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DIGITALIZATION OF LOCAL OWNER OPERATED RETAIL OUTLETS: THE ROLE OF THE PERCEPTION OF COMPETITION AND CUSTOMER EXPECTATIONS

Lars Bollweg
South Westphalia University of Applied Sciences, bollweg.lars@fh-swf.de

Richard Lackes
TU Dortmund University, Richard.Lackes@TU-Dortmund.de

Markus Siepermann
TU Dortmund University, markus.siepermann@tu-dortmund.de

Arbnesh Sutaj
TU Dortmund University, arbnesh.sutaj@tu-dortmund.de

Peter Weber
South Westphalia University of Applied Sciences, weber.peter@fh-swf.de

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Lars Bollweg, South Westphalia University of Applied Sciences, Germany,
bollweg.lars@fh-swf.de
Richard Lackes, TU Dortmund University, Germany,
Richard.Lackes@tu-dortmund.de
Markus Siepermann, TU Dortmund University, Germany,
Markus.siepermann@tu-dortmund.de
Arbnesh Sutaj, TU Dortmund University, Germany,
Arbnesh.sutaj@tu-dortmund.de
Peter Weber, South Westphalia University of Applied Sciences, Germany,
Weber.peter@fh-swf.de

Abstract

On the one hand, the increasing digitalization of commerce has put local owner operated retail outlets (LOOROs) under pressure to adapt their business models to the new technological and competitive environment as well as to the changing shopping habits of their customers. On the other hand, it also offers potential competitive advantages for them. This paper investigates the retailers' perception of the competition and their perception of customer expectations, combined with a survey of the current use of digitalized services and the LOOROs readiness to increase the usage of digitalized services.

Our results confirm that the perception of competitive pressure and customer expectations has a positive influence on LOOROs' readiness to adopt new technologies and business models. But a significant number of the surveyed retailers underestimate the expectations of their customers and are reluctant to add digital services to their business portfolio.

While our key findings are relevant insights for all LOOROs on their journey towards digitalization, our findings provide even more significant insights for all digital service providers aiming to take a slice of the still substantial market shares of LOOROs in rural areas.

Keywords: Local Owner Operated Retail Outlets, Digitalization, Competition, Customer Expectations.

1 INTRODUCTION

The retail landscape is experiencing seismic changes. The low growth rate environment puts local owner operated retail outlets (LOORO) under immense pressure (HDE 2015, p. 7). On the German market, the market share of the business model LOORO has fallen from 30% in 1995 to only 14% in 2014 (Collier International 2015). In 2014, LOOROs suffered the sharpest decline in turnover of all retail outlets in Germany and the future outlook for LOOROs is also bleak. A further turnover decline of about 30% by 2020 or 2023 has been forecast (IFH Köln 2015; cf. Heinemann 2014). Despite the huge growth rates in online retail (17.8% in 2014 (HDE 2015)), the German retail landscape is still dominated by stationary and locally rooted businesses, and LOOROs constitute an important income source for many communities (HDE 2015, p. 9). Although online retail only had a market share of 11.1% (Statista 2015) in 2014, it has significantly influenced the whole sector with regard to shopping convenience and service quality (Heinemann, Schwarzl 2010). On the one hand, the growing influence of e-commerce, which manifests itself not just in the online presence of "pure players" but also in an increased digitalization of traditionally stationary retail outlets as well as the changing shopping habits of their customers (IFH 2014; ECC 2011), has put enormous pressure on LOOROs and has brought retailers with a traditional business models to their knees. On the other hand, a custom-made digitalization strategy tailored to their specific customers also offers potential opportunities to LOOROs with regard to customer satisfaction, competitive advantages, and increased market share (Navickas et al. 2015).

However, the diffusion of digital retail services seems to hit a barrier for most LOOROs, as only very minor steps towards digitalization can currently be observed (Bollweg et al. 2015). This brings us to the question to what extent LOOROs are ready to face the digitalization challenge. Retail research has shown that increased competition and changed or increased customer expectations normally act as a driver for innovation for small and medium-sized enterprises (SME), as they are traditionally characterized by flexibility in their trade structure. But due to the continued decline of LOOROs, which is forecast to continue and speed up in the next years, it is not known whether LOOROs will be able to weather the digital challenge. This is why we decided to conduct a survey of LOOROs in a medium sized town of 46000 inhabitants about their perception of digitalization and their own position within this development. This survey was then correlated with a third-party survey conducted on shoppers in the same town about their shopping habits and their view on the increased digitalization of retail. Our main research question is, “Do LOOROs realize that digitalization is here to stay and that they will have to adapt to the new retail environment?”

The remainder of this paper is organized as follows: The literature review following in section 2 first gives an overview of related studies looking at the adoption of e-business and e-commerce technologies by SMEs. We will then examine the literature body for indications about the impact of the perceived competition and customer expectations on the adoption decision. In section 3, we develop the conceptual model concerning the perception of competition and customer expectations regarding the adoption of digitalization in LOORO and derive the hypotheses. The analysis of this model is presented in section 4, and the results are discussed in section 5. The paper concludes with a summary and an outlook to future research.

