Czech Republic, there are some significant differences in payment cultures such as popularity of different types of payment cards in the two observed countries. This finding supports the notion that there are various payment cultures across European countries which differ in customer behaviour and attitude towards payment instruments (Böhle and Krueger, 2001; Turban et al., 2002; Worthington, 1995).

On the other hand there are certain similarities or common features in use of some payment methods. One of the most distinguished common features is predominance of cash over other payment methods. Even though modern electronic payment methods offer numerous advantages, cash remains the most popular payment instrument in terms of volume. This fact conforms to a number of recent studies (Buck, 1997; Howard et al., 2006; Lefebvre, 1999; O'Mahony et al., 2001; Singh, 2004; Worthington, 1995).

According to primary data analysis especially small payments tend to be made in cash in both observed countries. Study of Böhle and Krueger (2001) support this notion. On the other hand larger amounts tend to be paid with payment cards in the UK and the Czech Republic. As studies of O'Mahony et al. (2001), Puri (1997) and Stephenson (1993) point out large number of customers try to reduce carrying large amounts of cash due to possibility of robbery or theft. Payment cards enable permanent and unlimited access to their funds.

Another feature common for both observed countries is security issue in connection with use of electronic payment methods. Respondents from the UK and the Czech selected lack of security as one of main problems which discourage them from using payment cards. English respondents find lack of security the most discouraging factor from using plastic. Czech respondents consider lack of security as the third most problematic factor. Lack of security was also chosen as the main reasons for not using internet banking in the UK. In the Czech

Republic security fear presents the second most often ticked reason for not using internet banking. Numerous studies agree that security represents the most principal issue (Dietel et al., 2001; Howard et al., 2006; Watson et al., 2000). Electronic payment methods evoke much more distrust and danger and they are quite often connected with the possibility of fraud perpetration (Turban et al., 2002). Moreover, study of Dietel et al. (2001) states that number of security attacks is still increasing. Hypothesis number three examines relationship between acceptance of electronic payments and security fears. It was proved that there is a relationship between the two categorical variables. Majority of nonusers of payment cards strongly agrees that lack of security discourage them from using electronic payments. That is why high level of security is very important for sustainability and increase of number of electronic payment method users.

81 per cent of Czech respondents agreed that the most problematic factor discouraging from using payment cards is that payment with plastic takes longer than payment in cash. This factor was not ticked by any of English respondents. Only studies of Roselius (1971) and Ho and Ng (1994) take this factor into account. The factor - time loss risk - presents one of individual sub-dimensions of perceived risk (Ho and Ng, 1994). The second most discouraging factor presents unacceptability of payment cards in shops in the Czech Republic. This factor can be described as performance risk which is highlighted in studies of Roselius (1971) and Ho and Ng (1994). Performance risk is the risk that a certain payment instrument cannot be used for effecting a transaction; for instance, some retailers can refuse to accept payment with plastic. Also Buck (1997), Wang et al. (2003), Juřík, (2003) and Chvátal (2006) consider unacceptability of electronic methods of payment as one of main commercial issues.

One of important discouraging factors in the Czech Republic which was not mentioned in English literature sources present high fees in connection with holding and using a payment card. One of the reasons for not mentioning this factor is the fact that level of bank services is exceptional in the UK. Holding and using a payment card is not connected with any additional fees in the UK. In contrast, there is a fee for numerous bank services, such as fee for a cash withdrawal, in the Czech Republic which are usually free in the UK. However, this problem is often mentioned in Czech literature sources (Chvátal, 2006; Juřík, 2003; Máče, 2006).

Bank fees also influence the value and volume of ATM withdrawals in the CR. Findings of this study confirm that the Czechs visit cash machines less often and withdraw higher

amounts of money in order to cut bank charges than the British. Study of Juřík (2003) came to similar conclusion.

One of significant differences between English and Czech payment cultures present use and popularity of payment cards and its types. Payment cards - debit and credit cards - are much more often used in the UK than in the CR. There are on average about 2,61 payment card per adult in the UK and only 0,75 payment card per adult in the Czech Republic according to data collected in the UK and the CR. This finding supports the notion that the UK is one of the most payment card friendly countries in the world (Worthington, 1998). While both debit and credit cards are often used in the UK, 98 per cent of Czech respondents prefer debit cards according to information acquired in the Czech Republic. Study of Chvátal (2006) states that 97 per cent of payment cards present debit cards in the Czech Republic.

