

ADOPTION OF INTERNET BANKING SERVICE WITHIN THE CORPORATE SECTOR: EVIDENCE FROM NEWLY ACCEDED EU COUNTRY

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ABSTRACT

This paper explores the level of adoption of the Internet banking service in the corporate sector of Croatia as newly acceded EU country, with goal of finding out the reasons behind the service's usage or refusal to use. Furthermore, we seek an answer on the frequency of usage of certain Internet banking functionalities among those companies which implemented the Internet banking. Finally, we hypothesize that companies' characteristics explain disparities in acceptance of the Internet banking service. A questionnaire research encompassed up to 80 companies. Research results reveal that the most of companies (around 75%) adopted the Internet banking service, but mainly to perform transactional services (e.g. paying bills, checking bank account balances and transferring funds). Profitability of the company, an industry in which it operates and computer literacy of its employees are confirmed as the main drivers of the Internet banking service adoption. Furthermore, there is a relationship between using online banking in private and professional life. Altogether, obtained results might be interesting for the Croatian banks in their attempts to operate as the full-

*service institutions via cross-selling strategy and possible new entrants to Croatian banking market.*¹

Keywords: *Corporate payments, Croatia, Financial services, Internet banking, Questionnaire.*

1 INTRODUCTION

The Internet banking (online or web banking, e-paying or e-banking) is one of distribution channels for delivery of financial products inside the banking industry. It is usually promoted as being more affordable (cost efficient), more accessible (self-service) and time-saving service in comparison to the offline banking. Nevertheless, there is still a large potential for its adoption by the retail sector clients, who are thus often in the focus of empirical researches. For instance, in the year 2013, 2/3 of households in Croatia had Internet access and approximately 23% of computer and Internet users were using it for the Internet banking (Statistical Yearbook 2014, pp. 324-325). On the other hand, in the EU-28 in 2014, approximately 44% of individuals were using the Internet for Internet banking, while the same indicator decreased for Croatia from 23% in 2013 to 19% in 2014 (Official website of Eurostat). With reference to this, by performing the country-level analysis, rather than individual or organizational level analysis, based on the secondary data collected from a sample of 33 European countries in 2013, Takieddine and Sun (2015) identified GNI-PPP, Internet access, speed and security as well as differences in national cultures as key factors for the Internet banking diffusion i.e. the percentage of individuals between the age of 18 and 74 years old who used Internet to conduct Internet banking activities. Similarly, Dumičić et al. (2013) proved that an increase in the economic growth and public expenditures on education, as well as, increase in the level of Internet access and broadband penetration rate raise the level of Internet banking users among individuals in the EU-28 countries in 2011. A conclusion can be made that besides the obvious differences in the economic development level, the EU countries differ with respect to the Internet adoption and usage,

¹ This paper is an outcome of the diploma thesis written by I. Tokić under the supervision of A. Kundid at the university graduate degree program in Business Studies, Financial management course of study, at the Faculty of Economics, University of Split. The diploma thesis oral exam was successfully completed on 10/10/2014. The paper was presented at the international scientific conference "Finance and Accounting in Creating Information about Financial Position of Reporting Entities" organized by the Department of Accounting within University of Economics in Katowice, Katowice, Poland on 21/10/2015.

regardless of the purpose of Internet usage. In such a manner, there is a threat from the emerging new inequalities which will be caused by the “digital divide” as “those who do not have access to the Internet will be at an increasing disadvantage”, both from the social and economic point of view (Orviska and Hudson, 2009, p. 279). In addition, Orviska and Hudson (2009, p. 289) emphasize that although the broadband infrastructure in the less wealthy member states was gravely financed by the EU structural funds, country characteristics, for instance living standards and the rule of law, as well as the socio-economic characteristics of Eurobarometer survey respondents still cause a digital divide between and within the EU countries. Therefore, single-country studies with user level approach remain important issue on the online banking research agenda.

Considering the corporate sector for the latest available year, that of 2010, 82% of enterprises in the EU-28 used the Internet for banking and financial services, and in Croatia 85% of enterprises (with 10 employees or more) used the Internet for the same purpose (Official website of Eurostat). According to the presented facts, it is clear why researches which encompass individual customers of banks have recently flooded the literature on the Internet banking service adoption. Namely, as up-to-the-minute information is assumed to be highly relevant to corporate customers for accurate decision-making in financial management (Takieddine and Sun, 2015, p. 361), the acceptance rate of Internet banking service among corporate customers exceeds the one for the retail customers.

Empirical researches which tackle the question of online banking can be classified in two main groups at least. Thus, the most of papers investigate either the question of the effect of this innovation on the bank performance (e.g. Acharya et al., 2008; Onay and Ozsoz, 2013) or on the other hand deal with the adoption of this service by the bank customers, but mainly the retail sector characteristics (except e.g. O’Donnell et al., 2002; Ibbotson and Moran, 2003; Rotchanakitumnuai and Speece, 2003; Johns and Perrott, 2008). The supply-side or the cost-benefit issue of the online banking implementation is beyond the scope of this paper, while the matter of individual users – retail sector is somewhat tackled due to our assumption on the interdependence of the online banking usage in the private and professional life. We rather focus on the demand-side of story, to be more precise the corporate sector in order to examine: 1) the reasons for the service acceptance or non-acceptance, 2) the disparities between the companies which are users and non-users, 3) the frequency of the usage of

certain online banking functionality and 4) other relevant aspects of the service content.

