FACE-TO-FACE AND ELECTRONIC COMMUNICATION WITH CUSTOMERS IN RETAILING AND COMPANY PERFORMANCE: A CASE STUDY IN THE ELECTRONICS AND COMMUNICATION EQUIPMENT RETAIL INDUSTRY IN THE CZECH REPUBLIC

Ludvík Eger¹, Petr Suchánek²

¹ West Bohemia University in Pilsen, Faculty of Economics, Department of Marketing, Trade and Services, Czech Republic, ORCID: 0000-0002-5437-3297, leger@kmo.zcu.cz;
² Masaryk University, Faculty of Economics and Administration, Department of Corporate Economy, Czech Republic, ORCID: 0000-0002-2606-4040, Petr.Suchanek@econ.muni.cz.

Abstract: Customers today can find the same assortments in a number of retail stores and through the Internet, thus effective store management has become a critical basis for developing strategic advantages. The aim of this research is to identify whether customer satisfaction measured by means of mystery shopping and the results of communication with the public on a company’s Facebook profile assessed by quantitative analysis influence the performance of the selected companies. The evaluation of customer satisfaction and loyalty follows the older pilot study and is newly supplemented by an analysis of communication with customers using social media such as Facebook. The company’s performance is evaluated through the financial ratios (ROA, ROE and ATO) based on accounting data available in the Magnusweb database. The research is focused on selected companies from the electronics and communication equipment retail industry in the Czech Republic and is unique from that point of view because it analyses communication with customers not only in retail shops but concurrently on their profiles for Facebook. The findings show how it is possible to assess the level of customer-oriented communication in retail shops and also the level of communication with customers on the social network. Retailers are increasing their focus on customers’ experience in their shops and on social media sites. The research contributes to a better understanding of marketing in retail and on social media in the selected industry.

Keywords: Customer satisfaction, retail mystery shopping, Facebook engagement, enterprise performance, electronics and communication equipment.

JEL Classification: M21, M31.


Introduction
Enterprise performance as well as customer satisfaction and loyalty are phenomena that are clearly at the forefront of the assessment of not only the current, but also the future value and prospects of an enterprise in today’s demanding, highly dynamic business environment.
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competitive conditions (Suchánek & Eger, 2019). Customer satisfaction and loyalty are prerequisites for strengthening the position of an enterprise in the market, and thus are also connected with achieving success in customer orientation (Kotler & Keller, 2013), which in turn is connected with the quality of services provided. The focus on service quality when selling competitive products combined with communication with customers via Facebook on a company's brand page (De Vierman, Cauberghe, Hudders, & De Pelsmacker, 2017) is a key factor to increasing the performance of a company. Today, organizations should consider the way they communicate with their target audience and consider social networks (particularly Facebook) and e-shops as a new way of expanding the business. In this context, Levy, Weitz and Grewal (2019, p. 397) argue that “customers can find the same assortments in a number of conveniently located retail stores and through the Internet, thus effective store management has become a critical basis for developing strategic advantages”.

In the presented research, enterprise performance is measured based on an analysis of publicly available data (Magnusweb) from closing financial statements (specifically, balance sheets and profit and loss statements). This (quantitative) way of measuring performance based on accounting data is fairly common (compare with, e.g., Gunasekaran, Williams, & McGaughey, 2005; Gupta & Galloway, 2003). Mystery shopping is used to gather information about customer-oriented communication, their satisfaction with retail and customer feedback via Net Promoter Score (Eger & Mičík, 2017). The purpose of the mystery shopping survey is to investigate the level of customer-oriented service, customer satisfaction and to search for the relationship between customer satisfaction and the level of Net Promoter Score (NPS) in the selected retail industry.

However, this research goes further than the pilot study (Suchánek & Eger, 2019) and newly analyzes the communication of selected companies with the public on the social network Facebook, which is still the dominant tool in the field of social media marketing in the Czech Republic (EUROSTAT, 2018). Social media enables open communication, which helps organizations to understand customer needs and motivates them to respond proactively and efficiently to those needs (Tajudeen, Jaafar, & Ainin, 2018). Successful company-consumer interactions foster customer loyalty and willingness to try new offerings. It is important to mention that for all the selected companies selling not only in their traditional stores, but also on the Internet, is important. Moreover, offline and online communication with customers is often interconnected when goods ordered online are handed over in the company's traditional retail network (brick and mortar stores). From this point of view, this research is unique and examines the link between customer-oriented communication in brick and mortar stores and on the Facebook social network and various financial ratios that measure the performance of companies in the Czech Republic. This research may contribute in several ways to the literature regarding retail and personal selling, electronic word of mouth, and customer satisfaction and customer loyalty.

First, we assess the influence of some part of the shopping environment and of customer-oriented communication on customer satisfaction and customer loyalty. Second, we analyze how selected companies used Facebook to communicate with customers and measure the engagement rate. Third, we operationalize and assess the company’s performance. Fourth, the research adds to the very limited research on company performance and customer satisfaction in retailing in the Czech Republic.

1. Theoretical Background
1.1 Enterprise Performance

Performance can be defined in a variety of ways, also thanks to the fact that over the past several decades this definition has changed and been further specified with respect to the purpose for which the performance was used. The subject of this research is an enterprise, so performance needs to be defined within the context of an enterprise. Lorino (1997, in Ravelomanantsoa, Ducq, & Vallespir, 2018) defines performance in general terms as “everything that, and only that, which contributes to achieving strategic objectives”. Hult, Hurley and Knight (2004) define performance in similar way, albeit more specifically in relation to financial indicators “as the achievement of organizational goals related to profitability and growth in sales and market share, as well as the accomplishment of general firm strategic objectives”.

