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The Approach of SMEs to Using the Customer Databases and CRM: Empirical Study in the Slovak Republic

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Abstract: Sustainability of (small and medium-sized enterprises) SMEs in a globalized economy depends on several factors. According to available studies, effective Customer Relationship Management (CRM) is one of the factors affecting the competitiveness of SMEs in a positive way. This paper is focused on creating customer databases and on using the CRM strategy in SMEs in Slovakia. The aim of the paper is to cluster SMEs in Slovakia based on using customer databases and CRM and to identify differences in clusters according to the selected attributes. The outputs of the research focused on marketing communication and on creating the CRM strategy in Slovak enterprises are presented in the paper. Quantitative nonexperimental research using the questionnaires was conducted at the end of 2017 and throughout the year 2018. The research results are based on the responses of 1009 Slovak SMEs. Basic descriptive statistics, K-means cluster analysis, Analysis of variance (ANOVA), and Tukey HSD test were used to process the data. The resulting clusters show three typical attitudes of Slovak SMEs to creating the database, using the CRM and its effectiveness. Moreover, attitude to the application of ethical principles and holistic, integrated, and socially responsible marketing are presented in the clusters. Following the results, the fact that SMEs can be divided into the three following clusters with equal size can be stated: 1st cluster (in 92.2% and consisting of micro- and small-sized enterprises), customer databases are created for the purpose of marketing communication; 2nd cluster, consisting of the highest percentage of medium-sized enterprises and enterprises with foreign equity participation using the customer databases and CRM; and 3rd cluster characterized with smaller-sized enterprises with domestic property not focused on marketing communication and using the customer databases. The research results provide the basis for further research and support for small and medium-sized enterprises.

Keywords: SMEs; customer database; CRM; marketing trends; Slovakia

1. Introduction

The business activities of companies, multinationals, as well as (small and medium-sized enterprises) SMEs are affected by issues related to sustainability [1,2]. Innovation and information technology are preferred due to globalization of markets [3–6]. Ability to adapt to new trends on the market including digitizing services in the emerging technologies leading the way known as Industry 4.0 will be an essential feature affecting the sustainability of SMEs [7–10]. The businesses

focus on customers and their needs in increasingly sophisticated ways. However, implementing these trends in many SMEs seems to be very difficult [11,12]. The lack of resources and the ability to use them effectively are regarded as the key difficulties [13]. A fully functional Customer Relationship Management (CRM) can be considered a competitive advantage even for small- and medium-sized enterprises [1]. Arsic et al. [14] and Siu [15] presented a positive relationship between the company performance and CRM implementation. Their studies show the importance of CRM in the case of SMEs in order to embed sustainability into a business in the long-term period. According to the research of Lecerf and Omrani [16] conducted in German SMEs in the Baden-Württemberg region, innovation of SMEs could be increased by introducing a comprehensive enterprise resource planning (ERP) and e-CRM. Subsequently, it can result in a higher export intensity [17]. The finding that internationalization is not affected directly by IT is mentioned in their research. On the other hand, they found out that implementation of ERP and CRM support the relationship between innovation and internationalization.

CRM is at the center of attention at the theoretical as well as research level. CRM is usually discussed by many authors in strategic and analytical perspectives [18]. In the strategic concept, CRM is understood as an enterprise-wide strategy. The emphasis is placed on the customer and the results of systematic analyses of their preferences and characteristics as a basis for management and marketing. On the contrary, the analytical concept of CRM is understood as a systematically created database of customer knowledge that can be used to make marketing more effective. In the digital era, the demand for appropriate use of information technology is growing. Most of the research is focused on the correlation between the use of CRM and the business performance, on familiarizing with e-CRM [19–22], on its interconnection with the ERP system and IT and information system (IS) solutions [16,23], especially in the early stages of the CRM life cycle [24]. Studies show that there are regional differences in the level of using IT in the creation of databases and the use of CRM in SMEs. Wahlberg et al. [18], in the presented research into the issue of CRM, states that there are only a few studies dealing with CRM in small- and medium-sized enterprises. Thus, CRM is investigated especially in terms of experience and special conditions in the large businesses. SMEs also play an important role in the most advanced economies, as they make up a high proportion of the business population. This paper focused on SMEs in CRM which are underrepresented and hard to deal with. However, the outcomes presented in mentioned papers show the importance of introducing a number of elements for their sustainable business, including CRM. The gap in CRM research and hence in the literature encourages researchers to investigate SMEs in the selected EU regions in terms of creating databases, using the CRM strategy and their attitude toward them in more detail. This paper tries to fill the gap of the research into SMEs in Slovakia with a focus on creating databases, using the CRM and investigating the attitude toward them in relation to business categories (business size, territorial scope of marketing programs, inclusion of sponsorship in marketing programs, and in the case of majority SME owners, the decision-making predominance in marketing activities), and on attitudes toward selected marketing strategies (e.g., incorporating the principles of the code of ethics, socially responsible marketing, integrated marketing communication, and holistic marketing in marketing communication programs). Comparing countries can provide potentially practically useful information for enterprises or authorities, for example, for the creation of strategies and investment decisions (in addition, it can widen the knowledge areas). The aim of the paper is to cluster SMEs in Slovakia based on using customer databases and CRM and to identify differences in clusters according to the selected attributes. The research outputs that focused on marketing communication and introducing the CRM in enterprises in Slovakia are presented in the paper.

2. Background

2.1. Creating Databases, CRM, and Its Goals

Customer relationship management refers to collecting, storing, and analyzing customer data to develop and maintain two-way relations between the company and customers [25]. The ultimate goal of CRM is to ensure consistent customer satisfaction by providing superior customer service. Enterprises use the database marketing in order to create an individual relationship with a customer. The CRM is basically built on an information database or data warehouse connected with internet applications [19,25]. Database marketing is the process of building, maintaining, and using databases for the purpose of contacting, transacting, and building customer relationships [26,27]. There are two main types of marketing databases: customer databases and business databases (e.g., suppliers, resellers, etc.). Customer databases provide relevant pieces of information about a customer's background with the company—this is a valuable source for preparing relevant marketing campaigns.