To our best knowledge, empirical researches on the adoption of online banking within the Croatian corporate sector are scarce or dated, contrary to results about the service adoption by the retail customers. With reference to the latter, Primorac et al. (2012) conducted research which encompassed around 340 respondents and concluded on the frequency of usage of certain online banking functionalities among Croatian customers as well as about the motives for doing so, while Mečev (2013) examined the perceived quality of the online banking service among the corporate and retail customers as well as employees of one Croatian bank. In the latter study, out of 184 respondents, 65 were legal entities or corporate sector. Thus, our research aims to serve as a certain estimation of the context of online banking adoption and content of its usage within the Croatian corporate sector. Finally, by summarizing the empirical researches on the determinants of internet banking service adoption which employ the individual-user level approach and were performed on a single-country basis for the EU member countries or other European countries, we put our results in a multi-country context.

The rest of the paper is organized as follows: the second section reviews empirical researches on the determinants of the Internet banking service adoption. The research design and findings are transparent and discussed in the third section. The last section summarizes the key findings and practical implications of our study for bank managers.

2 DETERMINANTS OF INTERNET BANKING SERVICE ADOPTION BY CONSUMERS: A SURVEY FOR EUROPEAN COUNTRIES

Internet banking is assumed to be one of catalysts of international financial integration, which is the building block of the EU “project”. In that way, Gkoutzinis (2006, p. 10) points out that “the archenemy of market integration is geography, not law”, and that “the Internet brings down physical barriers, while the single market programme brings down legal barriers”. The same author (Gkoutzinis, 2006, pp. 16-17), elaborates multiple gains for customers from the usage of the Internet banking service, for instance increase of financial services competition and consequent decrease in the service price, better service quality, as well as enjoying some innovative electronic financial services and products. From the macroeconomic point of view,

Internet banking adoption might increase financial inclusion, lower the cost of banking intermediation and thus foster the overall economic growth and development. However, despite numerous benefits from the usage of Internet banking service, disparities in its adoption still exist and are usually explained by several key demand factors. Centeno (2003, 2004) classifies them into three groups: 1) access technology and infrastructure related factors e.g. PC and Internet penetration and skills, attitude towards technology and security and privacy concerns; 2) banking sector specific factors e.g. trust in banking institutions, banking and e-banking culture and Internet banking push; and 3) other socio-economic factors e.g. institutional trust, income level, inflation rate and level of informal economy.

Lately, cross-country studies on the drivers of the online banking service adoption are becoming more popular (see e.g. Orviska and Hudson, 2009; Takeddine and Sun, 2015). According to Whetten (1989; as cited in Takeddine and Sun, 2015, p. 362) that might be troublesome as there is the danger "to generalize the findings beyond the original geographical scope as the 'where' condition places limitations on researches' propositions as contextual factors such as the targeted location of a study (one country) set the boundaries of generalizability". Thus, the most of empirical researches about online banking acceptance still contain single-country, individual-level analysis i.e. dominantly examine retail customers. We hypothesize that there is a positive correlation between using the Internet banking in private life as a retail customer and professional life as an employee, a manager or even an owner of business in the corporate sector. Therefore, a summary of the key findings of empirical researches on the determinants of online banking adoption by retail customers is made with a focus on the Eastern European economies which are comparable to Croatian economy. Individual-user level analysis' results for the more developed EU countries are encompassed with the work of Howcroft et al. (2002) for the UK, Karjaluo et al. (2002) for Finland, Grabner-Kräuter and Faullant (2008) for Austria, Aldás-Manzano et al. (2009) for Spain, Capece and Campisi (2013) for Italy, and Couto et al. (2013) for Portugal. For some other countries (e.g. US, Canada, Pakistan and India) please see researches by Shik Yoon and Barker Steege (2013), Rajaobelina et al. (2013), Akhlaq and Ahmed (2013) and Safeena et al. (2014). Resumes of some earlier researches for Croatia were given in the introduction.

According to Gurău (2002) who presented results for the Romanian banking sector the main requirements for the successful implementation and adoption of the Internet banking can be classified in four groups:

requirements expected to be fulfilled by customers, Internet network in a country as well as by government and banks. The interviews with Romanian banks' representatives and managers show that they perceive computer literacy, ethical behaviour, economic power for saving and spending and familiarity with electronic payments and currency as relevant for the online banking adoption by the Romanian bank customers.

Furthermore, Eriksson et al. (2005, 2008) by conducting a questionnaire research among the Estonian online banking users (around 1.800 respondents) concluded that Estonian banks should pay more attention in explaining to their retail customers why and how Internet banking is useful to them, rather than only designing an user-friendly online service. In addition, they found out that overall trust in a bank shapes customers' attitudes towards bank's online banking.

Ozdemir et al. (2008) also practiced questionnaire research and obtained 155 face-to-face responses of Internet users in developed parts of Istanbul. Online banking adopters had more experience with mobile Internet, earned higher income and had longer working hours in comparison to the offline banking users.

Polasik and Wisniewski (2009) analysed 3.519 answers of the Internet users in Poland out of which 2.044 were Internet banking users. Perceived Internet security, familiarity with mobile banking and payment cards, promotional campaigns, usage of Internet for work and shopping, the duration of Internet usage and number of years of education were important predictors for the online banking adoption. Among demographic characteristics it was found that male population and inhabitants of highly urbanised areas use e-banking more, while adolescents and older population (over the age of 65) were mainly among the non-adopters.