This study also indicates that the Czechs tend to be generally more distrustful nation than the British in connection with electronic payment methods. This issue reflects slower acceptance or reluctance against acceptance of electronic payment technology. According to Máče (2006) the Czechs are getting used to payments by plastic cards rather slowly than other Western European countries.

Analysis of collected data enables to describe sociodemographic characteristics of a card user profile. Czech and English card holders tend to be people between 26 and 40 years of age with higher income. Czech and English customers between 26 and 40 have the highest number of payment cards per adult and they also use them very often. However, this study did not prove that there would be any gender preference among using electronic payments. Proportion of men and women who use electronic payment methods in the UK or in the Czech Republic is balanced according to findings of the analysis. The studies of Durkin et al. (2007), Juřík (2003) and Flavián et al. (2006) suggest that users of electronic payment systems tend to be younger and have a higher income. Moreover, Devlin and Yeung (2003) and Flavián et al. (2006) emphasize that prevailing gender seems to be male. However, results of this study indicate that males and females hold and use payment cards without significant differences. This variance could be caused by small size of sample and that is why more extensive research in this area is recommended.

Hypothesis number four also did not prove that gender and holding a payment card is dependent. The hypothesis was tested twice, once using English data and once using Czech data, but the results are the same.

Hypothesis number one examined the relationship between acceptance of electronic payment services and level of income. It was proved that there is a significant relationship between the two variables in the both observed countries. The strength of relationship is higher in the UK (57%) than in the Czech Republic (35%) due to greater diversity of number of payment cards between and within income groups in the Czech Republic. Result of this hypothesis supports the notion that customers with higher income carry and use payment cards more often.

Hypothesis number two focused on relationship between acceptance of electronic payments and age groups. The test demonstrated that there are significant differences in number of payment cards across five age groups in the both observed countries. It means that some age groups use payment cards more frequently other less. Analysis of data indicates that English and Czech customers between 26 and 40 are the most payment card friendly age group which conforms to numerous previous studies as mentioned before.

Chapter 6 Conclusion

This study sets out to provide insights into use of payment instruments in the UK and the Czech Republic. Firstly, the study aims to investigate how popular various payment methods are in each of the countries and to compare the findings. Secondly, it sets out to examine which factors discourage customers from using electronic payments and if the factors significantly vary in the UK and the Czech Republic. Thirdly, it aims to analyse if there are any relevant differences in consumer behaviour in relation to payment methods among different age groups and also among the same age groups in the UK and the Czech Republic. Finally, this paper investigates if there can be observed any relationships between acceptance of electronic payments and level of income, gender or security fears.

To sum up, the most popular and predominant method of payment in terms of volume remains cash in the both observed countries. Even though it is less efficient than electronic payments, the volume of cash transactions exceeds the volume of other particular payment instruments, namely, debit cards, credit cards, chip cards and cheques.

Payment cards - especially debit and credit cards – and internet banking services are much more often used in the UK. The data analysis supports this notion because the British tend to be generally more confident in modern payment technology. However, in the both observed countries people between 26 and 40 with higher income carry the biggest number of payment cards and use them and internet banking most often. On the other hand, results of data analysis collected in the both countries did not prove that there would be a gender preference among using electronic payments. These findings are supported by results of analyses of hypotheses examining relationships between acceptance of electronic payments and age groups, level of income and gender.

The study also reveals that lack of security presents one of the three most problematic issues in the UK and the Czech Republic. Electronic payments are often associated with data gatherings and identity thefts. That is why pursuit of elimination or at least minimizing safety issues should become one of significant aims for financial institutions.

The process of learning about customer payment preferences, requirements and reasons for choosing a particular payment option can contribute to development of existing payment instruments and introduction of new payment methods in the future.

It should be noticed that there are several limitations in this study which are explained in the methodology chapter. It is with these limitations in mind that the results of this study should be interpreted with caution.

Further research in this topic is recommended. Larger size of sample and also use of different data collection methods such as questionnaire together with interview could help to increase reliability of the research and reveal more valuable insights into usage and acceptance of payment instruments in the UK and the Czech Republic.

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Appendix 1

Questionnaire

Dear respondents,

I am a final year Business School student from the University of Huddersfield now writing a dissertation on topic how the British and the Czech are accepting and using electronic banking services. For purpose of the research I would appreciate your cooperation in answering the following questions. The collected information will be anonymous and will be only used for research purposes. Please tick or fill in the most suitable answers.