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Performance is generally perceived very broadly as a multidimensional construct (Neely & Wilson, 1992), specifically as effectiveness and efficiency. Performance can be understood as the extent to which the customer’s requirements are met (effectiveness) and the measure of the economic use of the enterprise’s resources leading to customer satisfaction (efficiency) (Neely, Gregory, & Platts, 2005).

Quantitative measuring of performance (efficiency) of an enterprise based on accounting data is fairly common (cf. Gupta & Galloway, 2003; Gunasekaran et al., 2005), also thanks to their relative reliability (Tosi, Werner, Katz, & Gomez-Mejia, 2000). From the financial standpoint, it is possible to use various financial indicators, specifically the combination of several ratio or absolute indicators (further, e.g., Chia et al., 2009). In this research, performance will be understood within the context of an enterprise as a two-dimensional construct. One dimension is made up of effectiveness represented by customer satisfaction, while the other dimension is represented by efficiency.

The quantitative measurement of enterprise performance based on accounting data is connected with the fact that customer satisfaction translates into a successful business in the sense of sales volume and consequently profit and rate of return (compare Neely et al., 1995). In the context of customer satisfaction, it is obvious that the key indicator that can evaluate the specific performance of an enterprise and which can be measured is the rate of return of the company (more specifically, the ROA indicator). This also corresponds with a number of conducted research studies (e.g. Anderson et al., 1997; Terpstra & Verbeeten, 2014; Yeung, Ging, & Ennew, 2002).

Within a comprehensive approach to measuring company performance, there are various categories of financial indicators. Some authors use indicators related to the rate of return, activity, debt ratio, liquidity, growth indicators and asset structure indicators (Delen et al., 2013; Heikal, Khaddafì, & Ummah, 2014). In a number of research studies, financial performance in the context of customer satisfaction is evaluated by standard financial indicators, such as ROA, ROE (e.g. Al-Hawari & Ward, 2006). It suggests itself to use the financial indicators ROA, ROE and ATO which are well-proven in the conditions of Czech companies (Suchánek & Králová, 2018).

Several studies suggest that there is a positive relationship between customer satisfaction and enterprise performance (e.g. Levy et al., 2019; Yu et al., 2013). The findings from research conducted by Chi and Gursoy (2009) suggest that customer satisfaction has a significant positive impact on financial performance. The same result was achieved in the pilot study (Suchánek & Eger, 2019), which did not deal with internet communication and evaluated the selected indicators only over a short period of time. The report by FeedbackSystems (2016) summarizes findings from several studies and argues: “One of the main benefits of customer satisfaction research is the capability to observe trends in indicators that are directly tied to financial performance”. This is also the focus of this new research, conducted in the context of the Czech Republic.

### 1.2 Retail, Personal Selling, Customer Satisfaction

Consumer satisfaction and retention are critical for retail also in the area of electronics and communication equipment (Suchánek & Eger, 2019). Providing quality customer service is a way to be distinguished from competitors. An organization’s employee skills and competencies (Egerová, 2015; Zeglat, Aljaber, & Alrawabdeh, 2014) are essential to making a successful service encounter and interaction. Researchers have found that customer satisfaction is a major driver of customer loyalty and earlier empirical findings revealed that customer loyalty could lead to a 25–85% increase in profit (Reichheld et al., 1990). Some studies show that up to 70% of organizations are losing customers due to poor customer service, and just less than 15% due to poor quality of the product (e.g. Michelson, 2015). Customer satisfaction affects positive word-of-mouth (compare with electronic word-of-mouth below) and future repeat purchase (Abu-ELSamen et al., 2011; Bolton et al., 1998). Customer service is an important topic because it has a strong link to long-term financial outcomes such as profitability (Abu-ELSamen et al., 2011; Duncan & Eliot, 2004; Yeung et al., 2002).

Communication in personal selling is an important part of sales behavior and can help any company increase its customer satisfaction (Gilbert & Veloutsou, 2006; Pimpakorn & Patterson, 2010; Wangenheim, Evanschitzky, & Wunderlich, 2007). If customers are satisfied,
have trust in salespeople and see value in the provided customer service, they are more likely to come back and repeat purchase in the future (El-Bachir, 2014; Gruca & Rego, 2005; Kim, Park, & Jeong, 2004). Traditionally, it is supposed that customer satisfaction is an important factor in the performance and competitiveness of retail shops (including online retail).

Some authors argue that customer loyalty is of greater importance than customer satisfaction (Fraering & Minor, 2013; Belás & Gabčová, 2016), while others (e.g. Khan & Rizwan, 2014) argue that customer satisfaction explains 93% of customer loyalty. In general, there are two approaches to customer satisfaction in literature, the expectancy-disconfirmation approach and the performance-only approach (Gilbert & Veloutsou, 2006). In this research, we work with the performance-only approach. According to our adopted approach, customer satisfaction is defined as “an overall evaluation based on the customer’s total purchase and consumption experience with a good or service over time” (Anderson, Fornell, & Mazvancheryl, 2004). The deterministic approach to customer loyalty (Odin, Odin, & Valette-Florence, 2001) which we use in this research addresses customer loyalty as an attitude manifested through customers’ preferences, buying intentions, supplier patronization and recommendation willingness.

This research is focused on selected electronics and communication equipment retail companies. Customer service and communication with customers have become more important in retailing than ever before (Beneke et al., 2012; Eger & Mičík, 2017; Jankal & Jankalová, 2011; Parment, 2013).

The mystery shopping technique can be used to assess how employees interact with customers and to identify customer satisfaction and areas for future service quality improvement. Mystery shopping studies have been conducted especially in retail by Gosselt, van Hoof, de Jong and Prinsen (2007), Janka and Jankalová (2011), Kehagias, Rigopoulou and Vassilikopoulou (2011) and Eger and Mičík (2017).