Patsiotis et al. (2012) collected 281 responses from the Greek, to be more precise, Athens Internet users in order to profile them and conduct market segmentation. Among three defined segments of respondents, advanced users of Internet banking were mainly male gender and had a higher income in comparison to other segments (concerned majority and unconcerned majority), likewise proved in Polasik and Wisniewski (2009).

At last, Kürşad Özlen and Jukic (2013) gathered 183 online responses of online banking users in Bosnia and Herzegovina. They conclude that respondents have positive aspirations towards online banking and that they

are satisfied with the online banking service, but they rated themselves as weakly capable of using it.

We would by no means claim that this is a fully comprehensive list of studies, but we consider the cited studies as the most relevant.

3 EMPIRICAL RESEARCH ON ADOPTION OF INTERNET BANKING SERVICE WITHIN THE CROATIAN CORPORATE SECTOR

3.1 Research design and hypotheses

A very detailed and extensive questionnaire which consisted of 35 questions was designed with aim of collecting the data on the Internet banking service adoption by the corporate sector in Croatia. In the two months period (from June till August of the year 2014) questionnaire was filled out by up to 80 respondents – employees, managers or owners of the companies which were doing business in Croatia. The questionnaire was distributed via mail, e-mail or personally handed in to the companies, out of which the most of them were business partners of the company owned by one of the paper authors². Although this might be perceived as a research limitation, due to a practical reason i.e. expected high response rate in a very short time period, the questionnaire was targeted for that respondents. However, by distributing questionnaire across various Croatian counties, a condition of geographical diversification was satisfied and thus obtained results are somewhat less biased. In addition, the most of respondents were employed/self-employed in micro and small-sized enterprises, what is an important attribute of the research, as it could be assumed that medium and large-sized companies are more prone towards using the Internet banking service.

Namely, according to O'Donnell et al. (2002) who investigated corporate customers in the UK, all bank customers prefer personal approach, especially smaller customers, who are usually less profitable for banks. Moreover, smaller companies in the UK showed less willingness to use remote banking services and technological interaction. Characteristics of

² To be more precise, graduate student is an owner of a company Suggero Assistance Ltd, whose core business is intermediation for foreign insurance companies in organizing medical and technical services.

small companies (higher informational asymmetry, insufficient business history, lack of collateral and generally higher uncertainty) have always required relationship, rather than transactional banking approach (Kundid, 2014), although the intention of bank channel managers is to have financial transactions *d'entro* for big or wealthy clients (personalized approach) and *all'apperto* for small clients (self-service banking) as it used to be in the medieval states on the area of today's Italy (Pojatina, 2000). Thus, Ibbotson and Moran (2003) assume that it will become more difficult to retain SME sector client base for traditional banks which already pay less attention to small enterprises. Namely, one of the main reasons for the SMEs non-usage of e-banking in case of Northern Ireland that Ibbotson and Moran (2003) analysed was that SMEs were happy with present offline arrangements and did not need e-banking service. In addition, Rotchanakitumnuai and Speece (2003) found out that for Thai companies the greatest perceived obstacle to use online banking was the lack of trust and fear of security failures. Since then times have changed, and SMEs became less reluctant to online banking adoption, despite a possible threat of distancing from the head (main) bank. Nevertheless, adoption of the Internet banking service can still change the quality of relationship between a bank and corporate customer and *vice versa*, perception of offline relationship can lead to decision about the technology adoption (Johns and Perrott, 2008). To sum up, the paper gives an insight into the reasons behind the usage or refusal to use the Internet banking service mainly among the smaller companies in the Croatian corporate sector, which are often promoted as a backbone of the economic growth worldwide and which ordinarily ask for relationship banking approach. At last, two research hypotheses are established:

H-1: Adoption of the Internet banking service is related to company's characteristics (e.g. computer literacy of its employees, profitability, legal form and industry in which it operates).

H-2: There is a linkage between adoption of the Internet banking service in the professional and private life of companies' employees.

3.2 Data sample characteristics

Out of 74 respondents who answered on the question of a company's legal form around 50% were founded as a limited companies, slightly less than 40% were crafts and yet 6,7% were joint-stock companies. The most of the companies had up to 5 employees (60% of responses). Approximately 30%

of companies had between 6 and 20 employees, while only 5 respondents were employed in companies with more than 50 employees and 3 respondents in companies which had between 21 and 50 employees. The number of respondents who answered on this inquiry was 76.

Furthermore, the most of respondents were in companies which were aged up to 10 years (approximately 63% of 79 obtained responses), while around 27% of companies were between 11 and 20 years old. Only 8 companies were doing business for more than 20 years, and 21 companies were up to 5 years being old. All of the respondents were (self)employed in the service sector as it was expected due to the described business area of the author's company, whose business partners mainly filled out this questionnaire. Out of 80 companies, 38 were doing business in the hotels and restaurants industry, 11 were in trade and 9 in transportation services, while 5 companies were delivering financial and accounting services as well as health care services. The rest (12 companies) were providing other types of services. Out of 75 companies 47 achieved profit after tax in the year 2013, while 28 reported loss after tax. The most of the companies had their headquarters in the Split-Dalmatia County (around 75% of 75 responses), Šibenik-Knin County (8%), Dubrovnik-Neretva County (8%) and Zagreb County (4%).