2 LITERATURE REVIEW

Business informatics offers a number of theoretical models for the adoption of innovation and technology in SMEs that have been tested and validated in numerous studies. Ramdani and Kawalek(2007) have identified the following models: Technology – Organization – Environment Framework (TOE-Framework), Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), Combined TAM and TPB, TAM2, Diffusion of Innovation Theory, Resource-Based View, Stage Theory and Unified Theory of Acceptance and Use of Technology (UTAUT). They have shown

that in each of the nine models factors from the areas of technology, organization or environment are studied with regard to their influence on the decision to adapt. The Technology-Organization-Environment Framework (TOE-Framework) by Tornatzky and Fleischer (1990) addresses these areas directly and has been tested and validated in several studies. Therefore, we have chosen this model as a basis for our research.

To get an overview about the current state of research using the TOE-Framework in the context of adoption of new technologies in SMEs, we conducted a structured literature review concerning this field. We searched with the keywords “TOE-Framework”, “SME” and “adoption” for journals and conference contributions in the databases of EbscoHost, ScienceDirect and Google Scholar. To reduce our starting collection of 138 Papers we examined all abstracts and selected 22 papers with a clear focus on the TOE-Framework and the adoption of technologies for further investigation. This literature body has been fully analysed by us and it turned out that 13 of the 22 papers had also a section on SME. In the final 13 papers, we found two kinds of studies fitting to our requirements. The first group was designing general frameworks for examining the adoption of technology in SMEs without defining specific technologies within their model (Rashid 2001, Ramdani, Kawalek 2007). The second group of studies was very specific and had a clear focus on well-defined technologies, i.e. adoption of e-mail, Internet, EDI, VPN (Premkumar, Roberts 1999, Al-Qirim 2007). Both groups have in common that they adapted the TOE-Framework to the needs of their studies and developed it further by adding new categories or new factors within the predefined TOE categories. Most of the designed models remained close to the original TOE-Framework; just a few nearly doubled the number of examined factors (Rashid 2001, Chong 2008). More visible differences appeared with regard to the use of the term SME in the studies. One group of studies used the term as a universally accepted concept without closer definition (Zhu et al. 2002). A second group of studies was again very specific and had a clear defined research scope with a definition about e.g. company size, industry classification and area of research (Rashid 2001). Most of the studies using TOE presented here have gathered the examined data of their studies directly by taking it from surveys and interviews they conducted themselves. The industries discussed and examined in these studies did not refer to similar business sectors (i.e. Tourism, Manufacturing, E-Commerce).

With regard to our research about the visible change of competition (strong growth of E-Commerce) and the changing shopping habits of customers (i.e. online shopping) we finally examined the influence of the factors of perceived competition and the perceived customer expectations with regard to the decision of adapting to a new environment in the TOE studies of our literature body. Our findings show clearly (see Table 1) that, whenever mentioned, the factors competition and customer expectations had a visible positive impact on the adoption of new technologies in SMEs.

Now, concerning our scope of research, the question is why there is no comparable development towards digitalization and new technologies in LOOROs by now. Do LOOROs not perceive any competition and customer expectations regarding digitalization?

3 RESEARCH FRAMEWORK

In order to pursue our overall research question "Do LOOROs realize that digitalization is here to stay and that they will have to adapt to the new retail environment?" we will examine in more detail the question raised during our literature review: Do LOOROs perceive any competition and customer expectations regarding digitalization?
But first we need to gain a better understanding for the stimulation effects of the factors competition and customer expectation on the adoption process. Both are external factors of the near environment, concerning the three environments model (internal, near and far) of Stapelton et al. (2000). These external factors affect the general environment within a particular SME has to operate (Dholakia 2004). The Stakeholders of the near environment are customers, competitors and suppliers, these