1.3 Social Networking Sites and Customer Satisfaction

Currently, the popularity of social networking sites provides virtual brands with new platforms, such as brand pages on Facebook or accounts on Instagram or Twitter (De Vierman et al., 2017; Semerádová & Weindlích, 2019). When examining the role of social media and its influence in the marketing context, four main streams may be identified: brand communities, electronic word of mouth, networking analysis, and product-harm crisis (Gensler, Völcker, Liu-Tompkins, & Wiertz, 2013). The virtual communities offer companies new opportunities to interact with their customers. For example, using Facebook, companies and brands acquire the capacity to support activities, such as providing customer service, product information, special offers, and various types of entertainment (Simon & Tossan, 2018).

A number of studies focus on the relationship between social media marketing and financial performance. Alongside customer satisfaction, social media marketing is part of the effectiveness factor which determines the performance of an enterprise and also affects the financial aspect of its performance, specifically ROA (Kumar & Mirchandani, 2012). In the short-term, higher or more intensive use of social media by a company does not increase its financial performance (Smith et al., 2015). However, with respect to Facebook, it was discovered that the total number of comments has a positive effect on the company’s revenue (Yoon et al., 2018). This is also confirmed by research by Paniagua and Sapena (2014), which suggests that reaching a critical mass of “followers” and “likes” has a positive effect on the value of the company. The research also shows that it is important (specifically in the case of Facebook) whether the company responds to customers’ messages. Responding to negative messages leads to an increase in financial performance, while there is no noticeable effect of responses to positive messages on the company’s financial performance (Chung et al., 2020).

Several studies have consistently found a significant positive relationship between perceived interactivity on social media and outcome variables, such as attitude and behavior (Alalwan et al., 2017; Vendemia, 2017). Successful company-consumer interactions using social media support brand awareness, increase customer satisfaction and loyalty, and boost sales (Vendemia, 2017; Wang & Kim, 2017; De Vierman et al., 2017). Therefore, this research also investigates the impact of
communication on Facebook on customer engagement, specifically in the selected industry.

2. Research Methodology

2.1 Research Design

The research provides an answer to the following central research question: Is there an association between customer satisfaction resulting from the sale of products and the engagement with customers and potential customers on company profile for Facebook in selected companies in the electronics and communication equipment retail industry, and the performance of these companies?

To answer the research question, the research used a convergent parallel mixed methods research design, which allows the researcher to explore a research problem (Gray, 2009) using an embedded case study design (Yin, 2014). In the conducted research, both qualitative and qualitative data were collected during the same phase of research and the data were analyzed separately and independently (Creswell & Plano Clark, 2011). The quantitative approach comprises an analysis of the communication on Facebook profiles of selected companies and an analysis of the performance of the selected companies. The qualitative approach applies the mystery shopping survey and additionally a qualitative analysis of selected posts with the aim to explain communication with customers on Facebook in detail.

Before conducting our research, we formulated the following hypotheses:

- **H1:** There are positive relationships between service skills and overall customer satisfaction.
- **H2:** There is a positive relationship between customer satisfaction and customer loyalty in selected companies offering retail industry electronic and communication equipment.
- **H3:** There is a positive relationship between engagement with customers and potential customers on company Facebook profiles and the performance of the selected companies offering retail industry electronic and communication equipment.
- **H4:** There is a positive association between customer loyalty and the performance of selected companies offering retail industry electronic and communication equipment in the Czech Republic.

2.2 Characteristics of the Examined Sample of Companies

The research sample consisted of five companies that operated retail chains of electronics stores in the Czech Republic in 2017/2018. Specifically, these companies were: HP TRONIC Zlín, Ltd. (operating the chain of EURONICS stores), DATART INTERNATIONAL, Plc. (operating the chain of DATART stores), FAST CR, Plc. (operating the chain of PLANEO stores), OKAY, Ltd. (operating the chain of OKAY stores) and Electro World, Ltd. (operating the chain of ELECTRO WORLD stores). These companies rank among the six largest retailers of electronics in the Czech Republic (Marketing & Media, 2011). The companies DATART, Electro World and HP Tronic were also listed among the seven (excluding e-shops without brick-and-mortar stores) largest electronics retailers in the Czech Republic in 2016 (Redakce W4T, 2016).

<table>
<thead>
<tr>
<th>Shop name</th>
<th>Net sales in 2018 (in billion CZK)</th>
<th>Rank according sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electro World</td>
<td>3.96</td>
<td>5.</td>
</tr>
<tr>
<td>Euronics + DATART</td>
<td>15 (of this DATART 7.5)</td>
<td>2.</td>
</tr>
<tr>
<td>Planeo</td>
<td>10.1</td>
<td>3.</td>
</tr>
<tr>
<td>OKAY</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Alza.cz</td>
<td>25.3</td>
<td>1.</td>
</tr>
<tr>
<td>CZC.cz</td>
<td>4.1</td>
<td>4.</td>
</tr>
</tbody>
</table>

Source: own
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It can thus be said that the sample of companies consists of the largest electronics retailers in the Czech Republic but does not include the companies Alza.cz and CZC.cz, which are especially connected with online shopping. Alza.cz is the market leader in online shopping and CZC.cz is in second place, and the selected companies follow these leaders in the online shopping area. For the year 2019, EURONICS is no longer in the sample of companies because of the company merger of DATART and Euronics at the end of 2018. Thanks to the fact that the brands under which the companies operate in the market are generally better known than the companies’ names, the following text will use these store brands of the respective companies. Another reason is the Facebook-based research of the profiles representing their trademarks on the Internet. A comparison of the sales of the surveyed store names is given in Tab. 1.