3.3 Descriptive statistics and research findings – context of the Internet banking service adoption

The most of companies from the data sample use the Internet banking service in doing business (around 3/4 of all companies). Out of 79 companies 19 companies have not adopted the practice of online banking. The most of the non-users declared that they do not have trust in the security of transactions performed via Internet banking (7 respondents) or on the other hand they esteem that their computer literacy is not on the satisfactory level to use this service (4 respondents). Among other reasons there is the one that some respondents were not familiar whether their bank has Internet banking service at all or, on the other hand, respondents prefer personal approach to bank branch employees. Table 1 confirms that computer literacy is relevant for the usage of online banking as 12 respondents who esteemed their computer literacy level as "unsatisfactory" or "satisfactory" were in those companies which did not have a practice of using the Internet banking service.

Table 1. Computer literacy of employees and adoption of Internet banking

Self-evaluated level of computer literacy	Do you use the Internet banking service in doing business of a company in which you work / or you own?		Total
	Yes	No	
Unsatisfactory	4	8	12
Satisfactory	11	4	15
Good	13	1	14
Very good	12	4	16
Excellent	16	1	17
Total	56	18	74

Source: Authors.

Table 2. Computer literacy and level of formal education of employees

Self-evaluated level of computer literacy	Level of formal education (qualifications)			Total
	Secondary school	Two-year post-secondary school	University	
Unsatisfactory	12	0	0	12
Satisfactory and good	23	3	4	30
Very good and excellent	6	5	21	32
Total	41	8	25	74

Source: Authors.

In addition, table 2 proves that the level of formal education is related to the self-evaluated level of computer literacy. Thus, employees with the lowest educational level were the only ones who esteem themselves as having the “unsatisfactory” computer literacy, while those with the highest educational level see their computer knowledge mainly as “very good” and “excellent” one.

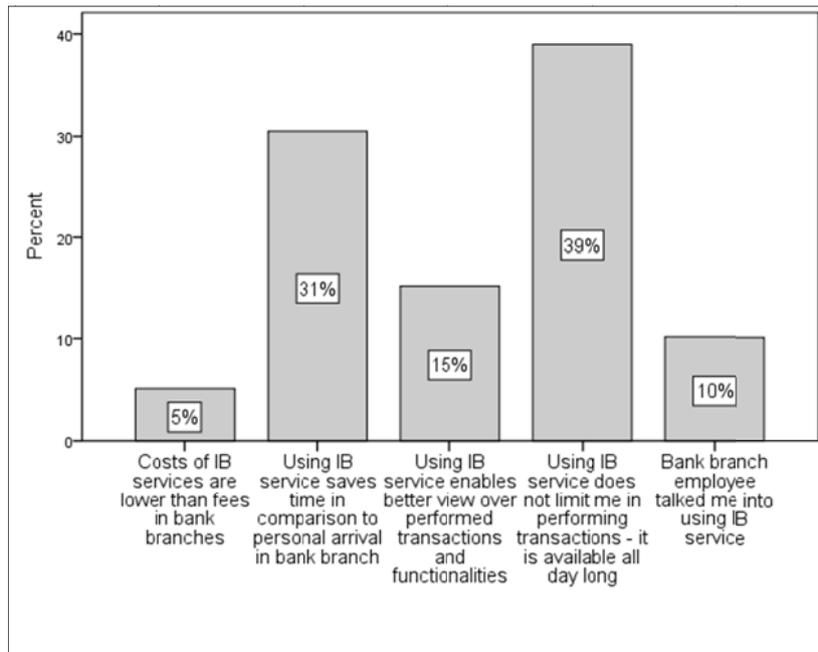
Another interesting finding is that the oldest respondents had the lowest self-evaluated level of computer literacy (table 3). Altogether, a conclusion can be made that the structure of human resources (e.g. their education and age) might be crucial for the adoption of certain mode of carrying out financial transactions in one company, for instance online banking usage.

Table 3. Computer literacy and age of employees

Self-evaluated level of computer literacy	Age				Total
	up to 35	36 - 45	46 - 55	more than 56	
Unsatisfactory	2	0	5	5	12
Satisfactory and good	10	11	8	1	30
Very good and excellent	14	9	9	0	32
Total	26	20	22	6	74

Source: Authors.

Chart 1. Key reasons for using Internet banking service (N=59)



Source: Authors.

The most of companies who are the users of online banking experienced one of these benefits (chart 1): 1) using Internet banking services is available all day long and does not limit them in performing transactions (23 responses), 2) using Internet banking saves their time in comparison to personal arrival of their employees in bank branch (18 responses), 3) using Internet banking enables better view over performed transactions and functionalities (9 responses) and 4) costs of Internet banking are lower than fees in bank branches (3 responses). However, some of them claim that the

main reason for using Internet banking is that they were talked into that by bank branch employees (6 responses). Out of 60 companies 27 companies are using the Internet banking service since their foundation. Interestingly, 16 companies with an age of 11 years or older have been using the Internet banking service only up to 4 years, while 16 companies aged up to 5 years adopted this service (table 4). Although, younger companies at first glance, are more flexible in adopting this mode of performing financial transactions, table 5 confirms that the most of non-users are still younger companies.

Table 4. Company age and duration of being Internet banking user

How long do you use the Internet banking service in your company?	Company age					Total
	up to 5 years	6 – 10 years	11 – 15 years	16 – 20 years	more than 20 years	
up to 2 years	2	6	3	1	1	13
3 – 4 years	6	9	6	1	4	26
more than 4 years	8	3	3	3	3	20
Total	16	18	12	5	8	59

Source: Authors.