Thank you for your time and willingness.

Yours sincerely

Klara Safarova

1. Gender Male / Female
2. Age 18-25 26-40 41-50 51-60 60+
3. Level of education Primary school
 Secondary school
 Sixth form / Further education
 Higher education
4. What is your own monthly income? If you do not have any income, tick Student or Other.
- Monthly income: £1,200 or below
 £1,201 - £2,000
 £2,001 - £3,000
 £3,001 or above
- No monthly income: Student
 Other, please state _____
5. Number of inhabitants in your place of residence up to 5,000
 up to 10,000
 up to 50,000
 up to 100,000
 up to 200,000
 more than 200,000
6. Do you have any payment cards? Yes / No
If the answer is Yes, how many payment cards do you carry?
a) Number of debit cards _____
b) Number of credit cards _____

c) Number of charge cards _____

d) Number of prepaid cards (smart cards) _____

7. On average, how many times do you pay
- | | |
|----------------------|-------|
| a) cash | _____ |
| b) with debit card | _____ |
| c) with credit card | _____ |
| d) with charge card | _____ |
| e) with prepaid card | _____ |
| f) by cheque | _____ |

in a week?

8. On average, how much do you usually spend for daily use? Please tick one option for each part a) and b).

- a) for payment in cash
- | | |
|--------------------------|-----------|
| <input type="checkbox"/> | below £10 |
| <input type="checkbox"/> | £11 - £30 |
| <input type="checkbox"/> | £31 - £50 |
| <input type="checkbox"/> | £51 - £70 |
| <input type="checkbox"/> | above £70 |

and

- b) for payment with plastic
- | | |
|--------------------------|-------------------------------------|
| <input type="checkbox"/> | £0 I do not pay with payment card/s |
| <input type="checkbox"/> | below £10 |
| <input type="checkbox"/> | £11 - £30 |
| <input type="checkbox"/> | £31 - £50 |
| <input type="checkbox"/> | £51 - £70 |
| <input type="checkbox"/> | above £70 |

9. Which factors do you consider as main problems which discourage you from using payment card? Choose one option to each factor.

a) Numerous shops still do not accept payment cards

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b) Lack of security (possibility of fraud perpetration, identity theft etc.)

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

c) Lack of privacy (after payment with plastics remain transaction records)

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

d) Low control over spent flow of money

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

e) Possibility of system breakdown

Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

f) Payment with plastic takes longer than payment in cash

Strongly disagree Disagree Neither agree or disagree Agree Strongly agree

g) Other important discouraging factors, please state if any

10. Does the amount of payment influence your method of payment?

Always yes Usually yes Sometimes Usually no Never

11. Do you pay cash for payments below £5?

Always yes Usually yes Sometimes Usually no Never

12. Do you trust and consequently easily accept new electronic payment technology?

Always yes Usually yes Sometimes Usually no Never

13. For what purpose do you mainly use your payment card? Choose one option only. If you do not have a payment card, proceed to question 16.

- ATM withdrawals
- Purchase at POS (point of sale)
- Purchase at POS together with cashback at POS

14. On average, what amount of cash do you withdraw at a visit to a cash machine?

£ _____

15. On average, how many times do you use ATM services in a month? _____

16. On average, what is the amount of cash you withdraw from bank tellers in bank offices?

£ _____

17. On average, how many times do you visit bank offices in a month? _____

18. Do you use a computer at home or at work? Yes / No

If the answer is Yes, how many hours per week do you use computer?

- Less than 2 hours per week
- Between 3 and 10 hours per week

More than 10 hours per week

19. Are you registered for internet banking? Yes / No

If you ticked No, please proceed to question 21.

20. Do you use internet banking services? Yes / No

If you ticked No, proceed to question 21.

If you ticked Yes, proceed to question 22.

21. Evaluate reasons for not using internet banking.

	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
a) Inaccessibility to the Internet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Lack of security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Complexity of the system, uneasy to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Possibility of system breakdown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Lacking the human touch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) No need to use internet banking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Other reasons, please state if you have any other important reasons _____					

Thank you for completing the questionnaire!

22. How often do you use internet banking services?

Very often (every day)	Often (3-5 times per week)	Sometimes (once a week)	Occasionally (once a month)	Rarely (less than once a month)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. State the frequency of internet banking service selected when logging to your account.