The communication with the customer is tracked and stored in a database, and if necessary, it is effectively provided to users or employees [28]. As Bohnné [29] remarks, by using the database, the system is able to create client groups on the basis of given parameters, to make data analyses, and to calculate client value. According to Pohludka [1], the database must be both actual and potential. Moreover, the upcoming era of Industry 4.0 brings further demands in this area in the form of using advanced information technology and its interconnection with individual areas of processes in the company [30–33]. For SMEs, the use of CRM and digitization is a challenge having a high potential for their competitiveness in the market [34,35]. However, these companies do not have enough sources to introduce and use these systems effectively. In the situation, when the competitive environment is changing as a result of globalization, information and communication technology (ICT) development, and changing consumer behavior, marketing practices (limited marketing activities and creating insufficient customer databases and strategically nonconceptual CRM) effective in the past may not be applied in the future [18]. Adopting a CRM approach emphasizing ICT-based marketing practices keeps a firm eye on the competition and on developing new competitive advantages in this new, globally competitive environment. Company growth rate is limited and affected by human resources and enhanced knowledge related to them [36]. Following the mentioned facts, it is clear that knowledge and ability to use human resources effectively are key factors necessary for company growth.

2.2. Small- and Medium-Sized Enterprises in Slovakia

Small- and medium-sized enterprises are considered key economic drivers in the world, and they account for the vast majority of world economic output (over 60%) in country economies worldwide, generating overall social growth [36–41]. According to the Jeck study [42], emerging SMEs in addition to job creation are often bearers of the commercialization of new technology or innovative ideas as well as positive structural changes in the economy and its productivity. The importance of SMEs can be seen in increasing intensity of competitions, reducing social and regional polarization. Moreover, they can be perceived as an element counteracting current strong monopolizing tendencies.

In the European Union, SMEs are defined as enterprises with zero to two hundred and fifty employees and turnover and/or balance sheet amount to less than 50 million euros. Enterprises with fewer than 10 workers and turnover less than 20 million euros are defined as micro-enterprises. A small enterprise is understood as a business with fewer than 50 employees and a turnover of less than 10 million euros. A medium-sized enterprise is defined as a business with fewer than 250 employees and a turnover of up to 50 million euros. Data in the document "The number of active small and medium-sized enterprises" showed a fall to 559,841 in Slovakia in 2018, which represents a decrease of 7290 business entities [43]. From all active business entities, the largest percentage (96.8%) was represented by micro-enterprises. In absolute terms, it represents 542,525 entities. Furthermore, in 2018, the structure of SMEs was completed with small enterprises at 2.6% (14,328 in absolute terms) and medium-sized enterprises with the lowest percentage of 0.5% (2988 in absolute terms).

The percentage of large businesses in the total number of active business entities remained unchanged at the level of 0.1% in comparison to the previous years, i.e., in absolute terms, 680 entities [44]. Available statistical data show that, after the previous increase in SMEs, the number of SMEs decreased by 1.3% compared to the previous year mainly due to a decrease in the number of sole traders. Promoting the competitiveness of SMEs is one of the priorities of the EU cohesion policy. The Strategic Framework for SME Support within the EU is the Small Business Act (adopted in 2008) aimed at creating business-friendly environments and SMEs. Compared to other areas, the lack of financial resources is the biggest barrier to set up a new business [45]. In terms of subjective factors, Slovakia is relatively competitive in setting up new businesses. However, when comparing objective factors (government regulations relating to business creation and taxation), it is behind advanced economies. In addition to the availability of financial resources for SMEs, the deficit in tax and regulatory support, the scope and quality of direct government support for SMEs [46], and especially science and research transfer as well as social and cultural standards [42,45] can be considered other weaknesses in the quality of SMEs' business environment.

2.3. Current Marketing Approaches

This paper is focused on the approach of SMEs to selected marketing strategies: holistic marketing, integrated marketing communication, socially responsible marketing, and accepting the Code of Ethics in management. Therefore, the mentioned strategies are described in more detail. Innovation and creativity are the keywords characterizing current marketing communication modernized by a holistic marketing approach.

Kotler and Keller [47,48] define holistic marketing as the development, design, and implementation of marketing programs, operations, and activities to determine its overall and overlapping impact. According to Pop and Vladoi [49], holistic marketing is defined as the expansion and application of the various processes and behaviors interrelated in the field of marketing. Lucassen and Jansen [50] emphasize the importance of holistic marketing in building mutual and satisfying long-term relationships with the core elements of the organization in order to grow and maintain their business. Purcarea and Ratiu [51] understand it as a well-developed marketing strategy that seeks holistic thinking about business in order to reflect every aspect of a business accurately. Tejedor [52] sees this as a fundamental action plan to achieve integration in terms of quality management and balanced performance. The elements of the holistic marketing approach are internal marketing, integrated marketing, performance marketing, and relationship marketing [27]. According to Rao [53], social responsibility marketing is included instead of performing marketing. The implementation of the holistic marketing is challenging because customers are sophisticated. Holistic marketing incorporates socially responsible marketing and understanding broader concerns and the ethical, environmental, legal, and social contexts of marketing activities and programs [27,47].

Communication, both internal and external, must be planned carefully, and the emphasis is put on communication with customers—often with the help of integrated marketing communication combining various communication tools to reach maximum impact. When characterizing the integrated marketing, Soliman [54] considers it a planned process designed to make sure that all marketing activities are utilized in an integrated and balanced manner in order to create, communicate, and deliver value to the customer and that these activities are appropriate all the time. This variable is measured through the following dimensions: a mix of products, prices, distribution channels, and marketing communication mix. The importance of integrated marketing communication (IMC) is to achieve the promotional objectives in reaching target markets and to raise awareness of the company products and services. Therefore, IMC may involve a combination of different promotional tools including advertising, personal selling, sales promotion, direct marketing, interactive marketing, publicity, and public relations [55].

