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The Influence of the Quality of Internet Banking Services on Customer Loyalty

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Abstract:

Purpose: *This paper explores, how particular dimensions of the quality of e-services influence customer loyalty in the field of Internet banking.*
Design/Methodology/Approach: *Drawing from the theories available in the reference items and dimensions determining e-services quality and customer loyalty were identified. A proposed hypothetical framework was tested in the Internet banking sector in Poland, employing a quantitative research method. A survey method was applied in the research. The survey data was collected from 384 e-banking customers. Data was processed with the use of Structural Equations Modeling (SEM).*
Findings: *It turns out that among the dimensions of the quality of the Internet banking services, the Fulfillment has the greatest impact on the customer loyalty, Efficiency is of slightly lower importance, whereas Privacy is of the lowest importance in this case. However, surprisingly it turned out that System Availability is omitted. This fact may imply that this dimension belongs to the "must-be quality".*
Originality/Value: *The novelty elements include the identification, estimation and evaluation of the model of direct relation between the quality and customer loyalty, identification of the quality dimensions which are the strongest predicators of customer loyalty as well as the indication of managerial implications.*

Keywords: *Internet banking, services, quality, customer loyalty.*

JEL codes: *M31, L15.*

Paper Type: *Research study.*

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1. Introduction

Quality is the key factor to ensure customer satisfaction, profitability of companies and economic growth of the countries (Golder *et al.*, 2012). In order to be competitive, the enterprises should strive towards above all the improvement of quality and innovation (Zefir and Sadikoglu, 2012). The progress within the scope of ICT has opened wide offering possibilities based on the technology of services rendered in the self-service mode (Dabholkar, 2000; Molla and Licker, 2001), including banking (Akinyele and Olorunleke 2010; Ariff *et al.*, 2012). Information and communication technologies have become one of the leading forces giving direction to business in the banking industry as well (Lake and Hickey, 2002).

However hyper-informativeness of the Internet provokes the peculiar escalation of customers' expectations about the quality (Alzola and Robaina, 2005; Pather and Usabuwera, 2010; Völler, 2013). The quality of the Internet services cannot be underestimated and it should become the object of further intensified and profound research (Boshoff, 2007; Akinyele and Olorunleke, 2010; Akinci *et al.*, 2010).

In modern economy the intangible assets such as brand, reputation image, quality, customer satisfaction and their loyalty are the most important resources on the way to gain competitive advantage (Chien and Tsai, 2012). Whereas customer loyalty is the asset of the greatest value for competitiveness (Lam and Burton, 2006; Eakuru and Mat, 2008). This results mainly from the growing customer purchase power in the situation, where the organizations must come up to the numerous challenges posed by the competitors (Pan, Sheng, and Xie, 2012). The question is how to gain and keep customer loyalty in the situation, where the relation with a bank turns from real into virtual (Floh and Treiblmeier, 2006).

In the Internet competition is "only a mouse click away" (Cheng and Zhang, 2015) and easy access to information, relying on the opinions placed in the Internet, possibility of immediate comparison of prices and product descriptions of products and services decrease the level of customer loyalty and the increase of its level is indispensable (Reichheld and Schefter, 2000; Floh and Treiblmeier, 2006). All this heightens the quality expectations (Alzola and Robaina, 2005). Therefore, from the management point of view, the role of the loyalty of customers taking advantage of the services rendered on-line is not to be underestimated (Cyr and Dash, 2008; Habibi and Hajati, 2015; Asgari *et al.*, 2014).

By combining these two above mentioned terms, i.e., the quality of services and consumer loyalty, it has been proved, with the use of *multidimensional exploratory techniques*, that guarantee of the high level of quality in the analyzed area of the Internet banking services translates into the higher level of customer loyalty (Suleiman *et al.*, 2012; Chocholakova *et al.*, 2015; Asadpoor and Abolfazli, 2017; Asgari *et al.*, 2014; Firdous, 2017; Aishatu and Lim, 2017). In this paper, the author's aim was to confirm the above observations and at the same time to

contribute to the accumulation of knowledge in this particular field of study. Therefore the objective of this research is to investigate, how the particular dimensions of e-service quality influence customer loyalty in the field of Internet banking.