Authors	Technologies	Examined factors	Impact on adoption (positive/negative/neutral) (- not mentioned)	
			Customer expectations	Competition
Premkumar, Roberts (1999)	E-mail, online data access, internet access and EDI	Relative Advantage, Cost, Compatibility, Complexity, Top-Management Support, IT Expertise, Size, Competitive Pressure, External Pressure, Vertical Linkages, External Support	-	positive
Rashid (2001)	General framework	Relative Advantage, Complexity, Compatibility, Cost, Image, Competitive Pressure, Suppliers / Buyers Pressure, Public Policy, Governments Role, Size, Quality of IS Systems and Capabilities, Information Intensity, Specialization, Top-Management Support, CEOs Innovativeness, CEOs IS / IT / EC Knowledge	positive	positive
Zhu et al. (2002)	General framework	Consumer Readiness, Competitive Pressure, Technology Competence, IT-Infrastructure, IT Expertise, E-business Know How, Firm Size, Lack of Trading Partner Readiness	positive	positive
Wymer, Regan (2005)	E-Commerce Technologies	Competitive Pressure, Government, Market, Partners / Vendors, Suppliers Readiness, Change Experience, Executive Experience, Innovativeness, Models, Need, Prior Experience, Trust, Understanding, Value, Capital, Employee Reduction, Priority, Profitability, Technical Expertise, Cost, EC Technology, Infrastructure, Reliability, Security, Technology Availability, Other	-	positive
Lippert, Govindarajulu (2006)	Web Services	Security Concerns, Reliability, Deployability, Firm Size, Firm Scope, Technology Knowledge, Perceived Benefits, Competitive Pressure, Regulatory Influence, Dependent Partner Readiness, Trust in Web Service Provider	-	positive
Al-Qirim (2007)	Internet, E-mail, Intranet, Extranet, VPN, Internet, EDI, Website	Size, Information intensity of product, Competition, Buyer / Supplier pressure, Support from Technology vendors, Relative Advantage, Cost, Compatibility, CEOs Innovativeness, CEOs Involvement	positive	positive
Chong (2008)	E-Commerce technologies	Firm Size, Firm Age, Management Support, Perceived Readiness, International Orientation, Relative Advantage, Complexity, Compatibility, Trialability, Observability, Information Sources, Communication Channels, Communication Amount, Pressure from Trading Partners, Competitive Pressure, Relevant Environmental Participation, Non-trading, Institutional Influence, Government Support, Customer Pressure, Supplier Pressure	positive	positive
Ramdani, Kawalek (2007)	General framework	Relative Advantage, Compatibility, Complexity, Trialability, Observability, Top-Management Support, Organizational Readiness, IS Experience, Size, Industry, Market Scope, Competitive Pressure, External IS Support	-	positive
Oliveira, Martins (2010)	General framework	Technology Readiness, Technology Integration, Firm Size, Perceived Benefits and Obstacles of E-business, Country, Industry, Competitive Pressure, Trading Partner Collaboration	-	positive
Ghobakhloo et al. (2011)	E-mail, Intranet, Extranet, VPN, EDI, Website, ESCM, EFT	Perceived Relative Advantage, Perceived Compatibility, Cost, Information Intensity, CEO Knowledge, CEO Innovativeness, Business Size, Competition, Buyer / Supplier Pressure, Support from Technology Vendors	positive	positive
Alshamaila et al. (2013)	Cloud computing	Relative advantage, Uncertainty, Compatibility, Complexity, Trialability, Size, Top-Management Support, Innovativeness, Prior IT Experience, Competitive Pressure, Industry, Market Scope, Supplier Efforts and External Computing Support	-	positive
Jones et al. (2013)	Enterprise applications	Relative Advantage, Compatibility, Complexity, Trialability, Observability, Top-Management Support, Organizational Readiness, IS Experience, Size, Industry, Market Scope, Competitive Pressure, External IS Support	-	positive
Rahayu, Day (2015)	E-commerce technologies	Perceived Benefits, Compatibility, Cost, Technology Readiness, Firm Size, Customer / Supplier Pressure, Competitor Pressure, External Support, Innovativeness, IT Ability, IT Experiences	positive	positive

Table 1. Literature Review of influencing factors in the TOE-framework

the main touchpoints of an SME. With regards to the three environments model, this is the group of external factors that an SME can influence. On the other hand the external factors of the near environment (Customers, Competition and Suppliers) have also significant influence on the SME itself and can shape the environmental situation through their actions (Dholakia 2004). This creates pressure, the SME needs to adapt to the new environmental situation. Otherwise the inability or the unwillingness to adopt or the disbelief in the need to the adoption will lead to a competitive disadvantage (Parasuraman et al. 1985). And if so, why does the perception of competition and customer expectations regarding digitalization not lead to the adoption of new technologies in LOOROs in the same way as this perception does in other SMEs?

Therefore, we defined a research model with four constructs. The first construct is named "Competition" and is derived from the main sales channels of LOOROs, the local store and the online channel.

It takes the already discussed change in competition for LOOROs (Heinemann, Schwarzl 2010) into the account and is measured by two indicators, the perceived competitive pressure in the local market (C1) and the perceived competitive pressure with the online trade (C2).

The further constructs, "Customer Expectations", "Current Usage" and "Future Usage" represent the digitalization of retail, each with a different scope. To cover this very general and broad category we derived our constructs from the transaction phase logic. We picked digital examples from the basic transaction phases (pre-sales phase, checkout / fulfilment phase and the after-sales phase). Each construct covers at least one example of each phase. For the construct "Customer Expectations" we have chosen frequently used applications and services, for "Current Usage" already widespread applications and services, and for "Future Usage" advancements or evolutions of the "currently used" applications and services (see Table 2).

<table>
<tr><th>Customer Expectations</th><th>Current Usage</th><th>Future Usage</th></tr>
<tr><td colspan="3">PRE-SALES (Search and Information)</td></tr>
<tr><td rowspan="4">Onlineshop</td><td>Homepage</td><td>Onlineshop</td></tr>
<tr><td rowspan="3">Emails</td><td>APP</td></tr>
<tr><td>Video-Telephony</td></tr>
<tr><td>Social Media</td></tr>
<tr><td colspan="3">CHECKOUT / FULFILMENT (Payment and Delivery)</td></tr>
<tr><td>Digital Applications</td><td rowspan="2">EC-Card</td><td rowspan="2">Mobile Payment
(via Smartphone)</td></tr>
<tr><td>Logistics (Home Delivery)</td></tr>
<tr><td colspan="3">AFTER SALES (Loyalty and Customer Care)</td></tr>
<tr><td>Customer Card</td><td>Customer Card</td><td>Customer Integration</td></tr>
</table>

Table 2. Indicators sorted by transaction phase

The construct "Customer Expectations" measures the perceived change in customer habits and perceived customer expectations regarding digitalization (IFH 2014; ECC 2011). It consists of four indicators, the acknowledgement of customers using digital applications accompanying their purchases (CE1), the demand of customers regarding an online shop (CE2), regarding customer cards (CE3), and regarding home delivery (CE4).