	Always yes	Usually yes	Sometimes	Usually no	Never
a) View account balance	<input type="checkbox"/>				
b) Look at bank statement	<input type="checkbox"/>				
c) Make a transfer/s of money	<input type="checkbox"/>				
d) Pay bill/s	<input type="checkbox"/>				
e) Set up a standing order/s	<input type="checkbox"/>				
f) Other service/s, please state if you use any other services _____					

Thank you for completing the questionnaire!

Appendix 2

Dotazník

Dobrý den,
jsem studentkou třetího ročníku University of Huddersfield, obor European Business a v současné době se zabývám závěrečnou bakalářskou prací na téma jak Britové a Češi používají různé elektronické bankovní služby. Pro účely výzkumu bych Vás chtěla poprosit o vyplnění krátkého dotazníku. Vámi poskytnuté informace budou anonymní a budou použity pouze pro účely tohoto výzkumu. Prosím zaškrtněte nebo doplňte nejlépe se hodící odpověď.

Mnohokrát děkuji za Váš čas a ochotu.

S pozdravem

Klára Šafářová

1. Pohlaví Muž / Žena
2. Věk 18-25 26-40 41-50 51-60 60+
3. Dosažené vzdělání Základní škola
 Učiliště s výučním listem
 Učiliště s maturitou
 Střední škola
 Vysoká škola
4. Jaký je Váš čistý měsíční příjem? Pokud nemáte žádný příjem, zaškrtněte políčko Student nebo Ostatní.
- Měsíční příjem: 10 000Kč nebo méně
 10 001Kč - 18 000Kč
 18 001Kč - 23 000Kč
 23 001Kč nebo více
- Bez příjmu: Student
 Ostatní, prosím uveďte _____
5. Počet obyvatel v místě Vašeho bydliště do 5 000
 do 10 000
 do 50 000
 do 100 000
 do 200 000
 nad 200 000
6. Vlastníte nějaké platební karty? Ano / Ne
Pokud je odpověď Ano, kolik platebních karet máte?
- a) Počet debetních karet _____ ks

(platba za zboží je odečtena tentýž nebo následující den z účtu majitele karty)

b) Počet kreditních karet _____ ks

(majitel kreditní karty čerpá při jejím použití úvěr, úvěrový limit se automaticky obnovuje s uskutečněnou splátkou úvěru, pokud je úvěr splacen v časově omezeném období (cca 45 dní), je úvěr čerpán s nulovým úrokem, jinak je nesplacená část úvěru úročena)

c) Počet charge karet _____ ks

(na konci měsíce pošle banka výpis útrat kartou a celá částka musí být uhrazena do stanoveného data, dluh musí být splacen najednou)

d) Počet předplacených karet (elektronická peněženka) _____ ks

7. Kolikrát týdně průměrně platíte

a) hotově _____

b) debetní kartou _____

c) kreditní kartou _____ ?

d) charge kartou _____

e) předplacenou kartou _____

f) šekem _____

8. Kolik průměrně denně utratíte? Prosím zaškrtněte pouze jednu možnost pro každou část a) a b).

a) denně za platbu/y v hotovosti

méně než 100Kč

101Kč - 200Kč

201Kč - 500Kč

501Kč - 800Kč

více než 800Kč

a

b) denně za platbu/y kartou

0Kč neplatím platební kartou

méně než 100Kč

101Kč - 200Kč

201Kč - 500Kč

501Kč - 800Kč

více než 800Kč

9. Které faktory považujete za hlavní problémy, které Vás odrazují od používání platebních karet? Zvolte pouze jednu možnost pro každý faktor.

a) Velké množství obchodů stále nepřijímá platební karty

Silně nesouhlasím Nesouhlasím Ani nesouhlasím ani souhlasím Souhlasím Silně souhlasím

b) Nedostatečné zabezpečení, pravděpodobnost zneužití platební karty

Silně nesouhlasím Nesouhlasím Ani nesouhlasím ani souhlasím Souhlasím Silně souhlasím

c) Transakční záznam (při použití platební karty dochází k zaznamenání transakční operace)

Silně nesouhlasím Nesouhlasím Ani nesouhlasím ani souhlasím Souhlasím Silně souhlasím

d) Malá kontrola nad utraceným množstvím peněz

Silně nesouhlasím Nesouhlasím Ani nesouhlasím ani souhlasím Souhlasím Silně souhlasím

e) Možnost výpadku systému (nefunkční platební terminál, bankomat atd.)

