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## SUSTAINABILITY IN MARKETING THROUGH CUSTOMER RELATIONSHIP MANAGEMENT IN A TELECOMMUNICATION COMPANY

**Abstract.** *The idea of sustainable development links business, environmental and social objectives into one integrated effort aiming to meet a common goal. Due to the influence of current developments in customer behaviour companies revise their business strategies towards more sustainably oriented ways of production, business practices, resource efficiency, waste disposal, building partnerships, communication effectiveness etc. Market with telecommunication services is affected by technology development. Growing demands of customers result in re-evaluation of marketing routine. The main purpose of the research is to identify the change in customers' approaches and satisfaction with offered products, enterprise processes, and business strategy as a result of implementing Customer Relationship Management in 2014 and subsequently in 2018 with the dependence on socio-demographic characteristics. Customers' opinions were investigated using a questionnaire. Respondents were selected by direct sampling with contingent valuation. Sample set consisted of 3,282 respondents. Following the results, the fact that there are changes in approaches of customers in investigated areas in terms of gender and age as a result of implementing the Customer Relationship Management can be stated. The customers' satisfaction with provided services improved. In order to serve the new and constantly evolving needs of the growing number of customers who care about social and environmental issues, the companies are required to permanently monitor their performance on the market and incorporate customer feedback as an input for evaluation of their internal processes. In terms of marketing, positive changes in approach, satisfaction with the quality of provided services and reduced service time were observed. In terms of business strategy, the changes in connection strategy, the effect of customer-driven strategy and services provided by call centres abroad are perceived in positive way.*

**Keywords:** sustainability, economical sustainability, marketing, Customer Relationship Management, telecommunication company.

**Introduction.** Telecommunication sector is very specific in individual countries in the European Union. Most of the largest telecommunication companies were formed by privatising the state-owned enterprises or as a result of evolving mobile technology. Many of them have consolidated so far, i.e. the subsidiaries

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have been obtained through acquisition by the parent company. The market with telecommunication services is affected by regulation significantly. Local regulatory authorities and the regulations of the European Union create the environment and conditions affecting the behaviour of telecommunication companies. The aim of the regulations is to make the processes and services easier in order to provide the chance that allows customers to choose and subsequently, to gain relevant information about enterprises and their products. Slovak market with telecommunication behaves in accordance with the mentioned trends. At the present time, there are five telecommunication service providers on the Slovak market. They are under the supervision of state, especially Regulatory Authority for Electronic Communications and Postal Services.

Due to financial crisis, globalisation, new trends in technology, not only Slovak telecommunication companies must take into consideration a downward trend in revenues and customer base (Hung et al., 2019). New product range is launched, existing product portfolio is simplified, new approaches to customers to meet their quality and provided service demands are created in order to achieve sustainability of enterprise process management (Gejdos et al., 2019; Hwangbo and Kim, 2019; Kemper, Hall, & Ballantine, 2019; Lee, Lee, & Choi, 2019; Dusak and Jelacic, 2018; Kubes and Rancak, 2018; Benda-Prokeinova et al., 2017; Lynch et al., 2017; Graa and Abdelhak, 2016; Musova, 2015). Sustainability is an issue that companies have to consider in their internal as well as external processes and practices related to the decision-making process. The idea of sustainable development links business, environmental and social objectives into one integrated effort aiming to meet a common goal. Due to the influence of current developments in customer behaviour companies revise their business strategies towards more sustainably oriented ways of production, business practices, resource efficiency, waste disposal, building partnerships, communication effectiveness etc. They need to respond to these changes by balancing profitability with environmental and social responsibility.

As customers are one of the main factors of success, companies need to find customers, raise their interest, meet their needs and wishes, and retain them. Therefore, in this context, customer satisfaction is an important topic (Park et al., 2019). Customer satisfaction has been investigated from different points of view so far (Sivathanu, 2019; Indrayani et al., 2019; Kantorova and Bachmann, 2018; Strenitzerova, and Gana, 2018; Wang and Ho, 2017). For example, in telecom settings (Zhou et al., 2019), in airline services (Park et al., 2019), in container shipping market (Balci, Caliskan, & Yuen, 2019). The research of Tasci (2016) revealed that loyal consumers are different from others in sociodemographic, psychographic and behavioral characteristics. The research results of Homburg, and Giering (2001) show that the strength of the relationship between customer satisfaction and loyalty is strongly influenced by characteristics of the customer. Among various sociodemographic variables, most previous studies investigated gender (Cha and Borchgrevink, 2019; Demoulin and Willems, 2019; Kim, Cho, & Kim, 2019; Bruwer and Li, 2017; Atkin, Nowak, & Garcia, 2007; Mitchell and Walsh, 2004) and age (Kelley, Hyde, & Bruwer, 2015; Hammond, Velikova, & Dodd, 2013). Understanding the socio-demographic characteristics of consumers allows firms to understand preferences and better customize products to their customers (Unal, Temizel, & Eren, 2017).

The aim of the paper is to identify the change in the approaches and satisfaction of customers with provided products, enterprise processes and business strategy resulting from the implementation of Customer Relationship Management (CRM) in the year 2014 and subsequently in the year 2018 depending on the selected sociodemographic characteristics.

**Literature review.** Today's multi-dimensional customers want enterprises to be familiar with their needs and requirements. When an enterprise wants to succeed on the market, it must familiarise with customers. CRM is one of the best ways to manage a company interaction with current and potential customers (Krizanova, Gajanova, & Nadanyiova, 2018; San-Martin, Jimenez, & Lopez-Catalan, 2016; Kostojohn, Paulen, & Johnson, 2011; Vicikova and Markova, 2011). CRM is considered a complex process

affecting various areas of business with particular importance (Dalla Pozza, Goetz, & Sahut, 2018; Kumar and Reinartz, 2006). CRM consists of technology (application and base, technical tools), business processes and personnel sources aimed at managing and defining customer relations in all business activities especially marketing, customer support and services provided for customers (Buttle, 2009; Armstrong and Stephens, 2008; Payne and Frow, 2005).

CRM enables enterprises to attract customers and respond to customer's demands quickly with the highest product quality at the lowest costs (Agrawal and Mittal, 2019; Frois, Teresa Pereira, & Ferreira, 2018; Kantorova and Bachmann, 2018). In the past, the attention was paid to the product. Nowadays, customers are becoming the determining factor, catching their interest, meeting their needs, demands and holding on to already existing customers (Lerro et al., 2019; Lizbetinova and Weberova, 2016). Long-term and perspective relationship between the company and a customer can result in sustainable development. Marketing managers define processes in the company in order to ensure long-lasting satisfaction of customers (Sanclemente-Tellez, 2017). Marketing, communication, business, service processes in the company and appropriate technology that allow companies to manage the relationship with customers are used in these processes (Foret, 2006). Business strategy is focused on developing and holding the maximum value of the company-customer relationship leading to a company's growth and improvement of its profitability.

CRM has been investigated from different points of view so far (Cheng and Shiu, 2019; Cruz-Jesus, Pinheiro, & Oliveira, 2019; Nam, Lee, & Lee, 2019; Wang et al., 2019; Dalla Pozza, Goetz, & Sahut, 2018; Karminskiy and Zhdanova, 2013; Krikovtsev, 2011). Chernev and Blair (2015), Krasnikov, Jayachandran, and Kumar (2009), and Anderson and Kerr (2002), found out that all business, marketing and service processes resulting in creating, holding, deepening the company-customer relationship or higher repeat purchase rate of goods and services integrated in effective CRM through coordination, consolidation, and connection of the company information with customers, suppliers, business partners and employees can lead to higher revenue and company's profitability growth. The results of the research of Gubiniova (2009) using the sample set consisting of enterprises offering services show that the sales cycle of the enterprises implementing CRM shortened, their financial results were better (costs associated with marketing communication were cut, revenues increased, as well the profit per one customer) and their brand awareness increased significantly as well. Haislip, and Richardson (2017), Yaghoubi, Fini, and Rahmati-Najarkolaei (2017), Coltman, Devinney, and Midgley (2011), and Krasnikov, Jayachandran, and Kumar (2009), found out that the enterprise performance is affected by the effective CRM in a positive way. Zaby and Wilde (2018) discovered that competitive advantage gained by implementing the CRT in business processes is the major contribution of CRM.