The constructs “Current Usage” and “Future Usage” measure the adoption and likeliness of the future adoption of digital technologies by LOOROs. The construct “Current Usage” is measured by four indicators, the current usage of basic digital applications like e-mails (CU1), EC-card (CU2), Internet (CU3), and loyalty cards (CU4). The construct “Future Usage” is measured by six indicators, the planed future usage of more advanced digital applications like video telephony (FU1), payment via smartphone (FU2), mobile apps with service (FU3), online shop (FU4), social media (FU5), and customer integration (FU6).

According to the stated relationship of competitive pressure (competition) and the adoption of new technologies in the TOE-Framework (Tornatzky, Fleischer 1990) and the proven positive impact by several reviewed TOE based studies about the adoption of new technologies in SME (see Table 1), we define our first hypothesis as follows:

H1: The perceived high competitive pressure has a positive influence on the current usage of digital services by LOOROs.

To gain more insights into the strategic development of LOOROs, we extend our examination of the current usage of digital services to the planned future usage of digital services and state the following second hypothesis:

H2: The perceived high competitive pressure has a positive influence on the plans of using digital services in the future.

Similar to Hypothesis 1, we also want to examine the relationship of customer expectations and the adoption of technologies in SME. Customer expectations are not part of the original TOE-Framework, but are frequently used extensions of the TOE-Framework (see Table 1). Additionally, customer expectations are a decisive factor in Service Quality Research like the well-known SERVQUAL Gap-Model (Parasuraman et al. 1985). The impact on the adoption of new technologies in SMEs is proved by the reviewed TOE based studies depicted in Table 1. Therefore, we hypothesize:

H3: The perceived high customer expectation towards digital services has a positive influence on current usage of digital services by LOOROs.

Corresponding to our extension of the hypothesis 1, we follow this path and also extend hypothesis 3 to gain more long-term insights into the development of LOOROs:

H4: The perceived high customer expectation towards digital services has a positive influence on the plans of using digital services in the future.

To examine, if the current usage of digital services seems to be promising for LOOROs, we want to see if there is a positive relationship between current and planned future usage. We assume that in those cases where a LOORO is benefitting from using digital services, they will be likely to use digital services in future. According to that assumption we state the last hypothesis:

H5: The current usage of digital services by LOOROs has a positive influence on their plans of using digital services in the future.

The resulting research model is depicted in Figure 1. The resulting questionnaire is given in Table 3.

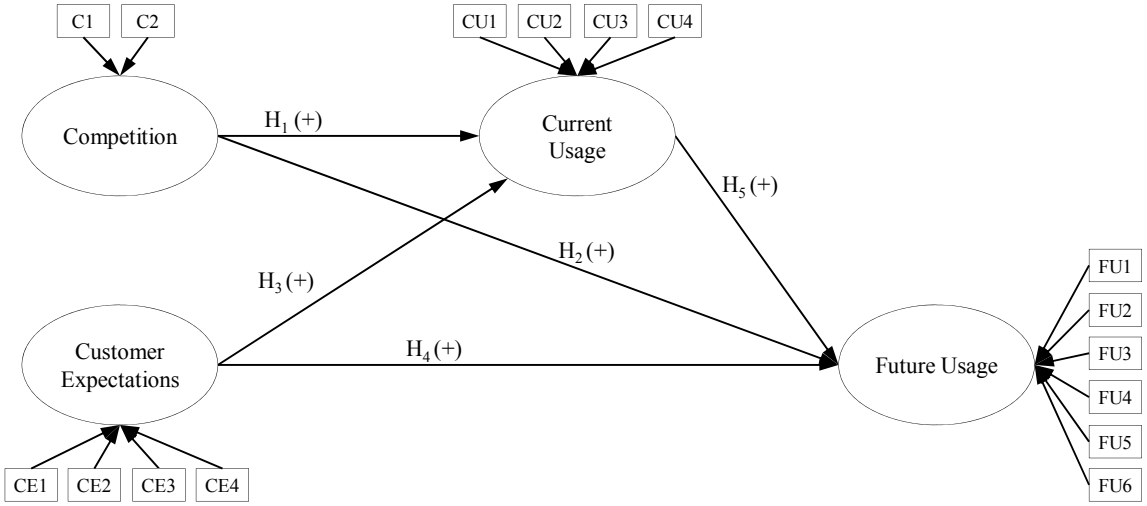

Figure 1. Research Model

Construct	Indicator	Question
Future Usage	FU1	How would you rate the intention of future use of video telephony as a means of corporate communications for your business?
	FU2	How would you rate the intention of future use of payment by smartphone (mobile wallet, NFC) for your business?
	FU3	How would you rate the intention of future use of an app with service (consultation or sale) for your business?
	FU4	How would you rate the intention of future use of an online shop for your business?
	FU5	How would you rate the intention of future use of social media for your business?
	FU6	How would you rate the intention of future integration of customers in decisions about your product range for your business?
Current Usage	CU1	How would you rate the frequency of current use of e-mails as a means of corporate communications for your business?
	CU2	How would you rate the frequency of current use of EC and credit card payment for your business?
	CU3	How would you rate the frequency of current use of an internet site for your business?
	CU4	How would you rate the frequency of current use of a loyalty card for your business?
Competition	C1	How high is the competitive pressure on the local market?
	C2	How high is the competitive pressure in the online trade?
Customer expectations	CE1	How often do you acknowledge that your customers use digital applications accompanying the purchases in your store?
	CE2	How high is the customer demand for an online shop?
	CE3	How high is the customer demand for loyalty cards?
	CE4	How high is the customers demand for home delivery?