Social responsibility means that marketers find and manage the role they and their organizations play in terms of social welfare [56]. This marketing concept results in implementing social and ethical

considerations in the marketing practices of the organizations. It means that organizations have to balance the most common conflicting factors of company profits, consumer satisfaction, and public interest [57]. Socially responsible marketing means the commitment of marketing organizations (departments) not to harm the social environment and to use its skills and resources in the development of the environment whenever it is possible [48,53]. Identifying the consumers' intentions in the relevant market as the consumers' choice of socially responsible and socially active enterprises is an important attribute [58]. The following dimensions are taken into account: Ethics, ecological context, legal considerations, and social factors [48].

As Belz and Schmidt-Riediger [59] point out, consumers are one of the main drivers of sustainability marketing strategies. Shamma and Hassan [60] highlight the importance of customer-driven benchmarking as a strategic approach for sustainable market performance, emphasizing the standards set by "experienced customers as best practices". Sadler [61] points out the relative importance of intellectual capital, and now, the concept of customer capital is starting to gain currency. Sustainability will be demand-driven by consumers who are increasingly demanding to know about the ethics of the companies and brands they buy into [62]. The solution might be creating the codes of ethics developed by organizations themselves (own codes of ethics) or a trade union transparent code of ethics (by various associations, e.g., sector-wise). Moreover, such a principle also contains a commitment to a fair and ethical treatment of other stakeholders, different from the shareholders—like employees, customers, suppliers, or creditors who usually show their appreciation by their greater relationship with the company bringing a greater value to the company on both the financial and reputational sides [63]. Codes of professional management together with specific ethical values are defined by most business activities (accounting, IT, and HR). However, the structure, management, and methods used in the assessment of company behavior vary across cultures and countries, but some key elements such as the transparency of the firm operations and its financial results are generally accepted [25].

3. Materials and Methods

The aim of the paper is to determine the clusters of SMEs in Slovakia based on the attitude to the use and evaluation of the effectiveness of creating customer databases and CRM. Research outputs focused on marketing communication and CRM building in Slovak companies are presented in the paper. Quantitative nonexperimental research was conducted at the end of 2017 and throughout the year 2018 using the questionnaire.

3.1. Data Collection and Processing

The sampling unit consisted of SMEs in Slovakia registered in the Register of the Slovak Organization of Infostat in 2018 (559,841 SMEs were registered in the Slovak Republic at the end of 2018). The standardized questionnaire was distributed to the representatives of the selected companies (1600 SMEs) responsible for decision-making processes in the field of marketing management including marketing communication. The questionnaire was sent via e-mail or directly to the address of the company headquarters. Competent managers were addressed in person. The respondents were selected by proportionate stratified sampling (according to the attributes company size, legal entity, region, and industry): 1009 SMEs in total completed the questionnaires correctly. The description of the research sample set with regard to the size of enterprises can be seen in Table 1. The sample set consisted of corporate entity (41.3%) and personal entity (58.7%). Trade-focused enterprises were businesses with the highest percentage (28.1%) as well as enterprises aimed at business services (24.2%); 14.2% of the sample set was enterprises operating in civil engineering, 3% was enterprises in other services, 7.4% was in transport, 3.3% was in agriculture, and less than 2% was the percentage of enterprises operating in accommodation and food services.

The questionnaire consisted of 32 questions investigating the state-of-the-art of using individual strategies of marketing communication mix in the surveyed companies. Their attitudes towards the application of new strategies of marketing communication and new media and trends in marketing

communication and communication in general as well as their attitudes toward identifying possible changes in the use of individual elements of the marketing communication mix were investigated too. To a large extent, the questionnaire was focused on creating and using the databases, implementing the customer relationship and management systems, awareness of the concept of integrated marketing communication, and its application in analyzed organizations. Data were evaluated using basic descriptive statistics (absolute and relative abundance and arithmetic mean). The K-means cluster analysis in SPSS statistics was used to create subsets of cases with similar vector variable profiles. The cases were divided into groups of the following variables:

- Creating customer databases
- Using the created databases
- Introducing the CRM system and evaluating its effectiveness
- Involving agency in the implementation of marketing communication programs.

A Likert scale was used to evaluate the responses and to gather data about the variables. The respondents could react to the question on agency involvement in implementing the marketing communication programs as follows: 1—no, we implement them by ourselves; 2—yes, we involve an agency; and 3—a combination of both. When asked about the creation of databases and their use and creation of CRM, the scale of responses was as follows: 1—yes; 2—I cannot assess; and 3—no. The scale offered for evaluating the effectiveness of CRM was 1—effective; 2—partially effective; 3—I cannot assess; 4—we do not use CRM; and 5—ineffective. Applying the selected marketing approaches in the marketing communication was investigated by the question: “Does your marketing communication follow your own code of ethics/code of ethics of the industry/principals of socially responsible marketing/integrated marketing/holistic marketing?” Respondents should choose one of two options: 1—yes or 2—no. The same way was used to determine the use of sponsorship. The option of analyzing the objectives, inter-rating and classifying, was selected in order to determine the typical groups of SMEs in Slovakia. A solution for three randomly generated cases in a matrix was prepared in order to obtain the most acceptable solution. The solutions in the case of two, three, four or five resulting clusters were also compared. The solution with three resulting clusters randomly arranged RU3 (the third random order of the questionnaires) seemed to be the most suitable. The results are presented in Table 1 [64].