2. Theoretical Background

2.1 E-Service Quality and its Dimensionality

Most authors claim that the quality of services concerns the feelings about the process of evaluating what is experienced from a focal organization (Armstrong and Kotler, 1996). Conventionally, the quality of services is treated as a difference between what customers expect and their perception of service variables (Gronroos, 2001). Now the Internet changes the shopping habits and behaviors of the customers (Zehir and Narcikara, 2016). Therefore there is a need of quantification and measurement of the quality of electronic services in the case of which the traditional measurement methods turn out to be inadequate (Voss, 2000; Zehir and Sadikoglu, 2012; Parasuraman, Zeithaml, and Malhotra, 2005).

The quality of services is a critical factor for the survival in the environment of electronic business (Yang, Peterson, and Cai, 2003) and the key determinant of success in the e-business environment (Santos, 2003). It took some time before marketers fully appreciated the potential impact of the Internet on marketing practices (Boshoff, 2007; Zehir and Narcikara, 2016). However, the realization eventually dawned that if this new technology is to be used as a channel of distribution, consumer needs and customer satisfaction will be as important as always (Wang, Tang, and Tang, 2001) and a higher degree of e-Service quality has been considered to be one of the main entrepreneurial targets (Barrutia and Lopez, 2009).

Dynamic development of the Internet banking is a particular challenge for the researchers of services quality, especially within the scope of the identification of its dimensions (Pather and Usabuwera, 2010; Mutesi, Mitingi, and Chakraborty, 2016). So the research on services quality has been popular for many years, but it is only recently that it is present in e-commerce environment.

The lack of conceptualization and appropriate measurement instruments forced the researchers to consider the paradigm of the quality and search for the tools proper to measure the quality of this specific group of services (Boshoff, 2007; Montoya-Weiss *et al.*, 2003). In response the authors formulated proposals which helped to respond to the presented challenge. A large number of examples of these solutions is to be found in literature (Ladhari, 2010; Li and Suomi, 2009; Kalia, 2017). However a part of them was questioned in terms of too narrow orientation or they did not reflect the quality of the services from customer perspective (Finn and Kayande, 2002; Zaithaml, Parasuraman, and Malhotra, 2005).

Because of this reason other solutions have been searched for. The most popular model of the measurement of the quality of electronic services is the approach which came into existence as a result of a long-term study conducted by A. Parasuraman with his team (2005). Theoretical basis of this approach was elaborated by the same authors (Zeithaml, Parasuraman, and Malhotra, 2001; 2002). Table 1 presents observable variables and the presumed dimensions of the quality of services of the scale with the note in which models proposed by the authors they are present.

Table 1. *Constructs and items – service quality*

Construct	Item	References
Efficiency	EFF1 On the bank website I can easily find what I need.	Zeithaml et al., 2001; Santos, 2003; Parasuraman, Zeithaml and Malhotra, 2005; Kim et al., 2006; Atker et al., 2010; Zavareh et al., 2012; Zemblyte, 2015
	EFF2 On the bank website I can navigate easily.	
	EFF3 On the bank website I can make transaction fast.	
System Availability	SYS1 Bank website is always available.	Cox and Dale, 2001; Jun and Cai, 2001; Kim et al., 2003; Yang and Fang, 2004; Parasuraman, Zeithaml and Malhotra, 2005; Yang and Tsai, 2007; Atker et al., 2010; Zemblyte, 2015
	SYS2 Bank website starts and works immediately.	
	SYS3 Bank website does not crash.	
Fulfillment	FUL1 Bank delivers what has been promised via its website.	Zeithaml et al., 2001; Parasuraman, Zeithaml and Malhotra, 2005; Li and Suomi, 2009; Zavareh et al., 2012; Zemblyte, 2015
	FUL2 The services on the bank website are available in a proper time.	
	FUL3 The services ordered on the bank website are provided fast.	
Privacy	PRI1 Information about my behavior on the website is protected.	Zeithaml et al., 2001; Parasuraman, Zeithaml and Malhotra, 2005; Li and Suomi, 2009; Zavareh et al., 2012; Zemblyte, 2015
	PRI2 Bank website does not disclose my personal data to other entities.	
	PRI3 Bank website protects information concerning my bank cards.	