Silně nesouhlasím Nesouhlasím Ani nesouhlasím ani souhlasím Souhlasím Silně souhlasím

f) Platba kartou trvá déle než platba v hotovosti

Silně nesouhlasím Nesouhlasím Ani nesouhlasím ani souhlasím Souhlasím Silně souhlasím

g) Jiné než výše uvedené faktory, prosím uveďte

10. Ovlivňuje výše platby Vaši metodu platby?

Vždy ano Obvykle ano Někdy Obvykle ne Nikdy

11. Platíte hotově za platby do 50Kč?

Vždy ano Obvykle ano Někdy Obvykle ne Nikdy

12. Důvěřujete a následně snadno přijímáte nové elektronické platební metody?

Vždy ano Obvykle ano Někdy Obvykle ne Nikdy

13. Pro jaký účel obvykle používáte Vaši platební kartu? Zvolte pouze jednu možnost. Pokud nepoužíváte platební karty, přejděte prosím na otázku číslo 16.

- Výběry z bankomatu
- Nákupy
- Nákupy společně s vrácením Vámi zvolené částky v hotovosti (cashback)

14. Jaká je průměrná výše Vámi vybrané hotovosti z bankomatu? _____ Kč

15. Kolikrát měsíčně v průměru vybíráte peníze z bankomatu? _____

16. Jaká je průměrná výše Vámi vybrané hotovosti v bance? _____ Kč

17. Kolikrát měsíčně v průměru navštěvujete banku? _____

18. Používáte počítač doma nebo v práci? Ano / Ne
Pokud je odpověď Ano, kolik hodin týdně používáte počítač?

- Méně než 2 hodiny týdně
 Mezi 3 a 10 hodinami týdně
 Více než 10 hodin týdně

19. Máte ke svému účtu zřízené internetové bankovníctví? Ano / Ne
Pokud jste zaškrtnli Ne, prosím přejděte na otázku číslo 21.

20. Používáte internetové bankovníctví? Ano / Ne
Pokud jste zaškrtnli Ne, prosím přejděte na otázku číslo 21.
Pokud jste zaškrtnli Ano, prosím přejděte na otázku číslo 22.

21. Ohodnoťte důvody pro nepoužívání internetového bankovníctví.

	Silně nesouhlasí	Nesouhlasí	Nesouhlasí ani souhlasí	Souhlasí	Silně souhlasí
h) Nemožnost připojení k internetu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Nedostatečné zabezpečení	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Složitost ovládání	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) Možnost nefunkčnosti systému	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l) Nedostatek osobního kontaktu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m) Nepotřebnost internetového bankovníctví	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n) Ostatní důvody, prosím uveďte jakékoli jiné pro Vás důležité důvody _____					

Děkuji za vyplnění dotazníku!

22. Jak často používáte internetové bankovníctví?

Velmi často (každý den)	Často (3-5krát týdně)	Někdy (jednou týdně)	Příležitostně (jednou měsíčně)	Zřídka (méně než jednou měsíčně)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. Uveďte četnost používání vybraných služeb internetového bankovníctví.

	Vždy ano	Obvykle ano	Někdy	Obvykle ne	Nikdy
g) Zobrazení zůstatku na účtu	<input type="checkbox"/>				
h) Zobrazení výpisu z účtu	<input type="checkbox"/>				
i) Převod peněz z účtu na účet	<input type="checkbox"/>				
j) Placení účtů	<input type="checkbox"/>				
k) Zadání trvalého příkazu	<input type="checkbox"/>				
l) Ostatní služba/y, prosím uveďte, pokud často používáte jiné služby _____					

Děkuji za vyplnění dotazníku!