2.3 Analysis of Financial Performance

Financial performance uses simple financial indicators (Venkatraman & Ramanujam, 1986), whereby it corresponds with the concept of performance, specifically the part related to efficiency (see above). Thanks to that, it is also possible to measure efficiency using financial indicators constructed from accounting data. Based on positive experience from prior research, the ROA and ROE indicators (from the rate of return category), supplemented by the ATO indicator (from the activity category), were chosen to measure efficiency (Suchánek & Králová, 2018). The ROA indicator is constructed as the ratio of EBIT (earnings before interest and taxes) to total assets. The ROE indicator is constructed as the ratio of net profit to the book value of equity. The ATO indicator is constructed as the ratio of total revenues to total assets. For all three of the above-mentioned indicators, it can be said that the higher their value, the higher the efficiency (as a part of enterprise performance).

The results were evaluated using two methods based on multiple criteria decision-making (cf. Babic & Plazibat, 1998). Using the first method (ranking method), the companies’ results in the selected financial indicators were sorted by ranking, with their average ranking determining the final rank according to their performance (Šubrt et al., 2015). Using the other method, the average values of the said indicators in the given industry (specifically, retail without motor vehicles) were ascertained. The results (averages) of the respective indicators for the industry were obtained from publicly available data from the Ministry of Industry and Trade of the Czech Republic (see Department 31400, 2016; Department 31400, 2017). Enterprises were evaluated either as performing (if the indicator value was above the industry average) or non-performing (if the indicator value was below the industry average). Subsequently, the results reached using both methods were synthesized and performance determined, i.e., the measure of performance of the researched companies.

2.4 Mystery Shopping

The scenario and research tool was used in research conducted by Eger and Mičík (2017) and in a pilot study by Suchánek and Eger (2019). The scenario of MS was validated by experts from retail industries and the planned research was piloted to assess the clarity and relevance of the questionnaire items (cf. Kehagias, Rigopoulou, & Vassilikopoulou, 2011; Suchánek & Eger, 2019). The process of scale construction was similar to the Dew and Xiao (2011) approach.

To obtain more objective assessments from the customer’s point of view, not the employee’s, skilled customers (mystery shoppers) evaluate the sales process. The survey also answers an ultimate question regarding loyalty, represented by the NPS indicator. This indicator is used in our research as a customer’s cumulative statement of their loyalty (cf. deterministic approach to customer loyalty above), because companies with satisfied customers tend to enjoy greater customer loyalty, which leads to positive word of mouth (Luo & Bhattacharya, 2006; Xu & Goedegebuure, 2005).

The use of the immediate customer satisfaction measurement (last item in this MS scenario) and the answer to a single NPS question represents simplification and a research limitation (Grisaffe, 2007) in comparison to cumulated satisfaction, which summarizes complex indexes like the ACSI (cf. Eklöv & Westlund, 2002).

Mystery shopping is a useful technique for measuring service quality and has the potential to directly measure service performance across the range of present standards, including behavioral aspects (Wilson, 2001). In our
survey, the scenario was based on theoretical issues (ESOMAR, 2005; Ford, Latham, & Lennox, 2011; Kehagias, Rigopoulou, & Vassilikopoulou, 2011; Porter & Heyman, 2018; Schmidt & Hollensen, 2006; Vadi & Suuroja, 2006; Wilson, 2001). Its structure and the content of partial items were evaluated in prior research (Eger & Mičík, 2017) and in a pilot study by Suchánek and Eger (2019).

The scenario contains items divided into seven parts: store entrance (A), staff appearance (B), needs and benefits (C), listening and answering (D), offer-knowledge of the product (E), negotiating and satisfaction with the overall impression (F), while the last small section contains the NPS question and a scale (0–10) for answers. A Likert-type scale was used in the scenario to measure individual items (1 = strongly disagree (parts A–E)/very dissatisfied (part F), 5 = strongly agree (parts A–E)/very satisfied (part F)).

The survey was conducted in three regions (in small and large cities), which were selected to represent the level of customer service in retail of the selected companies. To achieve an objective result by mystery shopping, the survey followed the pilot study from the year 2017/2018 and was conducted in March and in April 2019. This means that we have the opportunity to evaluate the selected companies in this area over a longer period. The total number of all mystery shopping visits in 2019 was 168 (38 in Electro World, 57 in DATART, 34 in Planeo Elektro and 39 in OKAY Elektro points of sale).

2.5 Facebook Social Network and Customer Engagement

Consumer sociability behavior on Facebook may include various kinds of actions such as linking, commenting, sharing and emoji reactions. The characteristics of company posts result in consumer behavior regarding likes, comments, shares and overall engagement on Facebook. It is possible to divide consumer responses to company and brand posts on Facebook into two main parts. The first group of consumers represents active users of this social network while the second group represents passive users or people that do not use social media. From this point of view, the conducted research focused only on communication between active consumers and the company. Recent findings have shown that useful information related to a company generates customer engagement according to the types of published posts (Kim & Yang, 2017; Vaiciukynaitė, Massara, & Gatautis, 2017).

The analysis of company communication on Facebook used data mining using the Netvizz tool to analyze how the selected companies communicated on Facebook in the year 2018. To answer the research question, the engagement rate was calculated for the selected companies. Additionally, the change in activity on company Facebook profiles between 2017 and 2018 was evaluated.

In the next step, using Netvizz, the best posts of each selected company were selected and then a qualitative analysis focused on the content of the published posts and types of call to action was conducted. A total of 973 (Netvizz) records of posts from 4 companies with Facebook profiles for the year 2018 were selected for investigation (Links, Photos, Status, Videos).

3. Results

The mystery shopping visits (168) executed in three regions in the first half of 2019 to the aforementioned four companies allow us to evaluate the effect of the different variables on overall customer satisfaction. Tab. 1 allowed us to identify correlations between important parts (variables) from the research construct.