Source*: Author's own study.*

2.2 Customer Loyalty in the Internet

Since many years, in the services sector, the researchers have been emphasizing the meaning of the loyalty of customers in the reduction of costs of marketing operations (Aaker, 1991), brand promotion and the increase of the share in the market (Buzzell and Gale, 1987). In general the customer loyalty is perceived as the

key determinant of the success of an organization in the market (Cortinas *et al.*, 2004; Lam and Burton, 2006; Eakuru and Mat, 2008). Whereas specific problems are connected with the acquisition of the *online* customer, i.e., e-loyalty. Anderson and Srinivasan (2003) define e-loyalty as a favor attitude and engagement of the customer towards the electronic enterprise, which results in the repeatability of shopping behaviors. They also add that *online* services differ from the traditional ones mainly in the lack of direct contact with other human, so the behaviors of *online* customers should also be considered differently.

Customer loyalty is said to be one of the ways to build a competitive advantage and important issue in e-banking debate to achieve higher profits (Aishatu and Lim, 2017).

Two most popular attitudes apprehend the phenomenon of customer loyalty (1) from behavioral point of view (*behavioral loyalty*), covering their behaviors and (2) from the emotional point of view (*attitudinal loyalty*), concentrated on feelings, values and attitude (Griffin, 1997; Oliver, 1999). Behavioral apprehension dominated at the beginning. Then it was discovered that customers behavior is influenced by the attitudes, emotional and psychological factors, social norms and situational impact.

Thus they were included in the loyalty analysis in the trend of motivation approach (Dick and Basu, 1994). Therefore the loyalty in the behavioral perspective is more frequently substituted by the loyalty understood as attitude, customer approach which dictates his behavior (Oliver, 1999). Not only customer behavior itself is important here, but also his motivation, which influences the behavior. Today the opinion that customer behaviors are mainly explained by motivation is dominant (Morchett, Swoboda, and Foscht, 2005). The usability of this approach has been many times proved in empirical studies (Robinson and Gammon, 2004; Hibbert, Hogg, and Quinn, 2005).

According to the popular model presented by Dick and Basu (1994), enlarged by the next researchers (Oliver, 1999; Manzuma-Ndaaba *et al.*, 2016), the loyalty attitude came into being as a result of factors and components of (1) cognitive, (2) affective and (3) conative character. Often the forth active component is added which covers conscious activities aiming to overcome difficulties in order to make the next purchase (Banahene, Ahudey, and Asamoah, 2017).

Cognitive component is connected with knowledge and assumptions. Affective component is determined by emotions, customer's mood, his instinct and satisfaction coming from the use of the brand. Whereas conative component is composed of intentions and readiness for purchase. On the basis of the above the variables are included in the construct which specifies the loyalty of the customer. They are presented in Table 2.

Table 2. *Construct and items – customer loyalty*

Construct	Item	References
Customer Loyalty	CLO1 I prefer using the services provided by this bank.	Dick, Basu 1994; Oliver 1999; Manzuma-Ndaaba *et al.* 2016; Banahene, Ahudey, Asamoah 2017
	CLO2 I take advantage of the services provided by this bank, because I really like it.	
	CLO3 I am planning to continue the use of the services provided by this bank.	

Source: *Author's own study.*

2.3 The Relationship between Service Quality and Customer Loyalty

Identification of the relationship between service quality and customer loyalty is a very difficult area of study (Du and Tang, 2014). In general the models proposed by the researchers can be divided into two groups: (1) models explaining the relationship between the quality of services and the loyalty of customers directly, (2) models explaining this relationship with the use of intervening variables (Pearl, 2000).