CRM enables communication with customers, makes the contact with them easier, helps companies gather, analyse information and subsequently transform it into important knowledge about customers' demands, their behaviour and approaches necessary for designing new products, providing new services (Gubiniova, 2009). CRM success depends on the ability to collect data, evaluate and use them in new business processes (Garrido-Moreno, Lockett, & Garcia-Morales, 2014). Data associated with customers are significant for the company. However, it is not enough to possess the data. According to several research studies (Stremitzerova and Gana, 2018; Hommerova, 2012), the data must be analysed and used in practise as much as possible. Identifying and meeting the right market segments following the basic idea of CRM – 20/80, i.e. 80% of earnings is from 20% of loyal customers, is a key to success (Lostakova, 2009; Armstrong and Stephens, 2008). Better conditions for familiarising with key customers and their needs are created by mentioned CRM.

**Methodology and research methods.** Regarding the aim of the paper, the study was conceptualised as follows. Firstly, the three examined areas were determined, in particular the provided products, enterprise processes, and business strategy. Related to the provided products, satisfaction with the quality

of provided products, product recommendation, product price appropriateness, innovativeness and importance of the Internet was investigated. In the area of enterprise processes, change in approach, satisfaction with service quality, time necessary to respond to customer's demand, clarity in an enterprise website and marketing communication was investigated. Business strategy was the last investigated area. Enterprise merger, strategy of merger, the effect of merger on customers and call centre service abroad were factors investigated. Secondly, the questionnaire was designed in a way to address each of the respective area. The aim of the research was to identify the change in the approaches and satisfaction of customers resulting from the implementation of CRM in the year 2014. Research questions and hypotheses were formulated. Two research were carried out. The initial one was performed before the implementation of CRM system in 2014 and the latter one after the CRM system was implemented (in 2018). Customers of the telecommunication company Slovak Telekom were asked to participate in the research. Population consisted of 2,220,000 customers of the telecommunication company in the year 2014 and 2,369,000 customers in the year 2018. Taking into account the existing population of customers a minimum sample size was defined. Minimum sample size of 384 respondents was set in order to ensure the representativeness of the sample set at the 95% level of reliability with 5% accuracy. Sample set consisted of 3,282 respondents in total (1,633 in the year 2014; 1,649 in the year 2018). Sample set description is given in Table 1. Simple random sampling was used to define the sample of respondents from the overall population. Random sampling is aimed at creating an unbiased representation of a group (Richterova, 2013; Scheer and Sedmak, 2014). The research was carried out using random phone calls to contact the respondents. Age and gender were two restrictions identified in the research. Respondents' opinions on the provided services, enterprise processes and business strategy prior to and after implementing CRM in the telecommunication company were investigated. Responses were in a form of simple selection. The Likert scale was corrected to Likert-type scale. Respondents assigned each question to one of four levels of agreement from the Likert-type scale (4 = certainly yes; 3 = yes, 2 = there is a chance for improvement; 1 = no). By intention 4-point scale was used and the neutral point was left. In general, neutral point is used in cases when the respondent does not have his/her own attitude to the examined issue (Krosnick, Judd, & Wittenbrink, 2005). Research results were not affected by mentioned restriction (Rod, 2012). Moreover, as stated by Rod (2012) using 4-point scale instead of 5-point results in less distortion of the results and increases the credibility of the measured results.

**Table 1. Description of sample set**

Category		2014		2018	
		Absolute Frequency	Relative Frequency	Absolute Frequency	Relative Frequency
Gender	Males	1,108	67.85	863	52.33
	Females	525	32.15	786	47.67
Age	<30 years	314	19.23	397	24.08
	31-40 years	508	31.11	502	30.44
	41-50 years	516	31.60	454	27.53
	>51 years	295	18.06	296	17.95
Customer's loyalty	<1 year	79	4.84	35	2.12
	1-3 years	350	21.43	298	18.07
	4-5 years	927	56.77	987	59.85
	>6 years	277	16.96	329	19.95

Source: authors' compilation.

Research questions and hypotheses were defined as follow:

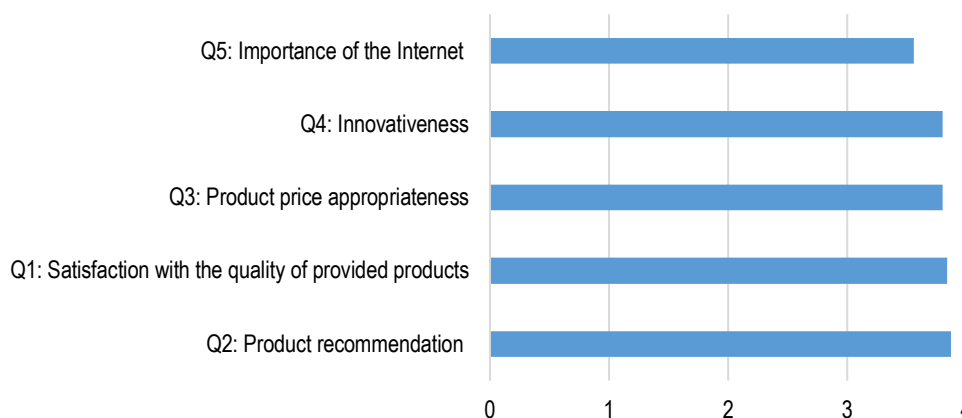
- Research question 1 – What is the difference in perceiving the quality of provided products, enterprise processes and business strategy between men and women?

- H<sub>1</sub> – It is supposed that women are more satisfied with the quality of products, processes and business strategy than men are.
- Research question 2 – What is the difference in perceiving the quality of provided products, enterprise processes and business strategy by customers of different age?
- H<sub>2</sub> – It is supposed that customers of higher age are more satisfied with the quality of products, processes and business strategy than younger ones.
- Research question 3 – Is there a difference in perceiving the quality of provided products, enterprise processes, and business strategy prior to and after implementing CRM in the enterprise?
- H<sub>3</sub> – It is supposed that customers' satisfaction with the quality of products, processes and business strategy improved as a result of implementing CRM compared to the situation before implementation.

Acquired information was adjusted for the purposes of statistical analyses in order to prove the formulated hypotheses and interpret the survey results. Obtained data were evaluated using the statistical analysis of data in the programs SPSS and STATISTICA 12. Reliability of analysed factors was verified using Cronbach's alpha with the values in the range from 0 to 1. The higher value than 0.8 indicates greater internal consistency for a scale (Rimarcik, 2007).

The value of Cronbach's alpha in 2014 ( $\alpha = 0.817$ ) and in 2018 ( $\alpha = 0.854$ ) shows the adequate reliability of the research. Chi-square test and a nonparametric Mann-Witney U test were used to show significant differences in the case of the data obtaining more parameters. The level of significance  $\alpha = 0.05$  was determined to evaluate results. Following the tests, the need to refuse the null hypothesis or to accept alternative hypothesis was identified.

**Results.** Firstly, the respondents' opinions on the quality of products provided by selected enterprise were investigated. CRM orientation towards quality of provided products. Satisfaction with the quality of provided products, product recommendation, product price appropriateness, innovativeness and importance of the Internet was investigated. The results are presented in Figure 1.



**Figure 1. Respondents' opinions on the quality of provided products in 2018**

Source: authors' compilation.

Following the research results (Figure 1), the fact that the willingness of respondents to recommend products to friends and associates (mean score 3.87) was the highest-ranking factor can be seen. It was

followed by the customers' satisfaction with the provided products (mean score 3.84), appropriate product prices (mean score 3.80) and the innovativeness (mean score 3.80). The factor associated with the understanding the importance of the Internet as an essential part of life was perceived as the less significant (mean score 3.56).