Tab. 2 compares selected areas and items of the customer-oriented service using the mystery shopping survey in the manner of shop interior, staff appearance, communication with customers (C, D, E) and satisfaction with the overall impression. The correlation matrix is used to investigate the dependence between variables from our construct focused on customer-oriented communication and on customer-oriented service (cf. Eger & Mičík, 2017). Tab. 2 newly compares the results of the pilot study from the year 2017/2018 with the current mystery shopping survey in 2019.

The reliability of the instrument is established by internal consistency (Cronbach’s alpha). Almost all partial scales showed acceptable values above or near 0.7 (Nunnally & Bernstein, 1994). The area Needs and benefits contains only 2 items focused on these two features of the mentioned area and Cronbach’s alpha is only 0.6. The values of Cronbach’s alpha are the same as in the pilot study.
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Partial conclusions are as follows:

- “WAO” effect – Shop looks attractive from the outside – no significant correlations were found with other items except the item Staff appearance (weak correlation).
- Positive correlations exist between variables E-C, and E-D. The results are stable for both research surveys and indicate the importance of these features in product selling.
- The highest (moderate) correlation coefficient was found between the items Satisfaction with the overall impression and Offer-knowledge of the product. This fact expresses the importance of personal selling in the selected industry.
- As we assumed, the findings show that product presentation and communication with customers (D, E) have positive effects on customers’ expression of their satisfaction with the overall impression of the buying process (F satisfaction).
- The relationship between service skills and overall customer satisfaction is supported (H1).

The Net Promoter Score, or NPS, measures customer experience and predicts business growth. The NPS calculation:

\[
NPS = \% \text{ Promoters} - \% \text{ Detractors}
\]

The Net Promoter Score is an index ranging from −100 to 100.

As shown in Tab. 3, the company with the high NPS score also received the best rating by mystery shoppers in terms of the item: I am satisfied with the overall purchase experience (5-point Likert scale from 1 = very dissatisfied to 5 = very satisfied).

Tab. 3 demonstrates the association between the item overall customer satisfaction and the item customer loyalty (NPS). This Tab. 3 shows that there existed a relationship between

### Tab. 2: Descriptive statistics, the individual section – customer-oriented service (mean, standard deviation, and correlation matrix)

<table>
<thead>
<tr>
<th>Areas and number of items</th>
<th>A</th>
<th>A*</th>
<th>B</th>
<th>B*</th>
<th>C</th>
<th>C*</th>
<th>D</th>
<th>D*</th>
<th>E</th>
<th>E*</th>
<th>F</th>
<th>F*</th>
<th>F*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Store entrance (3)</td>
<td>.69</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Staff appearance (2)</td>
<td>.75</td>
<td>.407</td>
<td>.392</td>
<td>.407</td>
<td>.392</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C Needs and benefits (2)</td>
<td>.57</td>
<td>.286</td>
<td>.359</td>
<td>.286</td>
<td>.359</td>
<td>.227</td>
<td>.288</td>
<td>.227</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D Listening and answering (2)</td>
<td>.75</td>
<td>.294</td>
<td>.151</td>
<td>.280</td>
<td>.151</td>
<td>.215</td>
<td>.446</td>
<td>.328</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E Offer-knowledge of the product (2)</td>
<td>.72</td>
<td>.284</td>
<td>.238</td>
<td>.261</td>
<td>.238</td>
<td>.264</td>
<td>.535</td>
<td>.478</td>
<td>.535</td>
<td>.593</td>
<td>.605</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>F Satisfaction (2)</td>
<td>.85</td>
<td>.380</td>
<td>.373</td>
<td>.272</td>
<td>.380</td>
<td>.373</td>
<td>.338</td>
<td>.534</td>
<td>.338</td>
<td>.633</td>
<td>.580</td>
<td>.644</td>
<td>.637</td>
</tr>
<tr>
<td>Mean</td>
<td>3.8</td>
<td>3.9</td>
<td>4.4</td>
<td>4.4</td>
<td>3.7</td>
<td>3.6</td>
<td>4.0</td>
<td>3.9</td>
<td>3.8</td>
<td>3.6</td>
<td>3.9</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>.70</td>
<td>.63</td>
<td>.66</td>
<td>.66</td>
<td>.89</td>
<td>.92</td>
<td>.6</td>
<td>.75</td>
<td>.79</td>
<td>.82</td>
<td>.72</td>
<td>.85</td>
<td></td>
</tr>
</tbody>
</table>

Note: * Results of pilot study in 2017/2018.

### Tab. 3: Selected companies in the electronics and communication equipment industry and NPS

<table>
<thead>
<tr>
<th>Shop name</th>
<th>Number of MS 2017/18*</th>
<th>MS 2019</th>
<th>Value of NPS*</th>
<th>Value of NPS</th>
<th>Satisfaction average*</th>
<th>Satisfaction average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electro World</td>
<td>44</td>
<td>38</td>
<td>18</td>
<td>13</td>
<td>4.11</td>
<td>3.95</td>
</tr>
<tr>
<td>Euronics</td>
<td>41</td>
<td>0</td>
<td>0</td>
<td>–</td>
<td>3.81</td>
<td>–</td>
</tr>
<tr>
<td>DATART</td>
<td>42</td>
<td>57</td>
<td>2</td>
<td>–9</td>
<td>3.93</td>
<td>3.95</td>
</tr>
<tr>
<td>Planeo</td>
<td>36</td>
<td>34</td>
<td>–25</td>
<td>–3</td>
<td>3.75</td>
<td>4</td>
</tr>
<tr>
<td>OKAY</td>
<td>41</td>
<td>39</td>
<td>–22</td>
<td>–46</td>
<td>3.71</td>
<td>3.51</td>
</tr>
</tbody>
</table>

Note: * Results of pilot study in 2017/2018.