Some researchers have proved, in an empirical way, that the quality of services may directly influence the loyalty of the customers. Parasuraman, Zeithaml, and Berry (1985; 1988) indicated that the relationship between the quality of the services and behavioral intentions of the customers is very close and eventually the activity of the customer depends on the quality of the services. Xiaoyun and Chunxiao (2003) verified on the basis of the research conducted in various branches of services, the hypothesis that the quality of services influences directly the cognitive and emotional loyalty of the customers. Whereas Hongcui (2008) proved that the particular dimensions of the quality of services directly influence the loyalty of the customers in the training branch. Similarly Aishatu and Lim (2017) proved that the factors shaping the quality of services directly influence the loyalty of the customers in the online banking.

A great number of authors propose the study of indirect influence of the services on the loyalty of the customers with the use of variables-mediators. Frequent variables-mediators in the process of the acquisition of the customer loyalty on the basis of the quality of services turn out to be: (1) satisfaction, (2) perceived value and (3) trust. Some researchers introduce customer satisfaction as an intervening factor. Caruana with his team (2000) elaborated a model including the quality of services, customer satisfaction and loyalty. Similarly Xingqi (2008) included satisfaction as a variable intervening between the quality of services and customer loyalty.

The next fraction of researchers in this group claims that the intervening variable is the perceived value. Yao (2011) proved that profits and losses are perceived differently by various customers. Dahai and Yufang (2004) proved that the value

and customer satisfaction perceived by the customer have positive and linear influence on the behaviors of the customers.

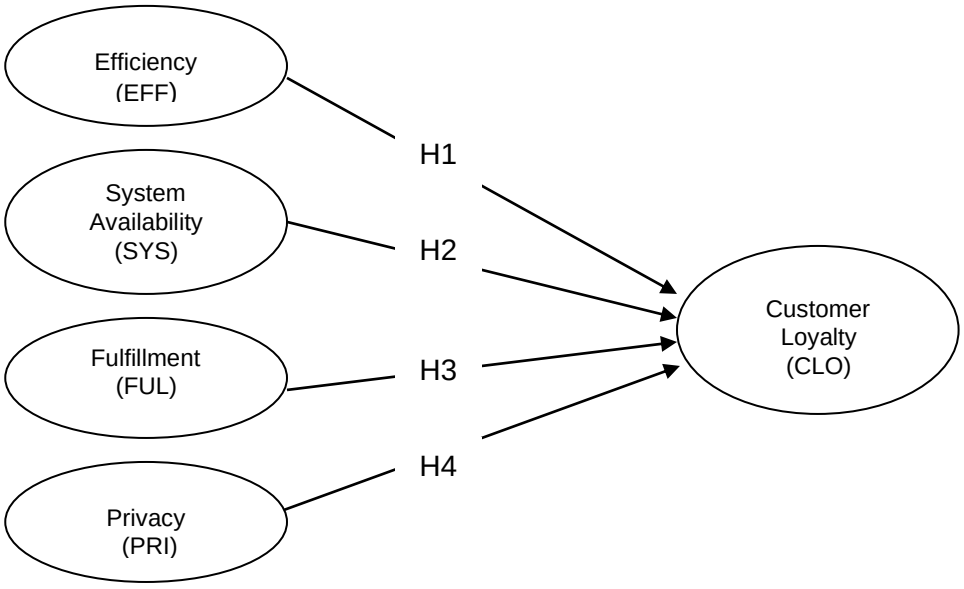
In this study the authors assumed the existence of a direct relationship between the analyzed constructs. They noticed that the authors whose works were analyzed, in the majority, they used the models with intervening variables (Asadpoor and Abolfazli, 2017; Suleiman *et al.*, 2014; Asgari *et al.*, 2014; Aghdaie *et al.*, 2015; Amin, 2016). Only few researchers proved the existence of direct relationship between the quality of services and customer loyalty in the empirical studies (Hongcui, 2008; Aishatu and Lim, 2017; Zehir and Narcikara, 2016; Firdous, 2017).