Table 1. Number of cases in each cluster.

| Cluster | Micro-Enterprise | | Small Enterprise | | Medium-sized Enterprise | | Total |
|--------------------------|------------------|-------|------------------|-------|-------------------------|-------|--------|
| Cluster 1 | | | | | | | 33.1% |
| Absolute frequency | 244 | 36% | 64 | 34.2% | 26 | 18.6% | 334 |
| Relative frequency | 73.1% | | 19.2% | | 7.8% | | 100.0% |
| Cluster 2 | | | | | | | 31.6% |
| Absolute frequency | 167 | 24.7% | 72 | 37.6% | 80 | 57.1% | 319 |
| Relative frequency | 52.4% | | 22.6% | | 25.1% | | 100.0% |
| Cluster 3 | | | | | | | 35.3% |
| Absolute frequency | 266 | 39.3% | 56 | 28.3% | 34 | 24.3% | 356 |
| Relative frequency | 74.7% | | 15.7% | | 9.6% | | 100.0% |
| Total absolute frequency | 677 | | 192 | | 140 | | 1009 |
| Total relative frequency | 67.1% | 100% | 19.0% | 100% | 13.9% | 100% | 100.0% |

Distances between final cluster centers present the differences in profiles of created clusters. The biggest difference is between cluster 2 and cluster 3 (Table 2). On the contrary, the smallest difference is between clusters 1 and 3 (1.42 times less than between 2 and 3).

Table 2. Distances among final cluster centers.

| Cluster | 1 | 2 | 3 |
|---------|-------|-------|-------|
| 1 | | 2.636 | 2.290 |
| 2 | 2.636 | | 3.248 |
| 3 | 2.290 | 3.248 | |

The formed clusters were subjected to a more detailed analysis using descriptive statistics. The dependencies of the formed clusters are tested by Analysis of variance (ANOVA) and Tukey HSD test (at the significance level 0.05) to accept or reject the H_0 Hypothesis stating that the tested correlation between the clusters is the same and, therefore, there is no statistically significant difference between the clusters. ANOVA test was preferred because two or more population means can be compared and results can be generalized without repeating the test and is in fact more statistically powerful in this situation (the significance level α remain the same). In the case, the null hypothesis is rejected at the significance level α and significant difference is determined. Using the post hoc analysis (multiply testing) provides deeper information about pairs affecting the rejection of the null hypothesis [65]. Fisher's LSD, Bonferroni, Scheffé's and Tukey's test are used in the case of multiple testing. Scheffé's method can be applied globally, but Tukey's test (applied in the case of the same number of observations in all groups) is more sensitive and cannot be used generally. Modified version of Tukey's test—Tukey's HSD test—allows the researchers to compare groups with different number of populations and was selected as the most suitable for our research [66]. Dependencies were tested in terms of the enterprise size, the territorial scope of marketing programs, the inclusion of sponsorship in marketing programs, majority SME owners and decision-making predominance in marketing activities, incorporation of own or sector code of ethics, socially responsible marketing, integrated marketing communication, and holistic marketing in marketing communication programs. Following the obtained results, the conclusions were drawn.

3.2. Development of the Hypotheses

In the research, the clusters were defined depending upon the attitude to the customer databases and CRM. Following the gathered data, mutual differences are described using basic statistics. Further research was focused on the finding whether the defined difference was statistically significant. Therefore, the following hypotheses were proposed in the paper.

- a. According to various studies dealing with SMEs [1,13,17,67], the practices of creating the databases and CRM are implemented proportionally to the enterprise size, i.e., in the case of small enterprises, it almost does not occur. It is especially due to the lack of resources, personal data protection, control, and the quality of evaluation and subsequent use. Moreover, according to the data describing the structure of SMEs in Slovakia, the medium-sized enterprises are in most cases the enterprises with foreign investment [68]. Therefore, the company size, multinational character, or territorial scope of marketing activities provide chances to implement marketing trends, and thus, different attitudes to customer databases and CRM can be assumed. That was why the correlation between formed clusters in terms of the attitude to the customer databases and CRM had to be investigated and the significance had to be determined. The following hypotheses were proposed:

Hypothesis H1. *When SME clusters are formed in terms of the attitude to creating and using customer databases for marketing communication, using and evaluating the CRM, or involving the agencies in creating marketing programs, there will be significant differences in terms of the company size;*

Hypothesis H2. *When SME clusters are formed in terms of the attitude to creating and using customer databases for marketing communication, using and evaluating the CRM, or involving the agencies in creating marketing programs, there will be significant differences in terms of the territorial scope of marketing activities;*

Hypothesis H3. *When SME clusters are formed in terms of the attitude to creating and using customer databases for marketing communication, using and evaluating the CRM, or involving the agencies in creating marketing programs, there will be significant differences in terms of their majority owners and their predominance in decision making.*

- b. Several studies provide positive information [7,56,57] or present good experience [54,56] in using codes of ethics, socially responsible marketing, or holistic or integrated marketing. These approaches are also used in Slovakia [69–72], and it is assumed that the groups of SMEs with a more progressive approach to databases and CRM have a different attitude to the mentioned marketing approaches. Further hypotheses were proposed following the research question: Are created clusters dealing with marketing activities such as creating customer databases and their use and attitude to the effectiveness of CRM more open to sponsorship and these progressive marketing strategies: the principles of the own or sector code of ethics, socially responsible marketing, integrated marketing communication, and holistic marketing into marketing communication programs?

Hypothesis H4. *When SME clusters are formed in terms of the attitude to creating and using customer databases for marketing communication, using and evaluating the CRM, or involving the agencies in creating marketing programs, there will be significant differences in terms of implementing the sponsorship;*

Hypothesis H5. *When SME clusters are formed in terms of the attitude to creating and using customer databases for marketing communication, using and evaluating the CRM, or involving the agencies in creating marketing programs, there will be significant differences in terms of incorporating the principles of the own or sector code of ethics into marketing communication programs;*

Hypothesis H6. *When SME clusters are formed in terms of the attitude to creating and using customer databases for marketing communication, using and evaluating the CRM, or involving the agencies in creating marketing programs, there will be significant differences in terms of incorporating the principles of socially responsible marketing into marketing communication programs;*

Hypothesis H7. *When SME clusters are formed in terms of the attitude to creating and using customer databases for marketing communication, using and evaluating the CRM, or involving the agencies in creating marketing programs, there will be significant differences in terms of incorporating the principles of integrated marketing communication into marketing communication programs;*

Hypothesis H8. *When SME clusters are formed in terms of the attitude to creating and using customer databases for marketing communication, using and evaluating the CRM, or involving the agencies in creating marketing programs, there will be significant differences in terms of incorporating the principles of holistic marketing into marketing communication programs.*