Source: own
overall customer satisfaction (from mystery shopping) and customer loyalty (index NPS) in the survey in 2017/2018. Tab. 3 also shows changes in the Net Promoter Score. Electro World received a good rating, Planeo was improving and OKAY received a worse rating in both indicators. The original proposition in conducted case study (H2) is supported (see the research limitation below). The results of our partial research confirm that customer satisfaction is a strong antecedent to customer loyalty (cf. Anderson & Sullivan, 1993; Xu & Goedegebuure, 2006; Eger & Mičík, 2017). In order to depict the connections between the selected variables, a statistical analysis was conducted. Due to the character of the data, the Kendall Tau indicator was used, on the basis of which the occurrence of the statistical significance was tested for the 2017/2018 data set ($t_k = 0.55$, $p = 0.0000001$) and for the 2019 data set ($t_k = 0.61$, $p = 0.0000001$).

To answer the research question in the subtopic focused on communication with customers using Facebook, the engagement rate (2) and reduced engagement rate (3) were calculated for the four selected companies. Engagement rate is a (old) metric that measures the level of engagement that a piece of created content (post) receives from an audience. It shows how much people interact with the content on a company’s Facebook profile.

\[
\text{Engagement rate (ER)} = \frac{\text{Comments} + \text{Reactions} + \text{Shares}}{\text{Followers}} \quad (2)
\]

Reduced engagement rate (3) was calculated according to a recommendation by Kim and Yang (2017). In this case, a share weighs as much as 2 comments, and a like weighs as much as 1/10 of a comment.

\[
\text{Reduced engagement rate (RER)} = \frac{\text{Comments} + 1/10 \times \text{Reactions} + \text{Shares} \times 2}{\text{Followers}} \quad (3)
\]

Tab. 4 displays basic data outputs from the Facebook profiles of the analyzed companies for the year 2018 as obtained via Netvizz. The column with the number of posts shows activity on the Facebook profile by means of posted messages a year and the last column shows the percentage change in achieved engagement (Likes + Comments + Reactions).

<table>
<thead>
<tr>
<th>Shop name</th>
<th>Likes</th>
<th>Comments</th>
<th>Reactions</th>
<th>Shares</th>
<th>Followers</th>
<th>ER</th>
<th>RER</th>
<th>No. of posts 2017/2018</th>
<th>Engagement in % 2017/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electro World</td>
<td>64,382</td>
<td>29,672</td>
<td>69,727</td>
<td>7,423</td>
<td>61,000</td>
<td>1.75</td>
<td>0.84</td>
<td>219/232</td>
<td>142.9</td>
</tr>
<tr>
<td>DATART</td>
<td>17,628</td>
<td>15,118</td>
<td>19,601</td>
<td>4,933</td>
<td>54,000</td>
<td>0.73</td>
<td>0.5</td>
<td>554/414</td>
<td>68.5</td>
</tr>
<tr>
<td>Planeo</td>
<td>1,361</td>
<td>227</td>
<td>1,532</td>
<td>1,165</td>
<td>24,000</td>
<td>0.12</td>
<td>0.11</td>
<td>183/93</td>
<td>45.6</td>
</tr>
<tr>
<td>OKAY</td>
<td>58,883</td>
<td>8,642</td>
<td>63,323</td>
<td>3,612</td>
<td>51,000</td>
<td>1.48</td>
<td>0.44</td>
<td>192/234</td>
<td>104.3</td>
</tr>
</tbody>
</table>

Source: own

Partial conclusions are as follows:

- As can be seen from Tab. 4, the best engagement rate and reduced engagement rate were achieved by Electro World and good results were also seen for OKAY.
- DATART had a good number of followers in comparison to both mentioned companies and published a higher number of posts a year, but did not reach the engagement rate of Electro World. This indicates lower efficiency of communication using the Facebook profile.
- As Tab. 4 shows, Planeo communicated very badly with customers and potential customers on Facebook.

It is important to mention that Electro World and OKAY present on their websites a visible logo of Facebook and call visitors to action.
Neither of the other companies call visitors to action but only display the Facebook logo with information about other social media.

As mentioned above, there are three different actions that individuals can do on Facebook: like, comment and share (Kim & Yang, 2017). Detailed analysis of the engagement rate shows differences in these metrics and additionally allows the quantity of feedback from audiences on Facebook to be measured using the three mentioned metrics: popularity, commitment and virality (Escobar-Rodríguez & Bonsón-Fernández, 2017).

Popularity was measured by means of the number of likes (year 2018). Companies reached values from 14.6 to 277.5 likes per post in the year 2018. The highest level of popularity was achieved by Electro World, followed by OKAY. Commitment refers to the number of comments per post. The values ranged from 2.4 to 127.9 and only one company, Electro World, achieved a value above 100. Virality shows the effectiveness of viral messages, which was measured according to the number of shares per post. The values ranged from 11.9 to 32. Only Electro World achieved a great viral effect through sharing. From this perspective, it can also be said that the company Electro World is the leader in acquisition popularity, commitment and virality. The results do not support the positive relation between the variables of the company’s level of activity on Facebook and the performance (financial indicators) of the selected companies.

As can be seen from Tabs. 4, 5 and 6, Electro World achieved the best results in communication with customers on Facebook, but according to the selected financial indicators it came last. On the contrary, DATART did not have good results in communication on Facebook, but in 2015 and 2017 it was the best in the sample of monitored companies according to selected financial indicators. No positive relationship was found between engagement with customers and potential customers on company Facebook profiles and the performance of the selected companies offering retail industry electronic and communication equipment (H3). This means that the original proposition in the conducted case study cannot be supported.