Therefore, assuming the previously discussed dimensionality of the construct specifying the quality of the online banking services as well as assuming the existence of direct relationship between the quality of services and customer loyalty, the following hypotheses have been posed:

H1: Efficiency of Internet banking services positively influences customer loyalty.
H2: System availability of Internet banking services positively influences customer loyalty.
H3: Fulfillment of Internet banking services positively influences customer loyalty.
H4: Privacy of Internet banking services positively influences customer loyalty.

Research model presented in Figure 1.

Figure 1. *Research model*



Source: *Author's own study.*

3. Research Methodology

To collect data, we adopted the survey method in the form of a printed questionnaire that was distributed among respondents to collect a suitable number of responses to test the proposed model. The questionnaire was composed of 3 parts: (1) observable variables characterizing the quality of the services (12 variables according to Table 1), (2) variables characterizing the loyalty (3 variables, 1 for each kind of loyalty) and (3) certificate variables (10 variables – 3 characterizing the customer and 7 characterizing the way in which the customers take advantage of the online banking services).

The answers concerning services quality and customer loyalty were recorded on 10-point Likert scales. The responses were analyzed by way of using structural equation modeling (SEM), which is a set of statistical techniques used to examine relationships among independent and dependent variables (Hair *et al.,* 2014; Pearl, 2000), and is widely used by researchers in the field of social sciences to test models exploring causal relationships between latent variables, used widely in the field of social sciences (Alyahya *et al.,* 2020; Suleiman *et al.,* 2014; Asadpoor and Abolfazli, 2017). This paper examines both models of SEM: the measurement model and the structural model. Both proposed models were tested using Statistica 13.0 software.

4. Research Results

The survey included a total of 384 valid responses. Table 3 summarizes demographic information. The table shows the diversity of responses for all demographic variables.

Table 3. *Demographic variables*

Variable	**Categories**	**Fraction**
Sex	Woman	54%
	Man	46%
Age	below 25 years	15%
	25-40 years	44%
	40-55 years	31%
	above 55 years	10%
Education	Elementary	6%
	Secondary	43%
	Higher	51%

Source: *Author's own study.*

4.1 Measurement Model

In order to test the proposed model, at first a confirmatory factor analysis (CFA) was conducted to assure the reliability and validity of the proposed constructs within the

measurement model. The appropriateness of the CFA model is assessed in two stages: (1) evaluation of the goodness of the model fit of the structural model and (2) evaluation of the measurement model convergent and discriminant validity.

To evaluate the CFA model goodness of fit, the following threshold values were utilized as advised by Hair *et al.* (2014) and used for example by Alyahya *et al.* (2020), χ^2/df, Goodness of Fit (GFI), Root mean square error of approximation (RMSEA), Comparative fit index (CFI) and Tucker Lewis index (TLI, also called Non-normed fit index NNFI). Table 4 shows fit indices obtained for the measurement model.

Table 4. *Measurement model results for reflective measures*

	Obtained fit indices					
	χ^2/df	**p**	**GFI**	**RMSEA**	**CFI**	**TLI**
Overall model fit	1,55	0,00	0,95	0,02	0,98	0,98
	Suggested fit indices					
	<=5	<=0,05	>=0,80	<=0,08	>=0,90	>=0,90

Source: *Author's own study.*

A joint confirmatory factor analysis, with all of the variables, was conducted to assess the factor structure, reliability, and discriminant validity. The results of the CFA model in Table 4 reveal that the measurement model results for reflective measures indicate a satisfactory model fit as all attained fit values met the suggested cut-off scores: χ^2/df = 1,55, GFI = 0,95, RMSEA = 0,02, CFI = 0,98, TLI = 0,98. Table 5 shows factor loadings (FL) composite reliability (CR) for each construct, in addition to the Cronbach's alpha (CA) and average variance extracted (AVE), to ensure the reliability of the model.