The evaluation shows that the above-average attention of the enterprise is put on the products. Subsequently, respondents were divided according to the selected socio-demographic characteristics (gender and age). They were tested using Chi-square test. The results are given in Table 2.

**Table 2. Comparison of respondents' opinions on the quality of provided products in 2018**

Question	Gender		Age	
	$\chi^2$	df	$\chi^2$	df
Q1: Satisfaction with the quality of provided products	8.326*	3	28.725*	9
Q2: Product recommendation	17.952**	3	24.513	9
Q3: Product price appropriateness	2.910	3	29.202**	9
Q4: Innovativeness	3.023	3	16.365	9
Q5: Importance of the Internet	1.887	3	6.344	9

Note: Single, and double asterisks (\*, \*\*) indicate significance at 5%, and 1% level.

Source: authors' compilation.

Satisfaction with the quality of provided products depending upon the demographic factors was the first investigated area (Q<sub>1</sub>). The results presented in Table 2 show that there are differences men and women ( $\chi^2 = 8.326$ ;  $p = 0.040$ ). Women were more satisfied with the quality of provided products than men were. 97.71% of women were completely satisfied with the quality of provided products. On the other hand, 96.87% of men were completely satisfied with the quality of provided products. Only small number of women (0.89%) and men (1.39%) expressed their dissatisfaction with the quality of provided products. The similar situation was observed in the case of age.

The differences in satisfaction with the quality of provided products was confirmed ( $\chi^2 = 28.725$ ;  $p = 0.001$ ). Respondents at the age 51+ were the most satisfied. No negative response was recorded. Other age groups were very satisfied as well. More than 98% of respondents at the age of 31 – 40, almost 97% of respondents at the age of 41 – 50 and more than 94% of respondents up to 30 years old were satisfied with the quality of the provided products. Almost 3% of respondent up to 30 years old asked for improving the quality of provided products.

Furthermore, 3% of respondents at this age were not satisfied with products at all. In the case of older age groups, the number of dissatisfied respondents was less than 1%.

The research results presented in Table 2 confirmed that there was statistically significant difference in the factor associated with the product recommendation (Q<sub>2</sub>) only in terms of gender ( $\chi^2 = 17.952$ ;  $p = 0.000$ ). Products were recommended more by women (98%) than by men (97%). Only 0.38% of women and 0.81% would not recommend the products to their friends and associates.

In the third area (Q<sub>3</sub>), there were differences in opinions on perceiving the product prices only in terms of age of respondents ( $\chi^2 = 29.202$ ;  $p = 0.001$ ). Almost 97% of respondents at the age of 31 – 40 considered the prices appropriate. They were followed by the respondents at the age of 41 – 50. Approximately 92% of respondents up to 30 years old expressed that they considered the prices of the products the less appropriate. Only 4.03% would like to see the improvement and 3.27% expressed the disagreement with the appropriateness of the product prices.

No statistically significant difference was observed in the case of Q<sub>4</sub>, i.e. whether the customers perceive the company innovative enough and Q<sub>5</sub>, i.e. whether customers consider the Internet an essential part of their life. Changes in perceiving the quality of provided products resulting from the implementation of new CRM. The results of the research conducted in the year 2014 and 2018 are presented in Table 3.

As the data were collected in two different periods of time, the changes in perceiving the quality of provided products resulting from the implementation of CRM can be compared.

The changes can be observed through the comparison of statistical indicators such as arithmetic mean ( $\bar{x}$ ), standard deviation (Sd) and using Mann-Whitney U test that allow researchers to find out whether the changes in the investigated period of time are significant, i.e. whether the time can be considered a factor affecting the changes in respondents' responses in both periods of time.

**Table 3. Changes in perceiving the quality of provided products resulting from the implementation of new CRM in the years 2014 and 2018**

Question	2014		2018		Mann-Whitney U
	$\bar{x}$	Sd	$\bar{x}$	Sd	
Q1: Satisfaction with the quality of provided products	3.64	0.85	3.84	0.48	<b>1,247,884.0**</b>
Q2: Product recommendation	3.84	0.47	3.87	0.43	1,333,056.00
Q3: Product price appropriateness	3.82	0.49	3.80	0.55	1,353,276.00
Q4: Innovativeness	3.58	0.67	3.56	0.70	1,338,911.50
Q5: Importance of the Internet	3.72	0.60	3.80	0.53	<b>1,265,532.5**</b>

Note: Single, and double asterisks (\*, \*\*) indicate significance at 5%, and 1% level.

Source: authors' compilation.

Following the research results presented in Table 3 the fact that the satisfaction of the customers with the provided products (Q<sub>1</sub>) improved from 3.64 to 3.84 from 2014 to 2018 can be seen. In the year 2018, respondents were willing to recommend products to their friends and associates more often than in the year 2014 (Q<sub>2</sub>;  $\bar{x}_{2014} = 3.84$ ;  $\bar{x}_{2018} = 3.87$ ).

In the year 2018, respondents considered the Internet the essential part of their lives more than in the year 2014 (Q<sub>5</sub>;  $\bar{x}_{2014} = 3.72$ ;  $\bar{x}_{2018} = 3.80$ ). There was a decrease observed in Q<sub>3</sub>, Q<sub>4</sub>, i.e. in perceiving the product price appropriateness (Q<sub>3</sub>) from 3.82 in the year 2014 to 3.80 in the year 2018. In the year 2018, respondents perceived the company as less innovative (Q<sub>4</sub>) than in the year 2014 (Q<sub>4</sub>;  $\bar{x}_{2014} = 3.58$ ;  $\bar{x}_{2018} = 3.56$ ). Mann – Whitney U test was used to show statistically significant difference in the level of coincidence between investigated areas. Statistically significant difference was observed in investigated period in three factors:

- Q<sub>1</sub>: Satisfaction with the quality of provided products (U = 1,247,884.0; p = 0.000) and
- Q<sub>5</sub>: The Internet as an essential part of life (U = 1,265,532.5; p = 0.000).

There was an increase observed in product recommendation to friends and associates (Q<sub>2</sub>), however, statistically significant difference was not confirmed by statistical methods used. In the case of Q<sub>2</sub> (product recommendation to friends and associates) in terms of time, there was no statistical significance confirmed. Following the research results, the fact that factors Q<sub>3</sub>, i.e. perceiving the price appropriateness and Q<sub>4</sub>, perceiving the innovativeness was not affected by the time can be seen.

Results of testing the respondents' opinions on the quality of provided products as a result of implementing CRM in terms of gender in the years 2014 and 2018 are presented in Table 4.

In the factor satisfaction with the quality of provided products (Table 4), statistically significant differences between responses of men and women in the year 2014, between responses of women in the year 2014 and 2018, and responses of women in the year 2014 and men in the year 2018 can be stated. Statistically significant differences between responses of women in the year 2014 and the year 2018, between responses of women in 2018 and men in 2018 were observed in the case of product recommendation.

Statistically insignificant difference was investigated in product price appropriateness and innovativeness. In the last researched area – the importance of the Internet, the fact that statistically

significant differences between responses of men in the year 2018 and the year 2014 in terms of gender and time can be stated.