The financial performance results in the various years are shown in Tabs. 5 and 6. These clearly indicate that the performance of the analyzed enterprises in mutual comparison varied in the particular years. The largest fluctuation is noticeable with DATART International, whose performance was the best in 2015 and 2017, but the lowest in 2016. Other companies saw less of a fluctuation in performance. HP Tronics Zlín jumped from second/third place in 2015 to first place in 2016 and returned again to second place in 2017. Fast ČR advanced from fourth place in 2015 to third place in 2016, and remained in third/fourth place in 2017. The position of OKAY remained practically unchanged in 2015 and 2016, and there were no data available for the year 2017. Electro World saw the worst performance in 2015 and 2016, and the situation did not change in 2017.

The results displayed in Tabs. 5 and 6 indicate that the performance of Euronics grew in 2016 (significant increase in ROE); however, the company saw a decrease in performance in...
2017 (with ROA and ATO below 2015 levels). The performance of DATART International saw an overall decrease (ROA slightly reduced, ATO slightly up, and a significant decrease in ROE), though 2017 saw a major increase in performance (despite a decrease in ATO). The performance of Planeo increased slightly in 2016; however, it fell in 2017 (despite a slight increase in ATO). OKAY saw a decrease in performance in 2016 (despite a slight increase in ATO), with data for 2017 unavailable. The performance of Electro World increased in 2016, although it needs to be noted that the company’s rate of return was poor, i.e., negative in both 2015 and 2016 (the positive result in ROE for 2015 is due to the ratio of negative profit and negative equity). The company’s performance continued to grow in 2017 (with the exception of a decrease in ATO), with the rate of return getting in the black.

<table>
<thead>
<tr>
<th>Shop name</th>
<th>ROA</th>
<th>ROE</th>
<th>ATO</th>
<th>Average rank based on indicators</th>
<th>Overall rank based on indicators</th>
<th>Overall rank based on industry average</th>
<th>Final order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electro World</td>
<td>1.02%</td>
<td>7.26%</td>
<td>4.75</td>
<td>3.67</td>
<td>4</td>
<td>2–3</td>
<td>3–4</td>
</tr>
<tr>
<td>Euronics</td>
<td>1.81%</td>
<td>22.85%</td>
<td>2.17</td>
<td>2.67</td>
<td>2–3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>DATART</td>
<td>3.19%</td>
<td>37.65%</td>
<td>2.4</td>
<td>1.67</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Planeo</td>
<td>4.80%</td>
<td>11.93%</td>
<td>1.91</td>
<td>2.67</td>
<td>2–3</td>
<td>4</td>
<td>3–4</td>
</tr>
<tr>
<td>OKAY</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Industry average</td>
<td>9.14%</td>
<td>15.32%</td>
<td>2.3</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

Based on the comparison of the NPS results from Tab. 3 and the performance shown in Tab. 6, it is clear that there is no positive association between customer loyalty and the performance of the selected companies offering retail industry electronic and communication equipment in the Czech Republic. Due to the small number of enterprises included in the case study, this hypothesis cannot be statistically tested in a standard way. Particularly the results of Electro World are at variance with the claim of the hypothesis, but the other companies do not reach the expected (identical) evaluation in terms of performance and loyalty, either. The original proposition (H4) in the conducted case study cannot be supported.

The conducted research analyzes five enterprises from a selected retail industry which represent only a quarter of total market turnover in this industry. But these enterprises are the most important players in this industry, and a deeper understanding of this issue is being gained in similar studies (cf. Chi & Gursoy, 2009). It is not possible to assume the implementation of comprehensive research for the retail industry, where many small entities operate.

**Discussion and Conclusion**

The research results suggest that communication with customers (in this case through a Facebook profile) and customer loyalty (NPS) are closely related (see Tabs. 3 and 4), with the exception of the OKAY, though in its case the problem may be a general lack of communication, as this company (unlike the others) has not posted its financial results for 2017. The correlation between communication by means of Facebook and customer loyalty in the retailing is, for example, proven by Gamboa and Gonçalves (2014) and by Escobar-Rodríguez and Bonsón-Fernández (2017). The relationship between communication and loyalty in general is confirmed by, e.g., Oly Ndubisy (2007).

The mystery shopping results confirmed the findings from the previous studies (Eger & Mičík, 2017; Suchánek & Eger, 2019) and proved that customer-oriented services and positive communication with customers lead...
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to overall customer satisfaction and customer loyalty. According to our results, overall customer satisfaction leads to greater customer loyalty (similar conclusion reached by Anderson & Sullivan, 1993; Abu-ELSamen et al., 2011; Blessing & Natter, 2019; Xu & Goedegebuure, 2005).

When comparing the performance results of the particular companies and the level of loyalty of their customers, it is obvious that the statement about greater customer satisfaction and greater company performance is in fact not valid, as proven in the area of services (e.g. Suchánek & Eger, 2019; Zeithaml, 2000). However, this applies in a static view (in the comparison of results in 2017). However, when the dynamic performance development is taken into account, Tabs. 5 and 6 suggest that the trend in performance development could affect customer loyalty. Tabs. 5 and 6 indicate that the performance of Euronics and Planeo decreased in 2017, while that of DATART and Electro World increased. However, the loyalty evaluation was worse in Euronics and Planeo than in DATART and Electro World. This seems to suggest that what is more important than the immediate data for the particular year is the developmental trend over time, as the performance of Electro World is worse in the particular years than that of DATART as well as Euronics.