Table 5. *Reliability assessment for the measurement model*

Constructs	**FL**	**CR**	**α**	**AVE**
EFF	0,77-0,84	0,85	0,86	0,64
SYS	0,82-0,84	0,87	0,86	0,69
FUL	0,68-0,73	0,75	0,82	0,51
PRI	0,82-0,87	0,88	0,91	0,71
CLO	0,57-0,70	0,73	0,78	0,50

Note: *FL – factor loadings; CR – composite reliability; a - Cronbach's alpha; AVE - average variance extracted.*
Source: *Author's own study.*

Additionally, to assess discriminant validity, variables correlation matrix, and the squared root of AVE were employed. The squared root of AVE of every single construct should exceed correlations between any combinations between any two pairs of dimensions in the model. As can be seen in Table 6 this condition was also met.

Table 6. *Validity assessment for the measurement model*

Constructs	EFF	SYS	FUL	PRI	CLO
EFF	**0,80**				
SYS	0,43*	**0,83**			
FUL	0,57*	0,55*	**0,71**		
PRI	0,47*	0,46*	0,57*	**0,84**	
CLO	0,64*	0,44*	0,69*	0,61*	**0,71**

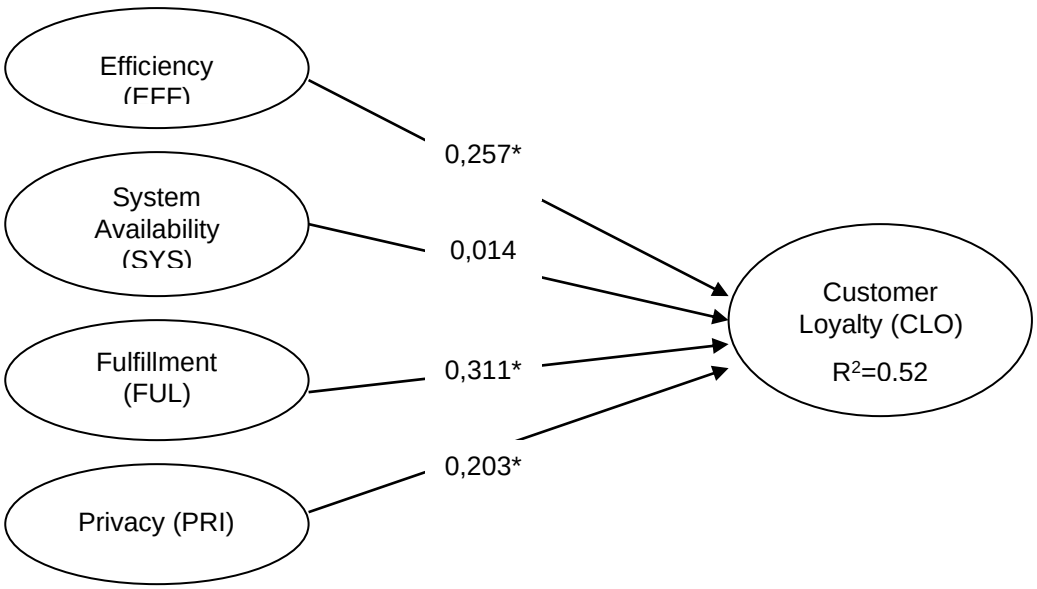
Note: *Diagonal values are the square root of the AVE. Off-diagonal values are the correlations among constructs; * p<0,001*
Source: *Author's own study.*

Convergent validity has been assured through three conditions as suggested by Fornell and Larcker (1981). Firstly, the factor loadings should exceed 0,5. Secondly, for each factor AVE should exceed the value of 0,5. Finally, CR should be higher than 0,7. As shown in Tables 5 and 6 three conditions which approve convergent validity were met.

4.2 Structural Model

Structural model with hypotheses estimates, i.e. standardized path coefficient estimates are shown at Figure 2.

Figure 2. *Structural model*



**p<0,001*
Source: *Author's own study.*

Table 7 summarizes the assessment of overall model fit.