Table 5. Company age and adoption of Internet banking

Do you use the Internet banking service in doing business of a company in which you work / or you own?	Company age					Total
	up to 5 years	6 – 10 years	11 – 15 years	16 – 20 years	more than 20 years	
Yes	16	18	12	5	8	59
No	5	11	2	1	0	19
Total	21	29	14	6	8	78

Source: Authors.

The most of Internet banking users found out for this service from their relationship managers (47,5%) or from the promotional activities of their bank (24,6%). Approximately 16% found out for the Internet banking service due to their curiosity by researching banks' official websites, and around 11% were informed from their business partners about it. Altogether, a conclusion could be made that relationship managers should pay more attention to younger companies in attracting them to become online banking users. Almost 80% of companies use the online banking service from their

head (main) bank, while the rest was attracted to use that service by some other bank. Furthermore, 98% of companies use the Internet banking service provided by one of the six largest banks in Croatia. The two largest banks were providers of the Internet banking service in 60% of cases.

From the descriptive statistics we found out that company's age is not crucial for adoption of the Internet banking service. On the other hand, employees' computer literacy seems to be related to this service usage. In order to find out the drivers of the Internet banking service adoption in a more detailed way we tested previously established hypotheses.

Among all tested company's characteristics inside H-1 ("Adoption of the Internet banking service is related to company's characteristics e.g. computer literacy of its employees, profitability, legal form and industry in which it operates") we found strong evidence for computer literacy as well as for profitability, boundary confirmation for the type of industry in which it operates, while legal form of the company seems to be irrelevant.

According to the results transparent from the table 6, Chi-square test confirms that there is a positive linkage between company's profitability, which is proxy with the profit after tax existence or non-existence in the previous year, and adoption of Internet banking service.

Table 6. Chi-square for profitability and adoption of Internet banking

	Value	df	Asymp. sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-square	6,224 ^a	1	0,013		
Continuity correction ^b	4,899	1	0,027		
Likelihood ratio	6,049	1	0,014		
Fisher's exact test				0,023	0,014
Linear-by-linear association	6,140	1	0,013		
N of valid cases	74				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,57.

b. Computed only for a 2x2 table

Source: Authors.

Namely, the descriptive statistics shows that out of 56 companies which adopted the Internet banking service, 40 companies recorded profit in the

previous year, while out of 18 companies which were non-adopters, only 7 companies accomplished positive financial result. In addition, values of symmetric measures (Phi, Cramer's V and Contingency coefficient) are somewhat lower than 0.3 with empirical significance $\alpha^*=0,013$. Furthermore, there is no significant difference in the adoption of online banking among the companies of various legal forms as the empirical significance of the Chi-square test was $\alpha^*=0,167$. Among the companies which do not use online banking there were 12 crafts, 6 limited companies and one joint-stock company.

The Chi-square test for the industry in which the company operates has empirical significance $\alpha^*=0,005$ (table 7), and thus a conclusion can be made that there is a difference in adoption of online banking among various industries. Values of symmetric measures are around 0.4 with empirical significance $\alpha^*=0,005$. However, results could not be unconditionally accepted due to non-possibility of merging cells for different types of industries. Thus, a look over table 8 might be useful. It is clear that the weakest adoption of the Internet banking service is in the transportation services, and the best one is in the financial and accounting services.

Table 7. Chi-square for industry and adoption of Internet banking

	Value	df	Asymp. sig. (2-sided)
Pearson Chi-square	16,950 ^a	5	0,005
Likelihood ratio	15,486	5	0,008
Linear-by-linear association	0,056	1	0,812
N of valid cases	79		

a. 7 cells (58,3%) have expected count less than 5. The minimum expected count is 1,20.

Source: Authors.

Table 8. Company's industry and adoption of Internet banking

Company's industry	Do you use the Internet banking service in doing business of a company in which you work / or you own?		Total
	Yes	No	
Hotels and restaurants	30	7	37
Trade	9	2	11
Transportation services	2	7	9
Financial and accounting services	5	0	5
Health care services	4	1	5
Other	10	2	12
Total	60	19	79

Source: Authors.

The last company's characteristic we assume to drive adoption of the online banking is employees' computer literacy. Confirmation is transparent from the tables 9 and 10 which contain results of the Mann-Whitney U test.

Table 9. Mann-Whitney U test - ranks

	Adoption of Internet banking within company	N	Mean rank	Sum of ranks
Self-evaluated level of computer literacy	Yes	56	41,87	2344,50
	No	18	23,92	430,50
	Total	74		

Source: Authors.

Table 10. Mann-Whitney U test – test statistics

	Self-evaluated level of computer literacy
Mann-Whitney U	259,500
Wilcoxon W	430,500
Z	-3,146
Asymp. sig. (2-tailed)	0,002

a. Grouping Variable: Adoption of Internet banking service.

Source: Authors.

Empirical significance of the test is $\alpha^*=0,002$ and conclusion on linkage between computer literacy of employees and adoption of the Internet banking service by a company is emphasized. Altogether the H-1 can be accepted.

Furthermore, we assume H-2 that adoption of the Internet banking in the private life of company's employees might spur adoption of the Internet banking in the corporate sector and vice versa ("There is a linkage between adoption of the Internet banking service in the professional and private life of companies' employees"). By conducting the Chi-square test we confirm the second hypothesis as empirical values of the test and symmetric measures are $\alpha^*=0,000$ (table 11). Values of symmetric measures are around 0,4. Thus, a conclusion can be made that there is a relation between using online banking in private and professional life.