Table 3. Questionnaire

4 ANALYSIS

4.1 Data Collection

The data was gathered in February 2015 in the context of a survey of local owner operated retail outlets (LOOROs) in a medium sized town (46000 inhabitants, name will be submitted after review process has been completed). The survey was supported by the local business marketing agency (Wirtschaft & Marketing GmbH - WMS) of the town. The WMS agency provided the addresses of 135 retail outlets, of which 85 corresponded to the parameters set for this survey, i.e. local owner operated retail outlets (relevant parameters were normal opening hours, a stationary retail outlet, not a

chain store, fast moving consumer goods). Of the 85 LOOROs that were personally invited to take part in the survey, 44 completed the survey in paper form (51.8%) and 8 (9.4%) via an online form. So we received 52 responses in total. All survey questions were measured in a 5-point-Likert-Scale.

In order to analyze the data gathered and to investigate the correlation between the different constructs proposed by the hypotheses, we used structural equation modelling that consists of an outer and an inner model. The outer model, called the measurement model, defines the relations between constructs and indicators, while the inner model, the structural model, represents the relations between the constructs (Fornell, Larcker 1981; Chin 1998a).

We used SmartPLS for the statistical data analysis, which allowed us to use a PLS algorithm and bootstrapping as resampling method (Ringle et al. 2005). As the PLS algorithm does not calculate all relations at the same time, but only subsets of data (Hair 2014), its results are reliable, even for small samples. The minimum sample size is determined by two rules, it is either 10 times the largest number of formative indicators used to measure a single construct or 10 times the largest number of structural paths directed at a particular construct in the structural model (Hair 2014). Our model missed the first rule just marginally (6 formative indicators in construct Future Usage) but complies with the requirements of the second rule. With three structural paths as the largest number of structural paths directed at a particular construct of the model, 30 cases would be required and we used 52.

The bootstrapping method, used on 5000 samples and 52 cases, was used to determine significance, loadings, weights and path coefficients (Chin 1998b). In order to ensure that there is no multicollinearity of the indicators, the findings were additionally cross-referenced using SPSS.

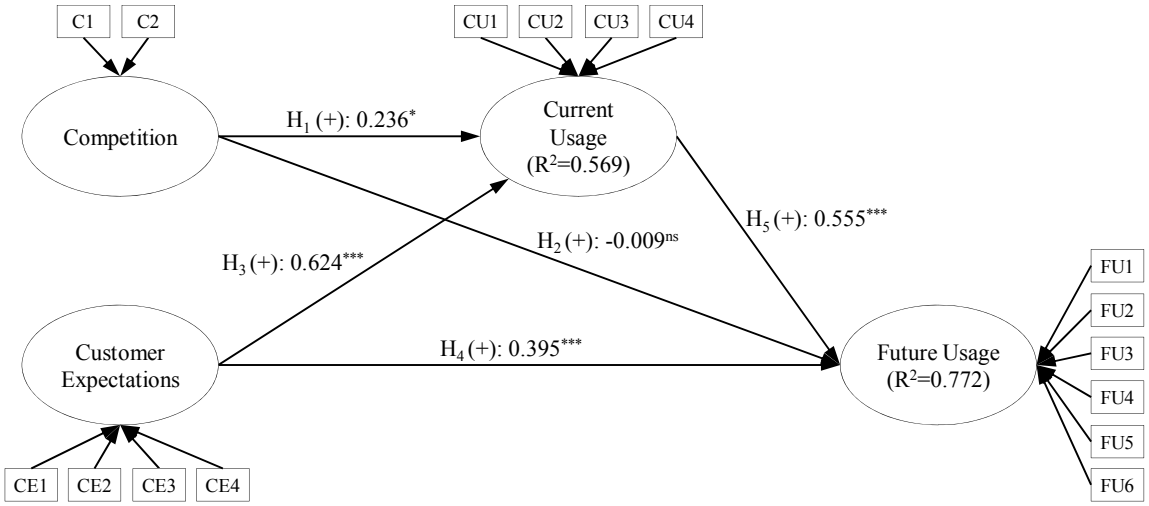

Figure 2. Results of the PLS Algorithm

4.2 Measurement Model

The two kinds of constructs underlying the measurement model, reflective and formative constructs, have different analysis requirements (Fornell, Bookstein 1982). But as the current model uses only formative constructs, the reflective constructs need not be considered here. The given formative constructs are built by their indicators, which means that a change in one of the indicators will also alter the construct. But an alteration in the construct will not influence its indicators (Bollen, Lennox 1991; Jarvis et al. 2003). In order to assess the significance of an indicator, the weights and the t-values have to correspond to the following requirements: The t value of a significant indicator must be higher than 1.65, which corresponds to a significance level of 10% (Hair 2006). In order to reach a

significance level of 5% (1%), the t-value must be higher than 1.96 (2.57) (Hair 2006; Huber et al. 2007). In addition, the weights must be higher than 0.1 (Chin 1998b). Table 4 shows the t-values as well as the corresponding weights for all indicators of our model and also indicates the result with regard to the calculated significance.