Table 7. *Assessment of overall model fit*

	Obtained fit indices					
	χ^2/df	**p**	**GFI**	**RMSEA**	**CFI**	**TLI**
Overall model fit	1,55	0,00	0,96	0,02	0,99	0,98
	Suggested fit indices					
	<=5	<=0,05	>=0,80	<=0,08	>=0,90	>=0,90

Source: *Author's own study.*

As presented in Table 7, the structural model shows tight fit, as measured by the following indices: χ^2/df = 1,55, GFI = 0,96, RMSEA = 0,02, CFI = 0,99, TLI = 0,98. For RMSEA it is even between good and excellent. The value of R^2 = 0,52 can be referred to as relatively weak (MacCallum *et al.*, 1996).

To sum up, in case of 3 dimensions of the quality of online banking services the influence on Customer Loyalty turned out to be statistically relevant. Taking into consideration the obtained value of the standardized path coefficients, it should be considered as moderate. Whereas in the case of System Availability the presence of the assumed relationship could not be confirmed. In Table 8 we present a summary of SEM results for the proposed model.

Table 8. *Summary of SEM results for the proposed model*

Predictor variables	**Criterion variable**	**Hypothesized relationship**	**Standardized coefficient**
Efficiency	Customer Loyalty	H_1 → Supported	0,257*
System Availability		H_2 → Not supported	0,014
Fulfillment		H_3 → Supported	0,311*
Privacy		H_4 → Supported	0,203*

Note: ** p<0,001*
Source: *Author's own study.*

As presented in Table 8, the influence of Efficiency on Customer Loyalty is β_1 = 0,257 with p<0,001. Therefore hypothesis H1 has been verified. Subsequently the influence of System Availability on Customer Loyalty is only β_2 = 0,014 and it is statistically irrelevant (p = 0,40). Therefore hypothesis H2 could not be confirmed. Whereas Fulfillment influences customer loyalty in the greatest degree among all dimensions of the quality of services: β_3 = 0,311 with p < 0,001. Thus H3 is powerfully confirmed. Finally, also the influence of Privacy on Customer Loyalty is statistically relevant (p < 0,001), however it is the weakest among the relevant relationships: β_4 = 0,203. In this way H4 is also supported.

5. Discussion

As it has been mentioned above, the influence of the quality of online banking services on the customer loyalty was the object of the analyses available in

literature. Table 9 presents the results of the study on the analyzed relationship obtained by other authors.

Table 9. *Influence of e-service quality on customer loyalty – discussion of different models*

Authr(s) and year	Coefficient type	Coefficient value(s)
Asadpoor and Abolfazli, 2017	Linear regression	0,556
Suleiman et al., 2012	Linear regression	0,146–0,458
Aishatu and Lim, 2017	Logistic regression	0,431–0,805
Asgari et al., 2014	Logistic regression	0,712
Yang and Tsai, 2007	Linear regression	0,135-0,331
Zehir and Narcikara, 2016	Linear regression	0,001-0,427
Firdous, 2017	Linear regression	0,000-0,316

Source: *Author's own study.*

The discussion on the obtained outcomes with the results obtained by other authors led to the conclusion that in the analyzed cases the said authors obtained significant and statistically relevant values of coefficients, some of them are very high (Aishatu and Lim, 2017; Asgari *et al.*, 2014). This confirms the influence of the quality of services on customer loyalty. The values of the power of the influence of the quality of online banking services on customer loyalty amounting from 0,26 to 0,31 may be considered as moderate. They are statistically relevant, however in some cases lower than the ones obtained by the other authors (Asadpoor and Abolfazli, 2017; Aishatu and Lim, 2017; Asgari *et al.*, 2014).

Therefore the influence of the quality of services on customer loyalty turned out to be weaker than suggested by the results of some other available research (Yang and Tsai, 2007; Suleiman *et al.*, 2012; Zehir and Narcikara, 2016). Fulfillment turned out to be the strongest predicator of Customer Loyalty. This conclusion was confirmed by some other authors (Yang and Tsai 2007; Zehir and Narcikara, 2016).