**Table 4. Changes in perceiving the quality of provided products resulting from the implementation of new CRM in terms of gender in time**

Category			2014		2018		
			Male	Female	Male	Female	
Satisfaction with the quality of provided products	p-level	2014	$\bar{x}$	3.8493	3.1978	3.8169	3.8753
			Male		0.000008***	0.700821	0.831770
	2018	Female	0.000008***		0.000008***	0.000008***	
		Male	0.700821	0.000008***		0.274536	
	2018	Female	0.831770	0.000008***	0.274536		
		$\bar{x}$		3.8592	3.8059	3.832	3.9097
Product recommendation	p-level	2014	Male		0.110949	0.546440	0.078503
			Female	0.110949		0.719362	0.000240***
	2018	Male	0.546440	0.719362		0.002795***	
		Female	0.078503	0.000240***	0.002795***		
	2018	Male	0.996776	0.996776	0.999527	0.829882	
		Female	0.996776		0.999537	0.801254	
2018	Male	0.999527	0.999537		0.801576		
	Female	0.829882	0.801254	0.801576			
Innovativeness	p-level	2014	Male		0.973604	0.542609	0.939044
			Female	0.973604		0.899935	0.999822
	2018	Male	0.542609	0.899935		0.904487	
		Female	0.939044	0.999822	0.904487		
	2018	Male	0.000160***	0.221180	0.000160***	0.005339***	
		Female	0.358854		0.221180	0.613890	
2018	Male	0.000160***	0.221180		0.877360		
	Female	0.005339***	0.613890	0.877360			

Note: Single, double, and triple asterisks (\*, \*\*, \*\*\*) indicate significance at 5%, 1%, and 0.1% level. Source: authors' compilation.

Subsequently, the respondents' opinions on the quality of provided products resulting from the implementation of new CRM in terms of age in the years 2014 and 2018 were tested. The results are given in Table 5.

Following the results presented in Table 5, the fact that most statistically significant differences were recorded in satisfaction with the quality of provided products can be stated. Further statistically significant differences in terms of age in time were observed in product recommendation, price appropriateness, and importance of the Internet. Significant differences were not confirmed in responses associated with innovativeness in terms of age in time.

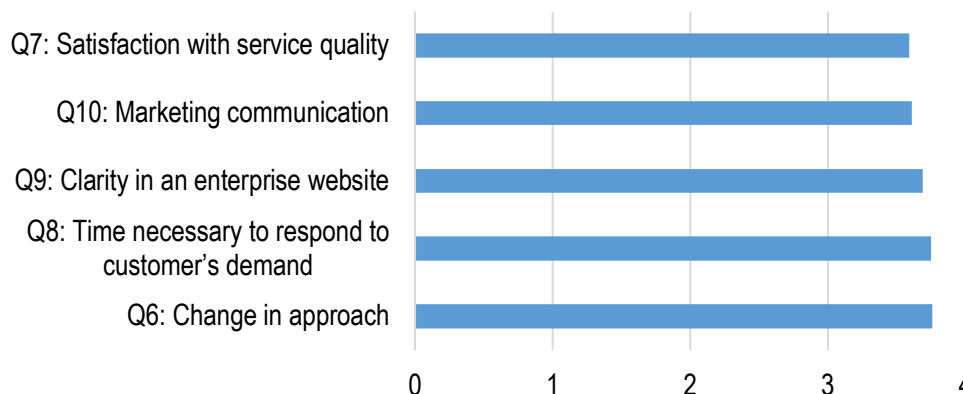
CRM orientation towards enterprise processes. Enterprise processes were further investigated area. Factors such as change in approach, satisfaction with service quality, time necessary to respond to customer's demand, clarity in an enterprise website and marketing communication were investigated. The results of testing in terms of gender in the years 2014 and 2018 are presented in Figure 2.



Table 5. Changes in perceiving the quality of provided products resulting from the implementation of new CRM in terms of age in time

Category		2014				2018					
		<30	31-40	41-50	>51	<30	31-40	41-50	>51		
Satisfaction with the quality of provided products	p-level	$\bar{x}$	3.7233	3.666	3.6365	3.4883	3.7683	3.8785	3.837	3.902	
		2014	<30		0.943132	0.645974	0.000663***	0.989076	0.036916**	0.322142	0.029807**
	2018	31-40	0.943132			0.997406	0.009841**	0.344747	0.000057**	0.003151**	0.000106***
		41-50	0.645974	0.997406			0.062387	0.081261	0.000033***	0.000195***	0.000035***
		>51	0.000663***	0.009841**	0.062387			0.000035***	0.000032***	0.000032***	0.000032***
		<30	0.989076	0.344747	0.081261	0.000035***		0.254384	0.835286	0.187147	
		31-40	0.036916**	0.000057***	0.000033***	0.000032***	0.254384		0.983606	0.999794	
		41-50	0.322142	0.003151**	0.000195***	0.000032***	0.835286	0.983606		0.913831	
	>51	0.029807**	0.000106***	0.000035***	0.000032***	0.187147	0.999794	0.913831			
	Product recommendation	p-level	$\bar{x}$	3.8585	3.8496	3.8442	3.8060	3.7884	3.8924	3.8899	3.9054
			2014	<30		1.0000	0.9999	0.8388	0.4424	0.9672	0.9812
		2018	31-40	1.0000		1.0000	0.8901	0.4663	0.8041	0.8665	0.6946
41-50			0.9999	1.0000		0.9421	0.5848	0.6856	0.7682	0.5807	
>51			0.8388	0.8901	0.9421		0.9996	0.1505	0.2003	0.1289	
<30			0.4424	0.4663	0.5848	0.9996		0.0144*	0.0244*	0.0173*	
31-40			0.9672	0.8041	0.6856	0.1505	0.0144*		1.0000	0.9999	
41-50			0.9812	0.8665	0.7682	0.2003	0.0244*	1.0000		0.9998	
>51		0.9051	0.6946	0.5807	0.1289	0.0173*	0.9999	0.9998			
Product price appropriateness		p-level	$\bar{x}$	3.8050	3.8281	3.8192	3.7976	3.7229	3.8705	3.8238	3.7736
			2014	<30		0.9985	0.9999	1.0000	0.4071	0.6416	0.9997
		2018	31-40	0.9985		1.0000	0.9898	0.0480*	0.8968	1.0000	0.8367
	41-50		0.9999	1.0000		0.9986	0.0957	0.7587	1.0000	0.9288	
	>51		1.0000	0.9898	0.9986		0.5878	0.4991	0.9964	0.9995	
	<30		0.4071	0.0480*	0.0957	0.5878		0.0006***	0.0851	0.9070	
	31-40		0.6416	0.8968	0.7587	0.4991	0.0006***		0.8592	0.1714	
	41-50		0.9997	1.0000	1.0000	0.9964	0.0851	0.8592		0.8996	
	>51	0.9953	0.8367	0.9288	0.9995	0.9070	0.1714	0.8996			
	Innovativeness	p-level	$\bar{x}$	3.5692	3.6270	3.5731	3.5418	3.4912	3.5916	3.5441	3.6115
			2014	<30		0.9380	1.0000	0.9997	0.8020	0.9998	0.9997
		2018	31-40	0.9380		0.9130	0.6840	0.0615	0.9921	0.5687	1.0000
41-50			1.0000	0.9130		0.9985	0.6263	0.9999	0.9980	0.9946	
>51			0.9997	0.6840	0.9985		0.9794	0.9754	1.0000	0.9204	
<30			0.8020	0.0615	0.6263	0.9794		0.3639	0.9523	0.3027	
31-40			0.9998	0.9921	0.9999	0.9754	0.3639		0.9628	0.9999	
41-50			0.9997	0.5687	0.9980	1.0000	0.9523	0.9628		0.8933	
>51		0.9949	1.0000	0.9946	0.9204	0.3027	0.9999	0.8933			
Importance of the Internet		p-level	$\bar{x}$	3.6635	3.7148	3.7577	3.7324	3.8186	3.8187	3.7709	3.8074
			2014	<30		0.9086	0.2692	0.7988	0.0063**	0.0031**	0.1545
		2018	31-40	0.9086		0.2692	0.9999	0.1076	0.0664	0.7846	0.3231
	41-50		0.2692	0.9263		0.9987	0.7377	0.6682	1.0000	0.9290	
	>51		0.7988	0.9999	0.9987		0.4849	0.4189	0.9847	0.7376	
	<30		0.0063**	0.1076	0.7377	0.4849		1.0000	0.9229	1.0000	
	31-40		0.0031**	0.0664	0.6682	0.4189	1.0000		0.8961	1.0000	
	41-50		0.1545	0.7846	1.0000	0.9847	0.9229	0.8961		0.9890	
	>51	0.0340*	0.3231	0.9290	0.7376	1.0000	1.0000	0.9890			

Note: Single, double, and triple asterisks (\*, \*\*, \*\*\*) indicate significance at 5%, 1%, and 0.1% level. Source: authors' compilation.