For the construct "Future Usage", three (FU2, FU4, FU5) of six indicators are significant having a positive influence. The construct "Current Usage" includes three significant indicators, CU1, CU2 and CU3 each with positive influence. In the construct "Competition" both t-values are higher than 1.96, indicating a 5% level of significance. This again indicates a positive influence of the indicator for the corresponding construct. For the construct "Customer Expectations" only the indicators CE2 and CE3 are significant. The t-value of CE2 is higher than 2.57 (1% level of significance) and the value of CE3 is higher than 1.65 (10% level of significance). The weights of both indicators exceed the threshold of 0.1. In addition to the significance of indicators, the discriminant validity of the formative constructs must be verified. The highest correlation between latent variables is given for the constructs "Current Usage" and "Future Usage" with a value of 0.8357. This does not go beyond the set maximum of 0.9. The analysis conducted using SPSS with regard to multi-collinearity showed that all indicators of the models are sufficiently different and independent of each other.

Construct	Indicator	Weights	*t*-statistic	significance
Future Usage	FU1	0.183	1.366	ns
	FU2	0.431	2.667	***
	FU3	-0.107	0.851	ns
	FU4	0.277	2.145	**
	FU5	0.383	3.218	***
	FU6	0.064	0.629	ns
Current Usage	CU1	0.544	3.261	***
	CU2	0.024	0.301	ns
	CU3	0.273	1.909	*
	CU4	0.495	3.291	***
Competition	C1	0.602	2.241	**
	C2	0.612	2.370	**
Customer Expectations	CE1	0.118	0.853	ns
	CE2	0.807	5.542	***
	CE3	0.245	1.764	*
	CE4	0.175	1.548	ns

ns = not significant; *p<0.10; **p<0.05; ***p<0.01.

Table 4. Path coefficients

4.3 Structural Model

In order to validate the model, the constructs were assessed using the variance inflation factor ($VIF=1/(1-R^2)$) as to potential multicollinearity (Weiber, Mühlhaus 2010). The VIF is lower than the required level of 10, which shows that there is no multicollinearity here either (Diamantopoulos, Winkelhofer 2001; Huber et al. 2007). The value of R^2 represents the coefficient of determination, which indicates a substantial influence if the value exceeds 0.67. Above the value of 0.33 a moderate influence of a latent independent variable on the dependent latent variable can be assumed. A weak influence is indicated by an R^2 value of higher than 0.19 (Chin 1998b). Figure 2 indicates the values for the different criteria of our model. The coefficient of determination of the construct "Current

Usage" is moderate with a value of R^2=0.569 and substantial with a value of R^2=0.772 concerning the construct "Future Usage".

The t-values stated in Figure 1 and their path coefficients allow conclusions as to the validity of the formulated hypotheses. According to the findings, all relations apart from the one between "Competition" and "Future Usage" (H2) are significant and have t-values of at least 1.65 (Weiber, Mühlhaus 2010).

5 DISCUSSION

At first sight, the results of our survey are in line with the findings of the other studies reviewed in section 2. The perceived competitive pressure (H1) as well as the perceived customer expectations (H3) influence the current usage of digital technologies by LOOROs positively. Thereby, the explanatory power of the construct "current usage" is moderate, indicating that the current usage could be explained quite satisfactorily. While the influence of the perceived customer expectations on the future usage (H4) was also confirmed at a high significance level (1%), the influence of the perceived competitive pressure on the future usage (H2) was not. As to hypothesis H5, contending that the current usage has a positive impact of the future usage, H5 was also be confirmed with high significance (1%), the competitive pressure indirectly influences the future usage. The main drivers for the usage of digital services are therefore the perceived customer expectations and the already existing use of such services.

While this indicates that the LOOROs already engaging in digitalization are satisfied with their current efforts and expect future business increases through digitalization, this could also mean that LOOROs tend to wait before going digital until the pressure of competition is high enough and they are forced to use digital services, or that LOOROs think they are well prepared for the digitalization and their customers' demand for it. To substantiate this assumption, let us have a look at the descriptive statistics of the survey questions (see *The survey was conducted in German, the questions are translated into English*

Table 5). In addition to the questionnaire that we used for our research model, we also asked several additional questions (AQ1-AQ4) concerning the status quo of LOOROs and their state of digitalization.

As we can see, about half of the interviewees feel high and very high pressure concerning the local as well as the online market. Following hypothesis H1, this should mean that the current usage of digital services is also quite high. But in fact, this is only the case for e-mail and EC payment. Loyalty cards as well as website are rated high or very high by less than a third. This picture continues when looking at the intention for future usage of digital services. Except for the online shop, less than a quarter of the interviewees indicate a high or very high intention to use digital services in future. The reason for this lies in the perceived customer expectations. Less than one third of LOOROs perceive a high or very high demand of customers for digital services (CE1-CE4 and AQ3-AQ4). But on the other hand, LOOROs feel well prepared for the challenge to digitalize (AQ1 and AQ2) although most of them have very low employee numbers (below ten). Thus, the employee situation is not viewed as barrier to digitalization. If we link these results with the customer survey conducted by the Retail Institute at the University of Cologne (Institut für Handelsforschung – IFH) in the same town, we observe an alarming gap. 45% of the shoppers interviewed in that survey indicated that they had changed their shopping habits in favor of more online retail. That means that LOOROs do not seem to perceive the raised expectations of their customers as to digital services.