However the influence of System Availability on Customer Loyalty could not be confirmed. The same conclusion on the influence of the quality of services on the perceived value and customer loyalty was confirmed in the study by Zehir and Narcikara (2016) as well as Firdous (2017). Also Yang and Tsai (2007) and also Asadpoor and Abolfazli (2017) suggest that the influence of System Availability on Customer Loyalty is the lowest among all quality dimensions, however statistically it is significant. This may result from the fact that the model did not include some mediating variables.

However, it may turn out that System Availability is treated by the customers as obvious and the improvement of the level of the quality of this dimension does not lead to the increase of declared loyalty. Then this would be the factor of the same

character as the factors which belong to the "*must-be quality*" group identified by N. Kano (1984).

6. Conclusions and Managerial Implications

This study is the input in the empirical study on the relationship between the quality of services and customer loyalty in the area of online banking. Dimensionality of the quality of online banking proposed also by other authors was successfully confirmed. For three among four quality dimensions, the existence of statistically significant influence of the quality on customer loyalty was discovered. It turns out that Fulfillment has the greatest influence on the customer loyalty (0,31). Slightly smaller influence is exerted by Efficiency (0,26), and the smallest by Privacy (0,20).

The carried out analysis indicates that the influence of System Availability is omitted (0,01). Therefore in order to increase the customer loyalty managers should above all keep the promises given to the customers. The scope of the services should be compatible with what has been promised. The access to information and realization of transactions should be available without any difficulties and in promised time. Secondly they should consider the quality of services within the scope of Efficiency, i.e., the assurance of easy and fast navigation on the website, user-friendly interface with easy orientation on the website and fast transactions.

The next element that increases the loyalty of customers is the assurance of privacy (very often connected with safety). This also concerns the protection of information on the behaviors of the customer on the website, non-disclosure of information about the customer to the other entities as well as the protection of typical bank data (concerning the codes, bank cards, etc.). The identified lack of the relationship between System Availability and customer loyalty should not be neglected. This dimension of loyalty may be treated by the customers as „must-be quality".

This would mean the necessity of fundamental and particular care for the availability, fast start and operation of the bank website without any difficulty. Thus a general implication from the analysis is that managers should pay great attention to research and understand customers' requirements and preferences to adjust the design of the services accordingly and to sustain customer loyalty.

7. Limitations

This study is restricted by some limitations. First of all the selection of the scale and its position may raise doubts. The authors followed the pattern of the E-S-QUAL scale. This scale has been empirically verified by many other authors (Boshoff, 2007; Akinci *et al.,* 2008; Chocholakova, 2015). However, it is worth knowing that there are many other scales dedicated to the measurement of the quality of electronic services (Ladhari, 2010; Li and Suomi, 2009; Kalia, 2017).

The next limitation concerns the fact that according to the trend of the study on motivation loyalty, only declared level of loyalty of customers has been researched. The indicators of behavioral loyalty, e.g. time of using of the services or provider's relative *share of wallet*, have not been considered.

Another reservation concerns the fact that the relationship between the quality of services and customer loyalty may not be linear. Some authors suggest that at the beginning the increase of the level of the quality of services does not lead to the increase of the level of loyalty and it is not earlier than in the last phase, when the quality is close to the maximum level, we observe "the delight" of the customers and the increase of their loyalty (Finn, 2011).

Finally, it must be emphasized that the quality of services is not the only factor shaping the loyalty of the customers. Various researchers have proved that other factors include the price (Varki and Colgate, 2001), customer inertia and costs of changing provider (Gremler and Brown, 1996) or homogeneousness of supply (Fornell, 1992).

8. Further Research

Due to the fact that the dimensions of the quality of electronic services are controversial (Ladhari, 2010; Pather and Usabuwera, 2010), other measurement scales could be applied in the kind of research as presented here (Kalia, 2017).

The study of the influence on customer loyalty exerted by the factors other than the quality of the services, should be taken into consideration. These factors may include for example the perception on prices, customer inertia, costs of the change of provider, as considered by Gremler and Brown (1996) or homogeneousness of supply analyzed by Fornell (1992).

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