Table 11. Chi-square for adoption of Internet banking in professional and private life

	Value	df	Asymp. sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson Chi-square	16,005 ^a	1	0,000		
Continuity correction ^b	13,935	1	0,000		
Likelihood ratio	19,117	1	0,000		
Fisher's exact test				0,000	0,000
Linear-by-linear association	15,789	1	0,000		
N of valid cases	74				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,47.

b. Computed only for a 2x2 table

Source: Authors.

Moreover, out of 75 respondents, 41 of them are non-users of online banking, and the rest claim to be users. Reasons for the usage and refusal to use online banking by respondents in their private life are pretty much the same as described for the company level. Thus, non-users: 1) are mainly not familiar that their banks developed the Internet banking service, 2) prefer personal approach to bank branch employees, 3) do not have trust in the security of financial transactions performed online and 4) esteem that their computer literacy is not on the satisfactory level to use the service. On the

other hand, users of the Internet banking: 1) perceive online banking as time-saving in comparison to the offline banking, 2) appreciate availability of online banking service 24/7 and 3) claim that by using online banking a better overview of transactions and functionalities is achieved.

3.4 Descriptive statistics and research findings – content of the Internet banking service usage

Several questions were addressed to respondents whose companies are Internet banking users about the content of the service usage likewise the frequency of using certain Internet banking functionalities and satisfaction with delivered service. The most of respondents use online banking on a daily basis (45%) or weekly (approximately 28%). Out of 58 companies, 15 companies use Internet banking only few times per month. A look over the Internet banking functionalities and frequency of their usage is available in the appendix. With reference to that the following conclusions can be established:

- ❖ Checking bank account balance and transactions as well as the service of taking over bank account summary are services with the most frequent usage. Out of 57 companies, 41 check bank account balance and transaction daily or few times per week, while 35 companies take over bank account summary.
- ❖ 42 companies use online banking for paying bills on a daily basis, few times per week or few times per month. Furthermore, only 6 companies do not use Internet banking for paying salaries.
- ❖ 30 companies buy and sell foreign currency using online banking, while the rest (27 companies) never use that functionality. In addition to that, 41 companies do not use Internet banking for arranging time deposits, while 46 companies do not use the functionality of buying and selling shares in funds.

Arguments for not using certain functionality were as follows. Out of 47 respondents, 23 companies do not need certain functionality as it does not appear in their business. However, the matter of trust is also important argument. Thus, 10 respondents claim that for certain financial products they want to have contract/confirmation which is signed and stamped by the bank representative, rather than online confirmation, while 9 respondents do not

have trust in performing some financial transactions online. The latter is of particular relevance if we take into consideration the research result on 3/4 of the Internet banking users having affirmative attitude toward performing their business with bank completely online. Some respondents answered that the main reason for not using certain functionality is that for some services they usually ask more information, explanations and advice from their relationship manager (4 respondents). It does not surprise then that approximately 81% of online banking users consider unnecessary to expand the list of Internet banking functionalities.

Finally, we examined the level of companies' satisfaction with the Internet banking service which they adopted. Thus we asked respondents to assign to each aspect of the Internet banking (the list of available functionalities, simplicity of usage, perceived security and service costs) the rank from 1 to 5 (in which 1 means "completely unsatisfied" and 5 is for "completely satisfied"). According to 58 responses, users are very satisfied with the content and quality of delivered Internet banking service. They were the most satisfied with the list of available functionalities (mean=4,2759) and the service price (mean=4,1207), while they were somewhat less satisfied with the simplicity of online banking usage (mean=4,0517). The mean value of perceived security of online banking was 3,8793. The reliability of statements in the questionnaire is confirmed with the Cronbach's Alpha which was 0,861.

Among other interesting research results we find the following ones. Out of 56 respondents, 27 respondents were unsatisfied with the daily account limit. The most of those who were unsatisfied perceived the daily limit as being too small (24 responses). In addition, 54% of respondents have an opinion that there is no need for setting up the daily limit inside the Internet banking service, while the rest justify its existence. Finally, out of 57 respondents, approximately 28% (16 companies) faced difficulties in usage of the Internet banking service, which were not caused by the Internet disconnection, lack of personal knowledge or mistakes made in the process of data input of transaction.

4 CONCLUSIONS AND PRACTICAL IMPLICATIONS

Questionnaire research was conducted in order to find out the scale and scope of the Internet banking acceptance among the corporate entities in Croatia. Furthermore, two hypotheses were set out with aim of detecting the

disparities between online banking adopters and non-adopters. Our study reveals several interesting findings. Out of 79 companies, approximately 25% are exclusively offline banking users mainly due to low trust in the online banking security or inadequate self-esteemed computer literacy. Service adopters appreciate the service mainly because of the comfort it gives them in the financial services performance. Furthermore, company's profitability, industry in which it operates, as well as, computer literacy of its employees are relevant factors for the Internet banking adoption in the Croatian corporate sector. In addition, there is a spillover effect between adoption of the service in the professional and private life of company's employees.