Question		Answer				
Future Usage		**very high**	**high**	**average**	**low**	**very low**
FU1	How would you rate the intention of future use of video telephony as a means of corporate communications for your business?	1.9%	0%	7.7%	25%	46.2%
FU2	How would you rate the intention of future use of payment by smartphone (mobile wallet. NFC) for your business?	9.6%	11.5%	15.4%	11.5%	36.5%
FU3	How would you rate the intention of future use of an app with service (consultation or sale) for your business?	0%	3.8%	13.5%	17.3%	38.5%
FU4	How would you rate the intention of future use of an online shop for your business?	19.2%	7.7%	17.3%	9.6%	28.8%
FU5	How would you rate the intention of future use of social media for your business?	1.9%	19.2%	25%	15.4%	21.2%
FU6	How would you rate the intention of future integration of customers in decisions about your product range for your business?	3.8%	11.5%	34.6%	11.5%	17.3%
Current Usage		**very high**	**high**	**average**	**low**	**very low**
CU1	How would you rate the frequency of current use of e-mails as a means of corporate communications for your business?	17.3%	23.1%	26.9%	13.5%	7.7%
CU2	How would you rate the frequency of current use of EC and credit card payment for your business?	40.4%	36.5%	7.7%	5.8%	1.9%
CU3	How would you rate the frequency of current use of an internet site for your business?	17.3%	13.5%	23.1%	21.2%	9.6%
CU4	How would you rate the frequency of current use of a loyalty card for your business?	15.4%	7.7%	15.4%	13.5%	30.8%
Competition		**very high**	**high**	**average**	**low**	**very low**
C1	How high is the competitive pressure on the local market?	13.5%	30.8%	28.8%	17.3%	5.8%
C2	How high is the competitive pressure in the online trade?	30.8%	25%	26.9%	9.6%	3.8%
Customer Expectations		**very often**	**often**	**average**	**seldom**	**very seldom**
CE1	How often do you acknowledge that your customers use digital applications accompanying the purchases in your store?	7.7%	17.3%	26.9%	26.9%	11.5%
		very high	**high**	**average**	**low**	**very low**
CE2	How high is the customer demand for an online shop?	7.7%	1.9%	23.1%	17.3%	32.7%
CE3	How high is the customer demand for loyalty cards?	7.7%	11.5%	11.5%	15.4%	40.4%
CE4	How high is the customers demand for home delivery?	17.3	9.6%	17.3%	17.3%	28.8%
Additional Questions		**very high**	**high**	**average**	**low**	**very low**
AQ1	How high is the importance o digitalization for your business?	13.5%	42.3%	19.2%	7.7%	3.8%
		very good	**good**	**average**	**bad**	**very bad**
AQ2	How is your personnel situation regarding the likeliness to work with digital applications?	19.2%	36.5%	23.1%	7.7%	1.9%
		very strong	**strong**	**average**	**weak**	**very weak**
AQ3	How strong do you perceive customer churn toward online trade?	7.7%	13.5%	34.6%	17.3%	9.6%
AQ4	How strong do your customers expect digital service offers (e.g. apps. online shop. website) from you?	5.8%	7.7%	21.2%	30.8%	21.2%

The survey was conducted in German, the questions are translated into English

Table 5. Descriptive statistics of survey questions

According to the SERVQUAL Gap-Model based on Parasuraman et al. (1985) (see Figure 3), our results suggest Gap 1 (actual customer expectations vs. perceived customer expectations). This Gap indicates that there is a risk that the services provided by the LOOROs may not correspond to the customer expectations, which will cause customers to have a negative quality perception, as their expectations of digital services provided and the actual services they experience fall short (Gap 5).