4. Results and Discussion

4.1. Creating Clusters of SMEs

The K-means cluster analysis was used to determine three clusters of SMEs operating in Slovakia according to the method of processing and using customer data, using the CRM and attitudes towards its effectiveness. Table 3 presents the results of testing using the Analysis of variance (ANOVA), which is a part of the cluster analysis options in SPSS to check results. However, the significance of the differences is, theoretically seen, not meaningful, and therefore, it is not possible to test the hypotheses. It is especially due to the fact that cases are grouped so that the vectors differ as much as possible. The significance of differences is supported artificially this way. The value F also indicates the attribute most significant when selecting cases into clusters. The higher the value was, the more significant the attribute was. Table 3 shows that using databases for marketing communication and the established CRM as well as looking at its effectiveness are the attributes considered the most important in selection.

Table 3. Analysis of variance.

| Selected Attribute | Cluster | | Error | | F | Sig. |
|--|-------------|----|-------------|------|----------|-------|
| | Mean Square | df | Mean Square | df | | |
| When implementing marketing communication programs: | 6.856 | 2 | 0.786 | 1006 | 8.721 | 0.000 |
| You create your customer database | 123.590 | 2 | 0.338 | 1006 | 366.051 | 0.000 |
| You use this database for marketing communication | 413.351 | 2 | 0.133 | 1006 | 3105.685 | 0.000 |
| You use this database for other marketing activities | 8.833 | 2 | 0.453 | 1006 | 19.490 | 0.000 |
| You have a CRM * in place | 265.195 | 2 | 0.258 | 1006 | 1027.426 | 0.000 |
| How do you evaluate its effectiveness | 451.920 | 2 | 0.353 | 1006 | 1279.172 | 0.000 |

Note: CRM—Customer Relationship Management.

Consequently, using the descriptive statistics, it was possible to characterize three clusters:

1. Domestic Masters (33.1%)

The majority of cluster was formed (92.2%) by micro- (73.1%) and small (19.2%) enterprises, 82% of them made up by domestic property. In cluster 1, 36% of all studied micro enterprises, 34.2% of all small-sized enterprises, and 18.6 of all medium-sized enterprises were represented. The role of 74.6% of Slovak management was decisive in the marketing programs. These SMEs created customer databases (97% create and 3% cannot assess), and subsequently, they used them in marketing communication (100% of all respondents). On the other hand, they did not use this database for other marketing purposes (only 12.6% use it for other marketing purposes). Marketing programs were of a regional character (43.4%), and at the same time, compared to the other two clusters, their programs were mostly national (up to 41.0%). Their marketing programs also included sponsorship (up to 60.5%). The CRM system was not used by these companies (their use is stated by 0%, and 27.8% cannot assess it), and therefore, they did not have a clear opinion on their efficiency (they consider it neither effective nor ineffective); the respondents stated that they could not judge it. Marketing communication of these SMEs were in compliance with their own code of ethics (52.4%) and on the other hand, 84.1% of them did not follow the code of ethics applied in the industry or area of activity. Cluster members (75.1%) did not apply the principles of socially responsible marketing in marketing communication; however, compared to cluster 3, there was a statistically significant difference (Tables 9 and 10) because

it was a group that generally applied this principle (24.9%). The principles of integrated marketing communication (82.9%) and holistic marketing (98.8%) were not used by these SMEs.

2. Larger Experienced Players (31.6%)

This cluster was formed by micro- (52.4%), small (22.6%) and medium-sized enterprises (25.1%) with the largest foreign investment of majority owners of all cluster (28.5%). The share of the Slovak management was the lowest in these companies in terms of decisive role in marketing activities (63.3%) compared to other clusters. In cluster 2, 24.7% of all studied micro-enterprises, 36.7% of all small-sized enterprises, and 57.1% of all medium-sized enterprises were represented. Members of this cluster created customer databases (95.9% create, 1.3% cannot assess, and 2.8% do not create them), and by more than a half of them, it was used in marketing communication (88.1% use it and 11.9% do not). Only 22.6% of the SMEs in this cluster used their databases for other marketing purposes. This was the cluster focused most on marketing activities with an international scope (28.5% for this cluster; cluster 1 = 15.6%, cluster 3 = 11%). Sponsorship (up to 60.2%) was included in the marketing programs of these cluster members. The members of this cluster used CRM (96.6% say they are using it, and 2.8% cannot assess it) actively, and 54.5% considered it effective, 42.9% partially effective. Marketing communication of these companies were governed by their own code of ethics (up to 73.4%), and 73.7% did not even take into account the code of ethics applied by industry or area of activity. Only a minority of SMEs (36.4%) followed the principles of integrated marketing communications, but they were the largest group of clusters ever (in cluster 1, it is 17.1%, and in cluster 3, it is 14.9%). Cluster members followed neither the principles of socially responsible marketing (81.5%) nor the holistic approach in marketing communication (90.3%).

3. Marketing Passivists (35.3%)

The members of this cluster were mainly small enterprises (90.4–74.7% of micro- and 15.7% of small enterprises) with 92.7% of the domestic majority owner, and thus, the overwhelming majority of the decisions regarding marketing activities were local. In cluster 3, 39.3% of all studied micro-enterprises, 28.3% of all small-sized enterprises, and 24.3% of all medium-sized enterprises were represented (that is 5.6% more than in cluster 1). This cluster was not strongly focused on creating customer databases (only 37.1% of SMEs create them, 17.4% cannot assess them, and 45.5% do not create them), and they, by no means, used them in marketing communication (100% do not use them). A small part of this cluster used the customer database for other marketing purposes (6.5%). Marketing activities of this cluster had the most regional character compared to other clusters (58.7%), and compared to clusters 1 and 2, they did not focus on sponsorship (64.3%). From the point of view of using CRM systems, they were not active users (only 12.4% use these systems, 57.3% do not explicitly use them, and 30.3% cannot assess it). The CRM system was considered effective by 0%, partially effective by 6.2%, and ineffective by 2.2%. The marketing communication of the vast majority of these SMEs did not follow their own code of ethics (72.5%), and 59.8% did not apply codes of ethics followed in their industry or area of activity. However, unlike other clusters, it is the cluster with the largest representation of SMEs, following the code of ethics applied within the industry or area of activity (40.2%). Marketing communications did not follow the principles of socially responsible marketing (84.8% of SMEs), integrated marketing communication (85.1%), and holistic marketing (98.9%).