The only non-performing company in the sample (Electro World) is the shop with the highest customer loyalty and with the best result of engagement on its Facebook profile (metrics: popularity, commitment and virality). On the other hand, the best-performing shop (Euronics) came third in terms of customer loyalty in 2018 and second as the brand DATART in 2019. The second highest-performing shop was OKAY (2017), which took fifth place in terms of customer loyalty, and the third highest-performing company was Planeo, which in terms of customer satisfaction took fourth place in 2018. It is a pity that the company OKAY no longer provides financial indicators for the year 2017 so we cannot compare this indicator with the pilot study results. In terms of evaluating marketing communication on Facebook, it is clear that OKAY has significantly improved, while DATART and Planeo achieved insufficient results for 2018.

Customers now go above and beyond their traditional role as passive recipients of information to actively engage with companies online (Yoon et al., 2018). Facebook is the preferred social media platform (EUROSTAT, 2018); companies consider that consumers who join this platform and become more engaged with their brands or products, will also be loyal to the company, and ultimately increase spending with the company.

Based on the research results, it appears that a short-term increase in the use of social media (in this case Facebook) does not result in an increase in financial performance, which corresponds with the conclusions of Smith et al. (2015). In this context, the findings suggest that the total number of comments received does not lead to an increase in the financial performance of an enterprise, which is partly at variance with the findings of Yoon et al. (2018). This also applies to the findings related to “followers” and “likes”. Given the development of these variables and financial performance, it appears that the companies (including Electro World and OKAY) have not yet reached critical mass when it comes to the number of followers who would have a positive effect on the companies’ financial performance, as ascertained by the research conducted by Paniagua and Sapena (2014).

As mentioned above, it was assumed that companies with higher positive results in customer satisfaction and loyalty also achieve better results in the selected financial indicators. The results of this research show that this may not be the case. However, retailers know that they are in a fully competitive market and they are increasing their emphasis on customer experience in retailers’ stores and websites and social media sites, including the service they get from store employees and the quality of the shopping environment (cf. Levy et al., 2019).

The comparison of the ATO indicator and NPS results shows that the evaluation of companies based on ATO corresponds with the evaluation of customer loyalty according to NPS. Thanks to the fact that the ATO indicator is an indicator of efficiency (Warrad & Al Omari, 2015), it can be said that there is a positive relationship between efficiency and loyalty, i.e., high efficiency is connected with high customer loyalty. In other words, the higher the efficiency, the higher the customer loyalty (and vice versa). Due to the fact that effectiveness in this sense of the word is about (goods) turnover rate, and because of the tight competition in the electronics market, the high turnover rate
is usually at the expense of a lower margin of profit (cf. Guo & Wang, 2019). Lower margins then put pressure on the company's lower rate of return. Just to compare, the average profit margin (our calculation from freely available sources) of the largest on-line retailer, Alza.cz, was 7.9% in 2017, while it was 8.5% for Electro World and 23.3% for DATART.

Apart from profit margins, costs are also important. There is no published research that would prove a negative effect of loyalty-related costs on the company's performance. On the other hand, loyalty is connected with costs. For example, it is more costly to gain a new customer than to keep an existing one (Hegner-Kakar, Richter, & Ringle, 2018); it is very costly to lose a customer (Harris & Goode, 2004); and not all (long-standing) customers increase the company's rate of return (Niraj, Gupta, & Narasimhan, 2001). Our research also proves a positive correlation between customer satisfaction and customer loyalty. When customer satisfaction is connected with costs (Ittner & Larcker, 1998), the same can be expected to hold true for loyalty.

It has been shown that the relationship between loyalty and a company’s financial performance is more complex and that there are several conflicting effects at play. There is a positive relationship between loyalty and performance development (as a whole) as well as between loyalty and the company’s effectiveness (asset turnover rate). On the other hand, there is a negative relationship between loyalty and the company’s costs (whether it be costs associated with the acquisition of new customers or keeping existing ones, or goods procurement costs) as well as between loyalty and profit margin, with profit margin affecting the company’s rate of return. From the theoretical point of view, it appears that in terms of understanding the financial performance of an enterprise as a two-dimensional variable efficiency and effectiveness (for more details, see Neely & Wilson, 1992; Neely, Gregory, & Platts, 2005), the effectiveness variable cannot be limited solely to customer satisfaction. The research shows that the concept of effectiveness needs to be expanded to include social media (specifically Facebook) that are closely connected with customer satisfaction, or in other words, social media also influence customer satisfaction. What is also apparent is the importance of the inner workings of an enterprise which has led to the current levels of both performance dimensions, which was (at least partially) discovered by way of mystery shopping.

**Limitations**

First, the research, focused on customer satisfaction and the performance of selected companies from the retail industry, was conducted in the context of the Czech Republic in 2017/2018 and 2019. Second, the conducted research survey focuses only on the most well-known companies in the mentioned retail industry without on-line shoppers. The research design did not allow for the formulated hypotheses to be statistically tested in the standard way, but made it possible to comment on the original propositions of the case study. One of the main limitations of this research is that customer satisfaction was examined as a unidimensional construct. The performance of retail companies depends not only on customers and their marketing activities, but also on the efficiency of the operation and management of the company. Some authors also state that mystery shopping may not be effective in predicting customer satisfaction (Blessing & Natter, 2019). And, of course, we still have limited knowledge about how companies in the context of the Czech Republic use social media and develop brand communities, e.g., on Facebook. Due to Facebook’s new policy, the app Netvizz lost access to the ‘Page Public Content Access’ at the end of August 2019. Thus, the data presented in Tab. 4 are unique. We suggest that further research in different cultures and countries is now necessary in this field to more deeply understand how both face-to-face communication and electronic communication with customers can influence the performance of companies also from the financial point of view. Another problem lies in the incomplete performance results for the research sample of companies in 2018 and 2019, so some of the statements will not be able to be verified until later.

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