We also found out that the most of the online banking users practice checking bank account balance and transactions, the service of taking over bank account summary and paying bills on a daily basis. Arranging time deposits online as well as buying and selling shares in funds are among the least used functionalities due to not being common in the company's business or due to the matter of lack of trust. However, adopters were very satisfied with the content and quality of delivered Internet banking service as the average ranks given for each of the four aspects of the service (the list of available functionalities, simplicity of usage, perceived security and service costs) were in the range from 3,8 up to 4,3.

With respect to other research results we extracted the next policy recommendations which might be beneficial to the banks in Croatia which offer the Internet banking service and possible new entrants in the Croatian banking sector:

- ❖ Relationship managers should pay more attention to companies in their portfolio and offer them online banking by default as it was found out that the most of the online banking non-users are still younger companies. Thus, after a company opens transactional account in a bank, the service of online banking should be promoted and offered.
- ❖ Personal bankers should also promote the online banking more among the retail customers due to noticed transmission of behaviour in professional and private life of companies' employees concerning this service.
- ❖ Banks should increase the daily account limits due to online banking users perceive it unnecessary to exist or insufficient.

- ❖ Banks must not neglect their corporate clients after they adopt online banking service if they want to preserve the client base. Relationship managers should monitor continuously clients' needs as well as their satisfaction with the provided service, as our research shows that 20% of e-banking adopters were attracted to migrate from the head (main) bank to another bank.

Nevertheless, some determinants of the online banking adoption are uncontrollable from the bank management point of view. Likewise, computer literacy remains macroeconomic factor and according to the presented results it is an obvious obstacle in the adoption of the Internet banking in Croatia. Thus, conclusion that higher attention in the educational system should be paid to computer literacy is indirectly underlined as even among the younger or middle-age population there are still respondents who self-esteemed their computer literacy with low marks.

At last, we admit that our work has several limitations. First, one might criticise that there is a very high geographical concentration of respondents, and that our results might be county-biased. However, we assume that within Croatian counties larger disparities in the online banking adoption should not exist. Furthermore, the Croatian banking market is rather oligopolistic and the most of companies in the sample (98%) use services of the six largest banks. Therefore, our results might be bank-biased. Finally, we focused mainly on the smaller companies who are business partners of one of the paper authors. Thus, in order to obtain more convincing results we strongly encourage replication and robustness check of this study/methodology on a wider or/and variety of data sets.

REFERENCES

1. Acharya, R. N., Kagan, A. and Lingam, S. R., 2008. Online Banking Applications and Community Bank Performance. *The International Journal of Bank Marketing*, 26(6), pp. 418-439.
2. Akhlaq, A. and Ahmed, E., 2013. The Effect of Motivation on Trust in the Acceptance of Internet Banking in a Low Income Country. *The International Journal of Bank Marketing*, 31(2), pp. 115-125.
3. Aldás-Manzano, J., Lassala-Navarré, C., Ruiz-Mafé, C. and Sanz-Blas, S., 2009. The Role of Consumer Innovativeness and Perceived Risk in Online Banking Usage. *The International Journal of Bank Marketing*, 27(1), pp. 53-75.
4. Capece, G. and Campisi, D., 2013. A Behavioural Model of E-Banking Usage in Italy. *International Journal of Engineering Business Management*, 5(16), pp. 1-9.
5. Centeno, C., 2003. Adoption of Internet Services in the Enlarged European Union: Lessons from the Internet Banking Case. European Commission Joint Research Centre Report EUR 20822.
6. Centeno, C., 2004. Adoption of Internet Services in the Acceding and Candidate Countries, Lessons from the Internet Banking Case. *Telematics and Informatics*, 21(4), pp. 293-315.
7. Couto, J. P., Tiago, T., Tiago, F., 2013. An Analysis of Internet Banking in Portugal: The Antecedents of Mobile Banking Adoption. *International Journal of Advanced Computer Science and Applications*, 4(11), pp. 117-123.
8. Dumičić, K., Pavković, A. and Palić, I., 2013. Internet Banking Usage in Selected European Countries: Multiple Regression Analysis Approach. *Proceedings of the 12th International Symposium on Operational Research SOR'2013* (eds: Zadnik Stirn, L., Žerovnik, J., Povh, J., Drobne, S. and Liseč, A.), Dolenjske Toplice, Slovenia, September 25-27, 2013, pp. 239-244.
9. Eriksson, K., Kerem, K. and Nilsson, D., 2005. Customer Acceptance of Internet Banking in Estonia. *The International Journal of Bank Marketing*, 23(2), pp. 200-216.
10. Eriksson, K., Kerem, K. and Nilsson, D., 2008. The Adoption of Commercial Innovations in the Former Central and Eastern European Markets: The Case of Internet Banking in Estonia. *The International Journal of Bank Marketing*, 26(3), pp. 154-169.
11. Eurostat official website [<http://ec.europa.eu/eurostat>]
12. Gkoutzinis, A. A., 2006. *Internet Banking and the Law in Europe: Regulation, Financial Integration and Electronic Commerce*. USA: Cambridge University Press.
13. Grabner-Kräuter, S. and Faullant, R., 2008. Consumer Acceptance of Internet Banking: The Influence of Internet Trust. *The International Journal of Bank Marketing*, 26(7), pp. 483-504.