The clusters present the three typical groups of SMEs were defined depending upon creating the databases, their way of using and applying the CRM, as well as attitude and its effectiveness. The first cluster of domestic masters was formed by 92.2% of micro- and small businesses, and domestic participation was in the cluster with the greatest percentage, 82%. Their marketing activities were nationwide compared to others. A typical feature of these cluster members was that they create customer databases and they use them in their marketing communication activities. On the contrary, these databases were not used for further marketing purposes, and in addition, the use of CRM was not mentioned. Compared to the other two clusters, these businesses followed their own code of ethics.

Compared to marketing passivists (cluster 3), the principles of socially responsible marketing were applied in this cluster in a wider range. The Lager experienced players (cluster 2) have the largest percentage of medium-sized enterprises compared to clusters 1 and 3 (by 17.3% and 15.5%) as well as the largest percentage of enterprises with foreign equity. The character of marketing activities in this cluster was transnational to a greater extent in comparison to other clusters. Compared to clusters 1 and 3, the role of the Slovak management was the least decisive in terms of marketing activities in this cluster. A typical feature of the companies in this cluster was not only the focus on creating databases and their use in marketing communication but also the use of CRM; 97.4% of these enterprises evaluated CRM as partially to fully effective. Compared to clusters 1 and 3, the members of this cluster were most engaged in integrated and holistic marketing (although it is a minority). The cluster of marketing passivists (cluster 3) is formed mainly by micro-, small, and medium-sized enterprises with domestic property. When deciding the marketing activities, the role of the majority of Slovak management was decisive and their marketing activities were mainly regional. These companies did not focus on creating databases, and therefore, the marketing communication was not used for other marketing purposes. CRM was not used, and therefore, its effectiveness was not evaluated as well. Unlike clusters 1 and 2, sponsorship was not included in their marketing programs. An interesting feature of this group of enterprises was that 40.2% kept within the code of ethics in the industry in which they operate.

4.2. Identification of Significant Differences between Clusters

Using the Tukey's HSD test (at a significance level of 0.05), significant statistical differences between SMEs in particular clusters were analyzed in terms of enterprise size, territorial scope of marketing programs, inclusion of sponsorship in marketing programs, majority SME owners and decision-making predominance in marketing activities, incorporation of own or sector code of ethics, socially responsible marketing, integrated marketing communication, and holistic marketing in marketing communication programs. A significant difference in the representation of medium-sized enterprises in cluster 2 compared to clusters 1 and 3 when the share of medium-sized enterprises in Cluster 2 was higher than in other two clusters was determined using the test (Table 4). In clusters 1 and 3, no significant difference was determined between enterprises in terms of their size. There was also a significant difference in terms of the territorial scope of marketing programs (Table 5) between all clusters. Specific facts about the territorial scope of marketing programs are presented in detail in particular clusters. In terms of the inclusion of sponsorship in marketing programs (Table 6), there is a significant difference between cluster 3 and clusters 1 and 2. The marketing programs of enterprises grouped in cluster 3 were of a much more regional character.

Table 4. Multiple comparisons of the clusters vs. enterprise size by Tukey HSD test.

| (I) Cluster Number of Case | (J) Cluster Number of Case | Mean Difference (I–J) | Std. Error | Sig. (p-Level) | 95% Confidence Interval | |
|----------------------------|----------------------------|-----------------------|------------|----------------|-------------------------|-------|
| | | | | | Lower | Upper |
| 1 | 2 | −0.380 * | 0.055 | 0.000 | −0.51 | −0.25 |
| | 3 | −0.001 | 0.054 | 1.000 | −0.13 | 0.13 |
| 2 | 1 | 0.380 * | 0.055 | 0.000 | 0.25 | 0.51 |
| | 3 | 0.379 * | 0.054 | 0.000 | 0.25 | 0.51 |
| 3 | 1 | 0.001 | 0.054 | 1.000 | −0.13 | 0.13 |
| | 2 | −0.379 * | 0.054 | 0.000 | −0.51 | −0.25 |

Note: * The mean difference is significant at the 0.05 level. The statistically significant difference determined by *p* is highlighted in bold.

Table 5. Multiple comparisons of the clusters vs. territorial scope of marketing activities by Tukey HSD test.

| (I) Cluster Number of Case | (J) Cluster Number of Case | Mean Difference (I–J) | Std. Error | Sig. (p-Level) | 95% Confidence Interval | |
|----------------------------|----------------------------|-----------------------|------------|----------------|-------------------------|-------|
| | | | | | Lower | Upper |
| 1 | 2 | −0.203 * | 0.057 | 0.001 | −0.34 | −0.07 |
| | 3 | 0.199 * | 0.056 | 0.001 | 0.07 | 0.33 |
| 2 | 1 | 0.203 * | 0.057 | 0.001 | 0.07 | 0.34 |
| | 3 | 0.402 * | 0.057 | 0.000 | 0.27 | 0.54 |
| 3 | 1 | −0.199 * | 0.056 | 0.001 | −0.33 | −0.07 |
| | 2 | −0.402 * | 0.057 | 0.000 | −0.54 | −0.27 |

Note: * The mean difference is significant at the 0.05 level. The statistically significant difference determined by *p* is highlighted in bold.