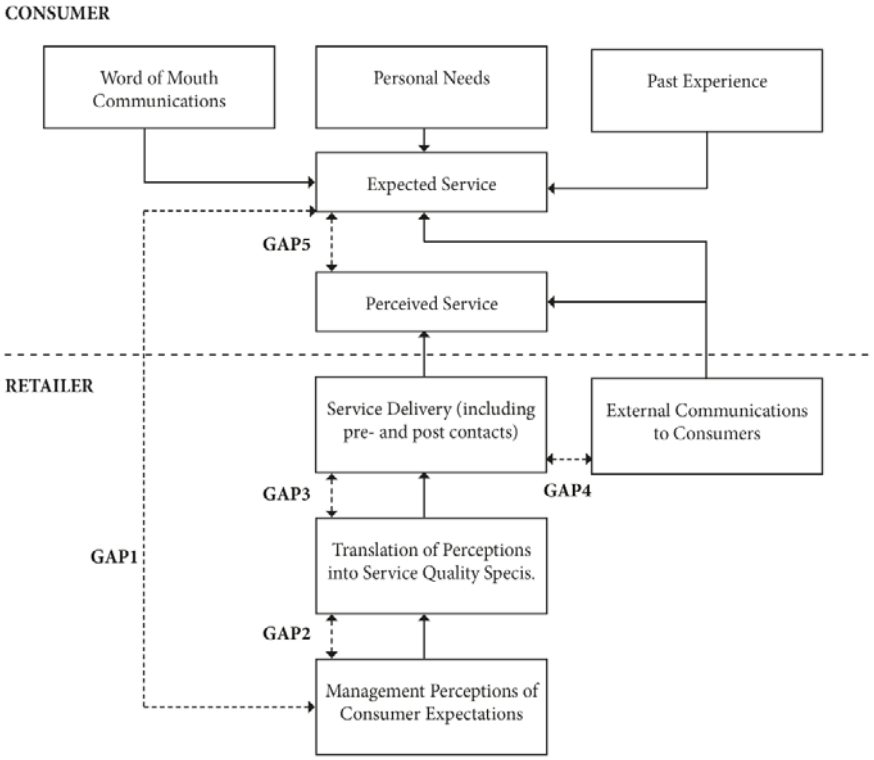

Figure 3. SERVQUAL Gap-Model (Parasuraman et al. 1985)

In general, the results of our survey are in line with the findings of previous studies based on the TOE-Framework with regard to the adoption of innovation and technology in SMEs. The perception of competition and customer expectations has a positive influence on current usage of digital services and at least the customer expectations also act as a driving force towards the willingness to adopt digital services in the future. If we go back to our main question "Do LOOROs realize that digitalization is here to stay and that they will have to adapt to the new retail environment?", the picture is ambivalent. On the one hand, LOOROs in general perceive a high importance of digitalization and feel well prepared for this challenge. But on the other hand, they perceive only low customer expectations with regard to digital services. This indicates a growing gap between actual and perceived customer expectations, which has potentially negative implications for the already difficult competitive position of LOOROs. As LOOROs feel high pressure on the local market as well as online, they should be encouraged to assess their digitalization options and make use of them to regain competitiveness (Navickas et al. 2015).

6 CONCLUSION

For owners and managers of retail outlets several lessons can be learned. This study highlights once again the importance of the perception of customer needs and habits for a successful business. Especially LOOROs seem to lose track of their customers' needs and wants. Owner and manager needs to take countermeasures and start with a step by step digitalization of their business processes. Facing a multitude of uncertainties, it is recommendable to start with targets within easy reach in the short term, such as search engine visibility and third party sales channels to meet the basic digital needs of their customers (IFH 2014; ECC 2011). In the long-term, LOOROs should try to develop a digitalization strategy that incorporates their local advantages, like short distance to the customers (using e.g. Location-Based Services) and the opportunity to create a touch and feel customer

experiences as well as offering their customers the opportunity to take the products into their possession directly (Navickas et al. 2015).

Providers of digital services should consider the findings of this study before tailoring their offers for LOOROs. The big group of not-yet-digitally-developed-LOOROs is a challenging but promising business opportunity for all companies that understand the driving force of digital services for local retail on the one hand and the limitations and obstacles those retailers are in on the other hand. Using digital services to foster the connection between LOOROs and their customers once again is just the first step, enhancing the shopping convenience through channel integration and excellent customer service needs to follow right away.

As always, some limitations of our study have to be acknowledged. First of all, the sample size of the survey with 52 participants is rather small. This brings us to the question to what extent the results of this study can be generalized. The respondents form quite a representative group concerning the city where the survey was conducted. 38.5% of all retail outlets and 61.1% of the town's LOOROs responded to the survey. This makes the survey representative for the town and lets us generalize the results to cities of the same size and in a similar regional situation (rural). The town is about 35 km and approximately 45 minutes by car away from Germany's biggest urban area, the Ruhr area. However, the picture may change in big cities so that the survey is only partly generalizable. Secondly, the survey covers only a small share of conceivable measures of digitalization. In particular, the usage of social media functions was barely touched on. Several measures like channel integration, in-store applications, in-store analytics, real time interaction management, could also be taken into account. But as LOOROs are already reluctant to use the simple measures of digitalization that we surveyed, we can assume that these more sophisticated measures are currently not taken into account either. However, in future studies, more detailed questions concerning the specific scope and direction of digitalization should and will be used.

7 FUTURE OUTLOOK

With regard to the findings of this research we suggest the following areas of future research:

1. "What are the barriers of digitalization of LOOROs within in the organization? How strong is the impact of limited capital, limited human resources, limited education, and limited time for strategic planning on the current state of digitalization?"
2. "How realistic is the perception of LOOROs as to the digital competence of their business?"
3. "What are the technological and non-technological options for LOOROs with regard to digitalization and what are the potential risks and opportunities of its implementation?"
4. "What are the most promising digital services and are there special digital services that can be a competitive "local" advantage for LOOROs in the competition with e-commerce?"
5. "What are best practices in LOOROs and what type of options and what type of actions can be derived from them?"
6. Customer Research (Survey) on the questions: "What are the products, services and offers that motivate customers to continue to buy in the cities?
7. Identifying Product characteristics and categories that are most promising for LOOROs.

Integrating the previously mentioned fields of future research, we suggest further to repeat the already conducted survey with an extended sample through surveying LOOROs from a bigger region or area. To gain more generalizability as well as to learn more about the differences of LOOROs in urban and rural areas, the sample should be adjusted to the size (small / medium / big) and the location (urban / rural area) of the surveyed cities.

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