14. Gurău, C., 2002. Online Banking in Transition Economies: The Implementation and Development of Online Banking Systems in Romania. *The International Journal of Bank Marketing*, 20(6), pp. 285-296.
15. Howcroft, B., Hamilton, R. and Hewer, P., 2002. Consumer Attitude and the Usage and Adoption of Home-Based Banking in the United Kingdom. *The International Journal of Bank Marketing*, 20(3), pp. 111-121.
16. Ibbotson, P. and Moran, L., 2003. E-banking and the SME/Bank Relationship in Northern Ireland. *The International Journal of Bank Marketing*, 21(2), pp. 94-103.
17. Johns, R. and Perrott, B., 2008. The Impact of Internet Banking on Business-Customer Relationships (Are You Being Self-Served?). *The International Journal of Bank Marketing*, 26(7), pp. 465-482.
18. Karjaluoto, H., Mattila, M. and Pentto, T., 2002. Factors Underlying Attitude Formation towards Online Banking in Finland. *The International Journal of Bank Marketing*, 20(6), pp. 261-272.
19. Kundić, A., 2014. Etičko bankarstvo – novi koncept bankarstva [Ethical Banking – The New Banking Concept] chapter in the book *Financije nakon krize: forenzika, etika i održivost [Finances after the Crisis: Forensics, Ethics and Sustainability]* (eds. Ćurak, M., Kundić, A. and Visković, J.). Split: Faculty of Economics, University of Split, pp. 243-264.
20. Kürşad Özlen, M. and Jukić, D., 2013. Perceptions of Online Banking Users in Bosnia and Herzegovina. *World Applied Programming*, 3(8), pp. 375-383.
21. Mečev, D., 2013. *Percepcija kvalitete usluge Internet bankarstva [Perception of the Internet Banking Service Quality]*. Master thesis. Split: Faculty of Economics, University of Split.
22. O'Donnell, A., Durkin, M. G. and McCartan-Quinn, D., 2002. Corporate Banking in the UK: Personal vs. Remote Interaction. *The International Journal of Bank Marketing*, 20(6), pp. 273-284.
23. Onay, C. and Ozsoz, E., 2013. The Impact of Internet-Banking on Brick and Mortar Branches: The Case of Turkey. *Journal of Financial Services Research*, 44(2), pp. 187-204.
24. Orviska, M. and Hudson, J., 2009. Dividing or Uniting Europe? Internet Usage in the EU. *Information Economics and Policy*, 21(4), pp. 279-290.
25. Ozdemir, S., Trott, P. and Hoecht, A., 2008. Segmenting Internet Banking Adopter and Non-Adopters in the Turkish Retail Banking Sector. *The International Journal of Bank Marketing*, 26(4), pp. 212-236.
26. Patsiotis, A. G., Hughes, T. and Webber, D. J., 2012. Adopters and Non-Adopters of Internet Banking: A Segmentation Study. *The International Journal of Bank Marketing*, 30(1), pp. 20-42.
27. Pojatina, D., 2000. Dometi bankovnog posredništva [The Scope of Banking Intermediation]. *Ekonomska misao i praksa – Economic Thought and Practice*, 13(1), pp. 75-94.

28. Polasik, M. and Wisniewski, T. P., 2009. Empirical Analysis of Internet Banking Adoption in Poland. *The International Journal of Bank Marketing*, 27(1), pp. 32-52.
29. Primorac, D., Smoljić, M. and Bogi, N., 2012. Moguće strategije banke u poboljšanju usluga Internet bankarstva – Analiza obeležja korisnika [Possible Bank Strategies in Improvement of Internet Banking Services – Analysis of Users Characteristics]. *Megatrend revija – Megatrend Review*, 9 (3), pp. 305-316.
30. Rajaobelina, L., Brun, I. and Toufaily, É., 2013. A Relational Classification of Online Banking Customers. *The International Journal of Bank Marketing*, 31 (3), pp. 187-205.
31. Rotchanakitumnuai, S. and Speece, M., 2003. Barriers to Internet Banking Adoption: A Qualitative Study among Corporate Customers in Thailand. *The International Journal of Bank Marketing*, 21(6-7), pp. 312-323.
32. Safeena, R., Kammani, A. and Date, H., 2014. Assessment of Internet Banking Adoption: An Empirical Analysis. *Arabian Journal for Science and Engineering*, 39(2), pp. 837-849.
33. Shik Yoon, H. and Barker Steege, L. M., 2013. Development of a Quantitative Model of the Impact of Customers' Personality and Perceptions on Internet Banking Use. *Computers in Human Behavior*, 29(3), pp. 1133-1141.
34. *Statistical Yearbook 2014*. Croatian Bureau of Statistics official website [<http://www.dzs.hr/>]
35. Takieddine, S. and Sun, J., 2015. Internet Banking Diffusion: A Country-Level Analysis. *Electronic Commerce Research and Applications*, 14(5), pp. 361-371.
36. Tokić, I., 2014. *Korištenje Internet bankarstva od strane pravnih osoba u Republici Hrvatskoj [Usage of the Internet Banking among Legal Entities in the Republic of Croatia]*. Diploma thesis. Split: Faculty of Economics, University of Split.

APPENDIX

Table 1. Frequency of usage of certain Internet banking functionalities (N=57)

Frequency / Functionality	Checking bank account balance and transactions	Paying bills	Paying salaries	Buying and selling foreign currency	Arranging time deposits	Taking over bank account summary	Buying and selling shares in funds
Daily	22	13	1	2	0	19	0
Few times per week	19	17	5	6	2	16	2
Few times per month	11	12	24	10	5	12	3
Rarely than once per month	5	10	21	12	9	3	6
Never	0	5	6	27	41	7	46

Source: Authors.