Table 6. Multiple comparisons of the clusters vs. sponsoring by Tukey HSD test.

| (I) Cluster Number of Case | (J) Cluster Number of Case | Mean Difference (I–J) | Std. Error | Sig. (p-Level) | 95% Confidence Interval | |
|----------------------------|----------------------------|-----------------------|------------|----------------|-------------------------|-------|
| | | | | | Lower | Upper |
| 1 | 2 | −0.003 | 0.038 | 0.997 | −0.09 | 0.09 |
| | 3 | −0.248 * | 0.037 | 0.000 | −0.34 | −0.16 |
| 2 | 1 | 0.003 | 0.038 | 0.997 | −0.09 | 0.09 |
| | 3 | −0.245 * | 0.037 | 0.000 | −0.33 | −0.16 |
| 3 | 1 | 0.248 * | 0.037 | 0.000 | 0.16 | 0.34 |
| | 2 | 0.245 * | 0.037 | 0.000 | 0.16 | 0.33 |

Note: * The mean difference is significant at the 0.05 level. The statistically significant difference determined by *p* is highlighted in bold.

In terms of majority ownership of SMEs, a significant difference was identified between all clusters (Table 7). Cluster 2 had a stronger foreign representation (28.5%) compared to cluster 1 (18%) and cluster 3 (3%). However, when marketing programs is discussed (Table 8), cluster 2 was significantly different from the others. While in clusters 1 and 3 it is mainly the Slovak management that made decisions, in this cluster, the role of foreign decision making was decisive with the higher percentage (30%). Following the mentioned findings, the fact that in terms of the majority owner and decisive role in marketing programs the null hypothesis was rejected in favor of an alternative hypothesis can be seen.

Table 7. Multiple comparisons of the clusters vs. majority owner by Tukey HSD test.

| (I) Cluster Number of Case | (J) Cluster Number of Case | Mean Difference (I–J) | Std. Error | Sig. (p-Level) | 95% Confidence Interval | |
|----------------------------|----------------------------|-----------------------|------------|----------------|-------------------------|-------|
| | | | | | Lower | Upper |
| 1 | 2 | −0.106 * | 0.029 | 0.001 | −0.17 | −0.04 |
| | 3 | 0.107 * | 0.028 | 0.000 | 0.04 | 0.17 |
| 2 | 1 | 0.106 * | 0.029 | 0.001 | 0.04 | 0.17 |
| | 3 | 0.212 * | 0.029 | 0.000 | 0.15 | 0.28 |
| 3 | 1 | −0.107 * | 0.028 | 0.000 | −0.17 | −0.04 |
| | 2 | −0.212 * | 0.029 | 0.000 | −0.28 | −0.15 |

Note: * The mean difference is significant at the 0.05 level. The statistically significant difference determined by *p* is highlighted in bold.

Table 8. Multiple comparisons of the clusters vs. distribution of decision-making competencies by Tukey HSD test.

| (I) Cluster Number of Case | (J) Cluster Number of Case | Mean Difference (I–J) | Std. Error | Sig. (<i>p</i> -Level) | 95% Confidence Interval | |
|----------------------------|----------------------------|-----------------------|------------|-------------------------|-------------------------|-------|
| | | | | | Lower | Upper |
| 1 | 2 | −0.234 * | 0.072 | 0.003 | −0.40 | −0.06 |
| | 3 | 0.039 | 0.070 | 0.846 | −0.13 | 0.20 |
| 2 | 1 | 0.234 * | 0.072 | 0.003 | 0.06 | 0.40 |
| | 3 | 0.273 * | 0.071 | 0.000 | 0.11 | 0.44 |
| 3 | 1 | −0.039 | 0.070 | 0.846 | −0.20 | 0.13 |
| | 2 | −0.273 * | 0.071 | 0.000 | −0.44 | −0.11 |

Note: * The mean difference is significant at the 0.05 level. The statistically significant difference determined by *p* is highlighted in bold.

The results of the ANOVA and Tukey’s HSD tests used to investigate the significant difference between SMEs in clusters in terms of applying selected principles in marketing communication—applying their own and industry codes of ethics, socially responsible marketing, integrated marketing communication and holistic marketing—are presented in Tables 9 and 10.

Table 9. ANOVA test of the clusters vs. application of selected principles in marketing programs.

| Principles Applied in Marketing Communication | | Sum of Squares | df | Mean Square | F | Sig. (<i>p</i> -Level) |
|--|----------------|----------------|------|-------------|--------|-------------------------|
| Own Code of ethics | Between Groups | 14.297 | 2 | 7.149 | 33.189 | 0.000 |
| | Within Groups | 216.682 | 1006 | 0.215 | | |
| | Total | 230.979 | 1008 | | | |
| Code of ethics in the industry we operate or in the area of activity | Between Groups | 10.270 | 2 | 5.135 | 26.900 | 0.000 |
| | Within Groups | 192.030 | 1006 | 0.191 | | |
| | Total | 202.299 | 1008 | | | |
| Socially responsible marketing | Between Groups | 1.656 | 2 | 0.828 | 5.329 | 0.005 |
| | Within Groups | 156.271 | 1006 | 0.155 | | |
| | Total | 157.927 | 1008 | | | |
| Integrated marketing communication | Between Groups | 9.179 | 2 | 4.590 | 27.781 | 0.000 |
| | Within Groups | 166.200 | 1006 | 0.165 | | |
| | Total | 175.380 | 1008 | | | |
| Holistic marketing | Between Groups | 1.598 | 2 | 0.799 | 22.393 | 0.000 |
| | Within Groups | 35.895 | 1006 | 0.036 | | |
| | Total | 37.493 | 1008 | | | |

Note: * The mean difference is significant at the 0.05 level. The statistically significant difference determined by *p* is highlighted in bold.