**Figure 2. Respondents' opinions on enterprise processes in 2018**

Source: authors' compilation.

Evaluation of individual responses is presented in Figure 2. Change in approach (mean score 3.76) and time necessary to respond to customer's demand (mean score 3.75) were the highest-ranking factors. Satisfaction with service quality provided by an agent in contact centre (mean score 3.59) was considered the less significant factor. According to the evaluation, customers would ask for improving the service quality and marketing communication.

**Table 6. Comparison of the respondents' opinions on the enterprise processes in 2018**

Question	Gender		Age	
	$\chi^2$	df	$\chi^2$	df
Q6: Change in approach	15.655**	3	24.929**	9
Q7: Satisfaction with service quality	7.138	3	22.722**	9
Q8: Time necessary to respond to customer's demand	8.489*	3	19.023*	9
Q9: Clarity in an enterprise website	19.137**	3	15.806	9
Q10: Marketing communication	9.790*	3	16.640	9

Note: Single, and double asterisks (\*, \*\*) indicate significance at 5%, and 1% level.

Source: authors' compilation.

In terms of demographic factors, significant differences were observed in questions (Q<sub>6</sub>) change in approach and (Q<sub>8</sub>) time necessary to respond to customer's demand (Table 6), which are perceived differently in terms of gender as well as age of respondents. Change in approach and time necessary to respond to customer's demand would appreciate women more than men. 86.3% of the responses in the case of question associated with the change in approach were certainly yes. In the case of time necessary to respond to customer's demand, 82.2% of women were satisfied in comparison to 79.7% of satisfied men. The greatest change in approach (Q<sub>6</sub>) occurred among respondents at the age 51+, 85.5% of respondents.

Respondents at the age of 31 – 40, 83.1% were the most satisfied group of respondents with the time necessary to respond to customer's demand (Q<sub>8</sub>). Satisfaction with the service quality is affected by the age of respondents ( $\chi^2 = 22.722$ ;  $p = 0.007$ ). In investigated questions (Q<sub>9</sub>) and (Q<sub>10</sub>), there are statistical differences in opinions on perceiving clarity of the Internet website and marketing communication in terms

of gender. According to the research, women considered the Internet website more clear ( $\chi^2 = 19.137$ ;  $p = 0.001$ ) and marketing communication better ( $\chi^2 = 9.790$ ;  $p = 0.020$ ) comparing to men.

Changes in perceiving enterprise processes resulting from the implementation of new CRM. Following the results of enterprise processes compared in the years 2014 and 2018 presented in Table 7 the fact that positive change was observed in the case of three investigated factors Q<sub>6</sub>, Q<sub>7</sub>, and Q<sub>8</sub> can be seen.

**Table 7. Changes in perceiving enterprise processes resulting from the implementation of new CRM in the years 2014 and 2018**

Question	2014		2018		Mann-Whitney U
	$\bar{x}$	Sd	$\bar{x}$	Sd	
Q6: Change in approach	3.71	0.62	3.76	0.59	<b>1,312,240.00*</b>
Q7: Satisfaction with service quality	3.58	0.73	3.59	0.72	1,353,219.50
Q8: Time necessary to respond to customer's demand	3.70	0.63	3.75	0.59	<b>1,313,287.00*</b>
Q9: Clarity in an enterprise website	3.71	0.60	3.69	0.63	1,344,248.00
Q10: Marketing communication	3.67	0.63	3.61	0.70	<b>1,312,092.00*</b>

Note: Single, and double asterisks (\*, \*\*) indicate significance at 5%, and 1% level.

Source: authors' compilation.

On the contrary, in the year 2018, the respondents were more dissatisfied with the clarity of the enterprise internet website (Q<sub>9</sub>;  $\bar{x}_{2014} = 3.71$ ;  $\bar{x}_{2018} = 3.69$ ). Marketing communication made worse as well (Q<sub>10</sub>;  $\bar{x}_{2014} = 3.67$ ;  $\bar{x}_{2018} = 3.61$ ). Statistically significant differences were recorded in the case of the evaluation of enterprise approach Q<sub>6</sub> ( $U = 1,312,240.0$ ;  $p = 0.012$ ) and satisfaction with the time necessary to respond to customer's demand Q<sub>8</sub> ( $U = 1,131,287.0$ ;  $p = 0.016$ ). In both cases, there was an increase observed. A decrease in 2018 comparing to 2014 occurred in Q<sub>10</sub> – marketing communication ( $U = 1,312,092.0$ ;  $p = 0.025$ ).

Differences in responses associated with enterprise processes depending on demographic data and time are presented in Table 8.

**Table 8. Changes in perceiving the enterprise processes resulting from the implementation of new CRM in terms of gender in time**

Category			2014		2018		
			Male	Female	Male	Female	
Change in approach	p-level	2014	$\bar{x}$	3.7193	3.7006	3.7092	3.8092
			Male		0.935299	0.982874	0.008156**
	2018	Female	0.935299		0.993953	0.007407**	
		Male	0.982874	0.993953		0.004609**	
	2018	Female	0.008156**	0.007407**	0.004609**		
Satisfaction with service quality	p-level	2014	$\bar{x}$	3.5262	3.5323	3.3893	3.4962
			Male		0.999008	0.001811**	0.868677
	2018	Female	0.999008		0.009901**	0.866410	
		Male	0.001811**	0.009901**		0.047338	
	2018	Female	0.868677	0.866410	0.047338		
Time necessary to respond to customer's demand	p-level	2014	$\bar{x}$	3.6354	3.5952	3.555	3.5992
			Male		0.695974	0.057423	0.688245
	2018	Female	0.695974		0.725149	0.999610	
		Male	0.057423	0.725149		0.579120	
	2018	Female	0.688245	0.999610	0.579120		

Continued Table 8

Clarity in an enterprise website	p-level	Year	Gender	$\bar{x}$	3.6697	3.6802	3.6524	3.7239
				2014	Male		0.988322	0.928060
		2014	Female	0.988322		0.846638	0.589816	
		2018	Male	0.928060	0.846638		0.090512	
		2018	Female	0.240745	0.589816	0.090512		
Marketing communication	p-level	2014	$\bar{x}$	3.5677	3.6155	3.5504	3.6349	
			Male		0.589394	0.952996	0.192572	
		Female	0.589394		0.356759	0.964060		
		2018	Male	0.952996	0.356759		0.084181	
		Female	0.192572	0.964060	0.084181			

Note: Single, double, and triple asterisks (\*, \*\*, \*\*\*) indicate significance at 5%, 1%, and 0.1% level. Source: authors' compilation.

Research results presented in Table 8 show that statistically significant differences in the change in approach in terms of gender and time were confirmed between women in the year 2018 and other investigated categories.

Further statistically significant differences occurred in the area associated with the satisfaction with service quality. Statistically significant differences between responses in terms of gender and time were not confirmed in the area time necessary to respond to customer's demand, clarity in the enterprise website and marketing communication of the enterprise.

Differences in respondents' opinions on enterprise processes resulting from the implementation of new CRM in terms of age in the years 2014 and 2018 are presented in Table 9.