Appendix 3

Average daily value of payments according to age groups in the UK

Method of payment		Percentage of all respondents				
		18-25	26-40	41-50	51-60	60+
Cash	below £10	13%	10%	9%	2%	2%
	£11 - £30	7%	10%	7%	10%	11%
	£31 - £50	0	0	4%	8%	7%
Plastic	below £10	0%	0%	0%	0%	0%
	£11 - £30	2%	1%	0%	0%	0%
	£31 - £50	10%	4%	10%	6%	8%
	£51 - £70	8%	15%	10%	14%	12%

Appendix 4

Average number of cards per adult and mode according to age groups in the UK

Age group	Average number of cards per adult	Mode
18-25	3,55	4
26-40	3,8	4
41-50	2,75	2
51-60	1,85	1
60+	1,1	0

Appendix 5

Acceptance of electronic payment technology in the UK according to age groups

Age group	Do you trust and easily accept electronic payment technology? (Percentage of respondents in appropriate age group)				
	Always yes	Usually yes	Sometimes	Usually no	Never
18-25	45%	35%	20%	0%	0%
26-40	65%	25%	10%	0%	0%
41-50	10%	65%	25%	0%	0%
51-60	0%	5%	55%	25%	5%
60+	0%	5%	25%	30%	40%

Appendix 6

Three most often selected reasons for not using internet banking in the UK

Reason	Percentage of internet banking nonusers
Lack of security	55%
No need to use internet banking	24%
Lacking human touch	12%

Appendix 7

Average daily value of payments according to age groups in the CR

Method of payment		Percentage of all respondents				
		18-25	26-40	41-50	51-60	60+
Cash	below 100Kč	15,5%	12,1%	7,2%	9,7%	7,1%
	101Kč-200Kč	5,2%	7,5%	11,4%	9,9%	12,5%
	201Kč-500Kč	0,8%	0%	1,2%	0%	0%
Plastic	below 100Kč	8,1%	0%	0%	0%	0%
	101Kč-200Kč	9,2%	2,4%	5,8%	6,5%	4,9%
	201Kč-500Kč	2,2%	8,0%	6,2%	12,1%	14,7%
	501Kč-800Kč	2,1%	9,2%	7,6%	1,1%	0%

Appendix 8

Acceptance of electronic payment technology in the CR according to age groups

Age group	Do you trust and easily accept electronic payment technology? (Percentage of respondents in appropriate age group)				
	Always yes	Usually yes	Sometimes	Usually no	Never
18-25	0%	17%	43%	35%	5%
26-40	0%	25%	10%	40%	25%
41-50	0%	5%	15%	55%	25%
51-60	0%	5%	10%	50%	35%
60+	0%	3%	8%	49%	40%

Appendix 9

Three most often selected reasons for not using internet banking in the CR

Reason	Percentage of internet banking nonusers
No need to use internet banking	52%
Lack of security	39%
Inaccessibility to the Internet	6%

Appendix 10

Number of payment cards and level of income of English respondents

Monthly income	Number of payment cards				
	18-25	26-40	41-50	51-60	60+
No income (students)	4, 4, 4, 4, 5				
Less than £1,200	3, 3, 2, 2, 2, 2, 2	3, 2, 2, 2, 2	1, 2, 2, 1	1, 1, 2, 0, 0, 0, 1, 1, 1	1, 1, 0, 0, 0, 0, 0, 0, 0, 0
£1,201 - £2,000	4, 3, 3, 3	4, 4, 3, 3, 3	2, 3, 2, 3, 2, 3, 2	2, 1, 2	1, 1, 2
£2,001 - £3,000	6, 5, 4	6, 4, 5, 4, 5, 4, 4	4, 3, 3, 2, 4, 4, 3	3, 4, 2, 3, 2, 2	2, 2, 2, 2, 2
More than £3,001	6	6, 5, 5	4, 5	4, 5	3, 3

Appendix 11

Number of payment cards and level of income of Czech respondents

Monthly income	Number of payment cards				
	18-25	26-40	41-50	51-60	60+
No income (students)	2, 1, 1, 1, 1, 0, 0, 1, 1, 1, 0, 1, 3				
Less than CZK 10,000	0, 1, 0	0, 0, 1	1, 1, 0, 0, 0, 0, 1, 0, 0, 0	0, 0, 0, 0, 0, 0, 0, 0, 0	0, 0, 0, 0, 0, 0, 0
CZK10,001 – 18000CZK	2, 1, 2, 1, 2	2, 1, 1, 0, 1, 1	1, 1, 1	1, 0, 0, 0, 0	0, 0, 0, 0, 0, 0, 0, 0
CZK18,001 – CZK23,000	2	2, 2	2, 1, 1, 1	1, 1	1, 0
More than CZK23,000		2, 2, 3, 1, 2, 1, 2, 2, 3	2, 2, 1	1, 0, 0, 1	1, 0, 1