Table 9. Changes in perceiving enterprise processes resulting from the implementation of new CRM in terms of age in time

Category			2014				2018					
			<30	31-40	41-50	>51	<30	31-40	41-50	>51		
Change in approach	p-level	$\bar{x}$	3.6730	3.7129	3.7519	3.6890	3.6524	3.7948	3.7709	3.8108		
		2014	<30		0.9840	0.5997	1.0000	0.9998	0.0938	0.3457	0.0912	
			31-40	0.9840		0.9693	0.9994	0.8120	0.3817	0.8159	0.3443	
			41-50	0.5997	0.9693		0.8431	0.2114	0.9502	0.9997	0.8860	
			>51	1.0000	0.9994	0.8431		0.9938	0.2460	0.6097	0.2169	
			2018	<30	0.9998	0.8120	0.2114	0.9938		0.0111*	0.0842	0.0154*
				31-40	0.0938	0.3817	0.9502	0.2460	0.0111*		0.9988	1.0000
				41-50	0.3457	0.8159	0.9997	0.6097	0.0842	0.9988		0.9878
				>51	0.0912	0.3443	0.8860	0.2169	0.0154*	1.0000	0.9878	
				$\bar{x}$	3.4497	3.5410	3.5462	3.5585	3.3048	3.5518	3.3568	3.5608
Satisfaction with service quality	p-level	2014	<30		0.7891	0.7352	0.7382	0.2885	0.6818	0.7954	0.7196	
			31-40	0.7891		1.0000	1.0000	0.0006***	1.0000	0.0142*	1.0000	
			41-50	0.7352	1.0000		1.0000	0.0004***	1.0000	0.0097*	1.0000	
			>51	0.7382	1.0000	1.0000		0.0018**	1.0000	0.0257*	1.0000	
			2018	<30	0.2885	0.0006***	0.0004***	0.0018**		0.0003***	0.9854	0.0017
				31-40	0.6818	1.0000	1.0000	1.0000	0.0003***		0.0074**	1.0000
				41-50	0.7954	0.0142*	0.0097**	0.0257*	0.9854	0.0074**		0.0236*
				>51	0.7196	1.0000	1.0000	1.0000	0.0017	1.0000	0.0236*	

Continued Table 9

		$\bar{x}$	3.6132	3.6152	3.6654	3.5686	3.4509	3.6693	3.5859	3.5709		
		Time necessary to respond to customer's demand	p-level	2014	<30		1.0000	0.9675	0.9937	0.0438*	0.9534	0.9995
31-40	1.0000					0.9459	0.9848	0.0108*	0.9238	0.9982	0.9891	
41-50	0.9675				0.9459		0.5492	0.0001***	1.0000	0.6442	0.5858	
>51	0.9937				0.9848	0.5492		0.3567	0.5044	1.0000	1.0000	
2018	<30			0.0438*	0.0108*	0.0001***	0.3567		0.0001***	0.0944	0.3338	
	31-40			0.9534	0.9238	1.0000	0.5044	0.0001***		0.5948	0.5409	
	41-50			0.9995	0.9982	0.6442	1.0000	0.0944	0.5948		1.0000	
	>51			0.9956	0.9891	0.5858	1.0000	0.3338	0.5409	1.0000		
Clarity in an enterprise website	p-level		2014	<30		0.7583	0.6014	1.0000	0.9734	0.0766	0.9481	0.6593
				31-40	0.7583		1.0000	0.5293	0.0879	0.8172	0.9998	1.0000
				41-50	0.6014	1.0000		0.3717	0.0419*	0.9262	0.9962	1.0000
				>51	1.0000	0.5293	0.3717		0.9984	0.0300*	0.8161	0.4490
		2018	<30	0.9734	0.0879	0.0419*	0.9984		0.0007***	0.2841	0.0899	
			31-40	0.0766	0.8172	0.9262	0.0300*	0.0007***		0.5504	0.9865	
			41-50	0.9481	0.9998	0.9962	0.8161	0.2841	0.5504		0.9947	
			>51	0.6593	1.0000	1.0000	0.4490	0.0899	0.9865	0.9947		
	Marketing communication	p-level	2014	<30		0.9975	0.8892	0.9994	0.9723	0.8182	0.9950	0.9242
				31-40	0.9975		0.9959	0.9117	0.5726	0.9847	1.0000	0.9972
				41-50	0.8892	0.9959		0.5507	0.1697	1.0000	0.9988	1.0000
				>51	0.9994	0.9117	0.5507		0.9999	0.4493	0.8871	0.6615
2018			<30	0.9723	0.5726	0.1697	0.9999		0.1173	0.5359	0.3018	
			31-40	0.8182	0.9847	1.0000	0.4493	0.1173		0.9942	1.0000	
			41-50	0.9950	1.0000	0.9988	0.8871	0.5359	0.9942		0.9991	
			>51	0.9242	0.9972	1.0000	0.6615	0.3018	1.0000	0.9991		

Note: Single, double, and triple asterisks (\*, \*\*, \*\*\*) indicate significance at 5%, 1%, and 0.1% level. Source: authors' compilation.

When respondents' opinions on the enterprise processes were investigated (Table 9), two statistically significant differences occurred in the area of an approach. The first one was between opinions of respondents at the age of 31-40 and respondents up to 30 years old. The second one was confirmed between respondents at the age 51+ and up to 30 years old.

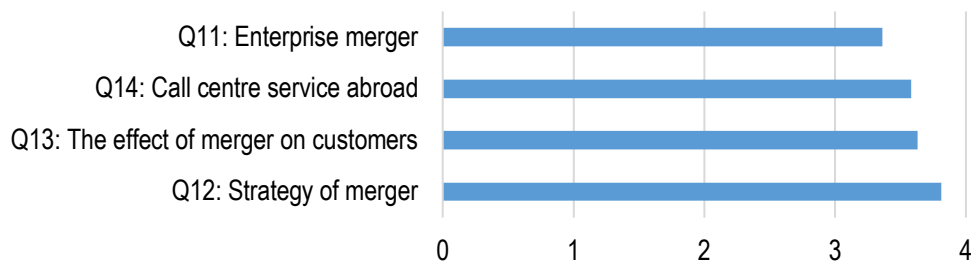


Figure 3. Respondents' opinions on business strategy in 2018

Source: authors' compilation.

Further statistically significant differences were observed in the case of service quality satisfaction, time necessary to respond to customer's demands and clarity in the enterprise website. Statistically significant differences were not observed in the area associated with marketing communication. CRM orientation towards business strategy. Business strategy was the last investigated area. Enterprise merger, strategy of merger, the effect of merger on customers and call centre service abroad were factors investigated. Results are presented in Figure 3.

Following the results presented in Figure 3, the fact that the question perceived most was Q<sub>12</sub>. Respondents considered the merger of two companies Slovak Telekom and T-Mobile Czech Republic strategically correct step (mean score 3.81). According to the respondents' responses to the question Q<sub>13</sub> the impact of the enterprise merger on the customers will be positive (mean score 3.63). It was followed by the question Q<sub>14</sub> associated with the call centre service abroad in foreign language (mean score 3.58). The less evaluated question was Q<sub>11</sub>, whether customers mentioned the merger of Slovak Telekom and T-Mobile Czech Republic (mean score 3.36). Table 10 shows the comparison of the respondents' opinions on the business strategy depending on gender and age of respondents.

**Table 10. Comparison of the respondents' opinions on the business strategy in 2018**

Question	Gender		Age	
	$\chi^2$	df	$\chi^2$	df
Q11: Enterprise merger	5,338	3	14,151	9
Q12: Strategy of merger	1,224	3	<b>31,026**</b>	9
Q13: The effect of merger on customers	<b>9,560*</b>	<b>3</b>	9,921	9
Q14: Call centre service abroad	<b>9,856*</b>	<b>3</b>	<b>18,551*</b>	9

Note: Single, and double asterisks (\*, \*\*) indicate significance at 5%, and 1% level.

Source: authors' compilation.

When respondents' opinions on changes in business strategy were investigated (Table 10), statistically significant difference in terms of respondents' age of was observed in question Q<sub>12</sub> – strategy of merger. The change occurred in the age group 31-40. Responses on the question Q<sub>13</sub> differed depending on gender of respondents. Enterprise merger is perceived more positively by women than by men. The last investigated area with statistically significant differences in terms of gender ( $\chi^2 = 9.856$ ;  $p = 0.020$ ) as well as age ( $\chi^2 = 18.551$ ;  $p = 0.029$ ) was the question Q<sub>14</sub>. 92.5% of women did not mind providing services of call centre abroad in foreign language in comparison to men. 71.3% of respondents at the age of 51+ would appreciate services of call centre abroad in foreign language. Changes in perceiving business strategy as a result of implementing new CRM. When comparing the years 2014 and 2018 based on Mann-Whitney U test, significant differences were observed in the case of questions Q<sub>11</sub> ( $U = 1,295,432.00$ ;  $p = 0.008$ ), Q<sub>12</sub> ( $U = 1,287,889.50$ ;  $p = 0.000$ ). Table 11 shows that in the case of the question Q<sub>11</sub>, the merger of Slovak Telekom and T-Mobile was perceived less by respondents in the year 2018 comparing to the year 2014. On the contrary, in the year 2018, more respondents thought merger was a strategically correct step. An improvement in the year 2018 comparing to the year 2014 was observed in the questions Q<sub>12</sub>, Q<sub>13</sub> a Q<sub>14</sub>.

Merger was considered strategically correct step in the year 2018 (Q<sub>12</sub>;  $\bar{x}_{2014} = 3.75$ ;  $\bar{x}_{2018} = 3.81$ ). Positive change can be seen in the question Q<sub>13</sub>. Respondents thought that the impact of the merger on the customers would be positive (Q<sub>13</sub>;  $\bar{x}_{2014} = 3.59$ ;  $\bar{x}_{2018} = 3.63$ ). Respondents' responses on the question Q<sub>14</sub> were more positive in the year 2018 than in the year 2014. They would appreciate services of call centre abroad in foreign language (Q<sub>14</sub>;  $\bar{x}_{2014} = 3.56$ ;  $\bar{x}_{2018} = 3.58$ ).

**Table 11. Changes in perceiving the business strategy resulting from the implementation of new CRM in the years 2014 and 2018**

Question	2014		2018		Mann-Whitney U
	$\bar{x}$	Sd	$\bar{x}$	Sd	
Q11: Enterprise merger	3.45	0.77	3.36	0.86	<b>1,295,432.00**</b>
Q12: Strategy of merger	3.75	0.59	3.81	0.81	<b>1,287,889.50**</b>
Q13: The effect of merger on customers	3.59	0.71	3.63	0.63	1,347,617.50
Q14: Call centre service abroad	3.56	0.72	3.58	0.58	1,342,100.50

Note: Single, and double asterisks (\*, \*\*) indicate significance at 5%, and 1% level.

Source: authors' compilation.

When investigating the respondents' opinions on the change in business strategy (Table 12) resulting from the implementation of CRM in terms of gender, the differences were confirmed in the case of men in the area associated with the impact of enterprise merger on customers in the years 2014 and 2018.

**Table 12. Changes in perceiving the business strategy resulting from the implementation of new CRM in terms of gender in time**

Category				2014		2018	
				Male	Female	Male	Female
Enterprise merger	p-level	2014	$\bar{x}$	3.7103	3.6802	3.7289	3.7672
			Male		0.780194	0.906791	0.183406
		2018	Female	0.780194		0.460161	0.050201
			Male	0.906791	0.460161		0.574369
Strategy of merger	p-level	2014	$\bar{x}$	3.7256	3.6913	3.6663	3.7214
			Male		0.708934	0.142300	0.998821
		2018	Female	0.708934		0.878736	0.816016
			Male	0.142300	0.878736		0.261832
The effect of merger on customers	p-level	2014	$\bar{x}$	3.6922	3.634	3.5886	3.6361
			Male		0.339285	0.003344*	0.268260
		2018	Female	0.339285		0.598127	0.999933
			Male	0.003344**	0.598127		0.468429
Call centre service abroad	p-level	2014	$\bar{x}$	3.574	3.5397	3.4948	3.4746
			Male		0.811643	0.083114	0.019811
		2018	Female	0.811643		0.681504	0.387603
			Male	0.083114	0.681504		0.944655
			Female	0.019811	0.387603	0.944655	

Note: Single, double, and triple asterisks (\*, \*\*, \*\*\*) indicate significance at 5%, 1%, and 0.1% level.

Source: authors' compilation.

Table 12 shows that there were no statistically significant differences in further investigated areas (enterprise merger, strategy of the merger, call centre service abroad) in terms of gender in 2014 and 2018. Differences in opinions of respondents on business strategy as a result of implementing CRM in terms of age in the years 2014 and 2018 are given in Table 13.

Table 13. Changes in perceiving the business strategy resulting from the implementation of new CRM in terms of age in time

Category		2014				2018				
		<30	31-40	41-50	>51	<30	31-40	41-50	>51	
Enterprise merger	$\bar{x}$	3.7138	3.7520	3.6750	3.6421	3.6574	3.7968	3.7643	3.7568	
	2014	<30		0.9877	0.9860	0.8230	0.9204	0.5414	0.9478	0.9880
		31-40	0.9877		0.4526	0.1979	0.2737	0.9377	1.0000	1.0000
		41-50	0.9860	0.4526		0.9955	0.9999	0.0283*	0.2943	0.5814
		>51	0.8230	0.1979	0.9955		1.0000	0.0110*	0.1190	0.2876
	2018	<30	0.9204	0.2737	0.9999	1.0000		0.0140*	0.1665	0.3903
		31-40	0.5414	0.9377	0.0283*	0.0110*	0.0140*		0.9915	0.9858
		41-50	0.9478	1.0000	0.2943	0.1190	0.1665	0.9915		1.0000
		>51	0.9880	1.0000	0.5814	0.2876	0.3903	0.9858	1.0000	
	Strategy of merger	$\bar{x}$	3.5786	3.5664	3.5615	3.5418	3.4332	3.5319	3.4449	3.5372
2014		<30		1.0000	1.0000	0.9986	0.1474	0.9874	0.2027	0.9971
		31-40	1.0000		1.0000	0.9998	0.1212	0.9955	0.1711	0.9994
		41-50	1.0000	1.0000		1.0000	0.1506	0.9982	0.2103	0.9998
		>51	0.9986	0.9998	1.0000		0.5332	1.0000	0.6430	1.0000
2018		<30	0.1474	0.1212	0.1506	0.5332		0.4857	1.0000	0.5941
		31-40	0.9874	0.9955	0.9982	1.0000	0.4857		0.6042	1.0000
		41-50	0.2027	0.1711	0.2103	0.6430	1.0000	0.6042		0.7026
		>51	0.9971	0.9994	0.9998	1.0000	0.5941	1.0000	0.7026	
The effect of merger on customers		$\bar{x}$	3.4528	3.5039	3.4327	3.4047	3.3275	3.4223	3.3040	3.3750
	2014	<30		0.9879	1.0000	0.9960	0.4489	0.9995	0.1938	0.9364
		31-40	0.9879		0.8546	0.7027	0.0259*	0.7521	0.0034**	0.3695
		41-50	1.0000	0.8546		0.9998	0.5220	1.0000	0.2108	0.9781
		>51	0.9960	0.7027	0.9998		0.9200	1.0000	0.7114	0.9998
	2018	<30	0.4489	0.0259*	0.5220	0.9200		0.6631	0.9999	0.9950
		31-40	0.9995	0.7521	1.0000	1.0000	0.6631		0.3236	0.9935
		41-50	0.1938	0.0034**	0.2108	0.7114	0.9999	0.3236		0.9407
		>51	0.9364	0.3695	0.9781	0.9998	0.9950	0.9935	0.9407	
	Call centre service abroad	$\bar{x}$	3.7107	3.7441	3.7288	3.6421	3.5919	3.7371	3.7137	3.7196
2014		<30		0.9948	0.9999	0.8614	0.1629	0.9989	1.0000	1.0000
		31-40	0.9948		0.9999	0.2979	0.0049**	1.0000	0.9944	0.9994
		41-50	0.9999	0.9999		0.5135	0.0178*	1.0000	0.9999	1.0000
		>51	0.8614	0.2979	0.5135		0.9626	0.3987	0.7682	0.7829
2018		<30	0.1629	0.0049**	0.0178*	0.9626		0.0098**	0.0731	0.1169
		31-40	0.9989	1.0000	1.0000	0.3987	0.0098**		0.9990	0.9999
		41-50	1.0000	0.9944	0.9999	0.7682	0.0731	0.9990		1.0000
		>51	1.0000	0.9994	1.0000	0.7829	0.1169	0.9999	1.0000	

Note: Single, double, and triple asterisks (\*, \*\*, \*\*\*) indicate significance at 5%, 1%, and 0.1% level.

Source: authors' compilation.

In terms of age in time, statistically significant differences in business strategy occurred in three areas – enterprise merger, the effect of merger on customers, call centre service abroad.

**Conclusions.** Changes in economic environment affect individual parts of economy, including the telecommunication services. At the same time, business approaches towards effective services provide for customers are affected. In order to serve the new and constantly evolving needs of the growing number of customers who care about social and environmental issues, the companies are required to permanently



monitor their performance on the market and incorporate customer feedback as in input for evaluation of their internal processes. CRM tools are used by the enterprises with the aim to ensure the sustainability of enterprise processes and to customise. Customers and their behaviour through which marketing departments of big companies can affect the needs of customers are in the centre of attention (Moresova et al. 2019; Halaj, Sedliacikova, & Mala, 2018; Loucanova, Olsiakova, & Dzian, 2018).

Over the last century, CRM has grown and affected significantly all sectors, geographies and management cultures (Maggon and Chaudhry, 2019; Guha, Harrigan, & Soutar, 2018; Lotko et al., 2018). There was a paradigmatic movement observed in perceiving CRM. At the present time, it is understood as a strategic tool in modern enterprises that allow managers to monitor needs and requirements of customers (Elfarmawi, 2019). Therefore, the value of sustainability of CRM is evident (Shukla and Pattnaik, 2019). Technology (application and base, technical tools), business processes and personnel sources aimed at managing and defining customer relations in all business activities especially marketing, customer support and services provided for customers are integrated in the enterprises through implementing CRM (Pävöloaia et al., 2019; Shukla and Pattnaik, 2019; Vilcekova and Starchon, 2017; Dibb and Simkin, 2008). CRM allows enterprises to identify and hold loyal customers. IT helps enterprises address, serve the most profitable customers and thereby, build profitable relationship with customers at lower costs (Kantorova and Bachmann, 2018; Eriksson, LeBel, & Lindroos, 2017; Nemeč et al., 2017). Positive interaction with customers, more effective way of providing data to marketing department and enterprise management, more effective communication, cutting operation costs are considered the greatest contribution of CRM (Durisova and Kucharčikova, 2014). CRM is an important tool and strategic condition necessary for company growth (Gubiniova, 2009).

The aim of the paper was to identify the changes in approaches and satisfaction of customers with provided products, enterprise processes and business strategy resulting from the implementation of CRM in the year 2014 and subsequently in the year 2018 depending on socio-demographic characteristics. The change in approaches of customers in terms of gender was studied also by Al-Zuabi, Jafar, and Aljoumaa (2019). Similar issue was investigated by Dutt and Chauhan (2019), Hamidi and Safareeyeh (2019). They emphasized mainly the improvement of customers' satisfaction in mobile banking.

When investigating the satisfaction with the quality of provided products, the fact that there were differences between men and women can be stated. The results show that women were more satisfied with provided products than men were. Following the presented findings, the hypothesis H1 was confirmed. Moreover, the results show that there were differences due to the age of respondents. Respondents at the age 51+ are the most satisfied with the enterprise services. No negative response was recorded. The hypothesis H2 was confirmed by the presented findings. Other age groups were satisfied as well. In the case of product recommendation, there was statistically significant difference between men and women. Enterprise services were recommended more by women than by men. In the case of product price appropriateness, there were differences in terms of respondents' age. Almost 97% of respondents at the age of 31 – 40 were satisfied with the product price. They were followed by the respondents at the age of 41 – 50. There was no significant difference in perceiving innovativeness. The importance of the Internet did not show any significant difference in perceiving by the respondents. When investigating the respondents' opinions on the quality of provided products as a result of implementing new CRM, the highest number of statistically significant differences in terms of gender and age was observed especially in satisfaction with the quality of provided products. Further statistically significant differences in terms of age in 2014 and 2018 occurred in product recommendation, product price appropriateness and the importance of the Internet.

In terms of evaluating the effect of demographic factors on perceiving the enterprise processes, significant differences were observed in the question changes and in approach and time necessary to respond to customer's demand. They were perceived differently in terms of gender and the age of

respondents. Changes in approach and time necessary to respond to customer's demand would be appreciated more by women than by men. The greatest change in approach of an enterprise was observed by the respondents at the age of 51+. Changes in perceiving enterprise processes resulting from the implementation of CRM were confirmed in the area of changes in approach in terms of gender and time between women in the year 2018 and other investigated categories and in the satisfaction with service quality. In terms of the age of respondents, there were two statistically significant changes observed in the area of changes in approach – between opinions of respondents at the age of 31-40 and respondents at the age up to 30. The second statistically significant difference was confirmed in the case of respondents at the age 51+ and up to 30.

In the case of business strategy, respondents considered the merger of two companies Slovak Telekom and T-Mobile Czech Republic a strategically correct step. The enterprise merger was perceived by women more positively than by men. When investigating the opinions of respondents on perceiving the business strategy as a result of implementing new CRM in terms of gender, in the years 2014 and 2018, the differences were confirmed only in the case of men in the area associated with the effect of merger on customers. In terms of age, statistically significant differences in time occurred in three areas – enterprise merger, the effect of merger on customers and call centre service abroad.

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**Цілі сталого розвитку в маркетингу: управління комунікацією з клієнтами в телекомунікаційній компанії**

Основною метою стало розв'язання гармонізації економічних, соціальних та екологічних цілей. У статті зазначено, що розвиток інформаційних технологій та поширення ідей сталого розвитку обумовлює зміну поведінки споживачів, що спонукає компанії адаптувати свої бізнес-стратегії щодо способів виробництва з урахуванням принципів сталого розвитку та вимог споживачів. Авторами зазначено, що компанії повинні підвищувати ефективність використання ресурсів, впроваджувати інноваційні технології переробки відходів, розбудовувати комунікацію з основними стейкхолдерами тощо. При цьому у статті наголошено, що ринок телекомунікаційних послуг впливає на розвиток технологій, а зростаючі потреби споживачів призводять до переоцінки маркетингової політики підприємства. Основною метою статті є аналіз основних змін поведінки споживачів, підходів до оцінювання рівня задоволеності продукцією/послугою, ефективності управління компанією в результаті впровадження системи комунікації зі споживачами у 2014 та 2018 роках з урахуванням соціально-демографічних характеристик. Інформаційну базу дослідження сформовано на основі результатів анкетування 3282 респондентів. Емпіричні результати дослідження свідчать про наявність змін у поведінці споживачів внаслідок впровадження системи комунікації зі споживачами. Визначено, що відбувся зсув інтересів та цінностей споживачів у бік зростання рівня зацікавленості у екологічних властивостях товару/послуги. Окрім цього, підтвердилась гіпотеза, що впровадження інформаційних технологій призводить до підвищення рівня задоволеності клієнтів наданими послугами, їх якістю та швидкістю отримання. Авторами визначено, що компанії повинні здійснювати постійний контроль ефективності системи комунікації зі споживачами та аналізувати їх відгуки. Результати даного аналізу повинні сприйматись як вхідні дані для оцінювання внутрішніх процесів компанії. При цьому споживачами позитивно сприймається клієнто-орієнтована маркетингова стратегія, що передбачає консультування споживачів через закордонні кол-центри.

Ключові слова: стійкість, економічна стабільність, маркетинг, управління відносинами з клієнтами, телекомунікаційна компанія.

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