Following the ANOVA test (Table 9), the Hypothesis H_0 that these principles are equally applied in the SMEs of particular clusters was rejected in favor of an alternative hypothesis. The ANOVA results were confirmed by the Tukey HSD test (presented in Table 10), and differences between clusters were specified. The results show that cluster 1 was significantly different in terms of applying its own code of ethics compared to clusters 2 and 3. SMEs in cluster 1 followed their own code of ethics in marketing communication: 24.9% (this is 6.4% more than in cluster 2 and 9.5% more than in cluster 3). The significant difference between all clusters was identified in the application of the code of ethics in the industry or area of activity in marketing communication. In cluster 3, it was up to 40.2% of SMEs

applying the code of ethics. In cluster 1, the code of ethics was not applied by 84.1% of enterprises and, in cluster 2, by 73.7%. At a significance level of 0.05%, the Tukey's HSD test showed a significant difference in applying the principles of socially responsible marketing in marketing communication programs between clusters 1 and 3. These principles were applied only to a very small extent in all clusters, but it was taken into account by the enterprises grouped in cluster 1 by more than 9.7% (24.9% of enterprises in cluster 1 apply them). In terms of applying the principles of integrated marketing communication and holistic marketing, cluster 2 was evaluated as significantly different from clusters 1 and 3. In both cases, enterprises grouped in this cluster apply them to a higher extent than clusters 1 and 3 (integrated marketing communication is applied by 36.4% and holistic marketing by 9.7% in cluster 2).

Table 10. Multiple comparisons of the clusters vs. application of selected principles in marketing programs by Tukey HSD test.

| Dependent Variable | Cluster Number of Case (I) | Cluster Number of Case (J) | Mean Difference (I–J) | Std. Error | Sig. | 95% Confidence Interval | |
|--|----------------------------|----------------------------|-----------------------|------------|--------------|-------------------------|-------|
| | | | | | | Lower | Upper |
| Own code of ethics | 1 | 2 | −0.257 * | 0.036 | 0.000 | −0.34 | −0.17 |
| | | 3 | −0.249 * | 0.035 | 0.000 | −0.33 | −0.17 |
| | 2 | 1 | 0.257 * | 0.036 | 0.000 | 0.17 | 0.34 |
| | | 3 | 0.009 | 0.036 | 0.967 | −0.08 | 0.09 |
| | −3 | 1 | 0.249 * | 0.035 | 0.000 | 0.17 | 0.33 |
| | | 2 | −0.009 | 0.036 | 0.967 | −0.09 | 0.08 |
| Code of ethics in the industry we operate or in the area of activity | 1 | 2 | 0.105 * | 0.034 | 0.006 | 0.02 | 0.18 |
| | | 3 | 0.243 * | 0.033 | 0.000 | 0.16 | 0.32 |
| | 2 | 1 | −0.105 * | 0.034 | 0.006 | −0.18 | −0.02 |
| | | 3 | 0.138 * | 0.034 | 0.000 | 0.06 | 0.22 |
| | 3 | 1 | −0.243 * | 0.033 | 0.000 | −0.32 | −0.16 |
| | | 2 | −0.138 * | 0.034 | 0.000 | −0.22 | −0.06 |
| Socially responsible marketing | 1 | 2 | −0.064 | 0.031 | 0.099 | −0.14 | 0.01 |
| | | 3 | −0.097 * | 0.030 | 0.004 | −0.17 | −0.03 |
| | 2 | 1 | 0.064 | 0.031 | 0.099 | −0.01 | 0.14 |
| | | 3 | −0.033 | 0.030 | 0.517 | −0.10 | 0.04 |
| | 3 | 1 | 0.097 * | 0.030 | 0.004 | 0.03 | 0.17 |
| | | 2 | 0.033 | 0.030 | 0.517 | −0.04 | 0.10 |
| Integrated marketing communication | 1 | 2 | 0.193 * | 0.032 | 0.000 | 0.12 | 0.27 |
| | | 3 | −0.022 | 0.031 | 0.761 | −0.09 | 0.05 |
| | 2 | 1 | −0.193 * | 0.032 | 0.000 | −0.27 | −0.12 |
| | | 3 | −0.215 * | 0.031 | 0.000 | −0.29 | −0.14 |
| | 3 | 1 | 0.022 | 0.031 | 0.761 | −0.05 | 0.09 |
| | | 2 | 0.215 * | 0.031 | 0.000 | 0.14 | 0.29 |
| Holistic marketing | 1 | 2 | 0.085 * | 0.015 | 0.000 | 0.05 | 0.12 |
| | | 3 | −0.001 | 0.014 | 0.999 | −0.03 | 0.03 |
| | 2 | 1 | −0.085 * | 0.015 | 0.000 | −0.12 | −0.05 |
| | | 3 | −0.086 * | 0.015 | 0.000 | −0.12 | −0.05 |
| | 3 | 1 | 0.001 | 0.014 | 0.999 | −0.03 | 0.03 |
| | | 2 | 0.086 * | 0.015 | 0.000 | 0.05 | 0.12 |

Note: * The mean difference is significant at the 0.05 level. The statistically significant difference determined by p is highlighted in bold.

4.3. Verification of Working Hypotheses and Discussion

Using the K-means cluster analysis, three clusters were formed depending upon creating customer databases, upon using the formed databases and the introduced CRM, and upon evaluating its effectiveness and involving agency in the implementation of marketing communication programs. Subsequently, these clusters were analyzed in more detail, and their differences were examined in several aspects. Based on the results of this investigation, the proposed hypotheses can be verified:

- a. The validity of hypotheses H1–H3 was accepted by the results of the ANOVA test, where the test showed statistically significant differences between the formed clusters in terms of the enterprise size, their majority owners, and their predominance in decision making and sponsorship. Subsequently, specific significant differences between clusters were determined using the Tukey's HSD test (Tables 4–8). In terms of the enterprise size and distribution of decision-making competencies, there were significant differences between cluster 2 and the other two clusters (at a significance level of 5%). However, despite the assumption that customer database and CRM are used less often by smaller enterprises, there was no significant difference between clusters 1 and 3 in terms of the enterprise size. However, their approach to creating and using the databases and CRM is different. The significant difference between all clusters was in the case of territorial scope of marketing activities and the majority owner. It means that hypotheses were verified and formed clusters are significantly different in terms of the enterprise size, territorial scope of marketing activities, majority owner of an enterprise, and decision-making competencies in marketing.
- b. Following the results of the ANOVA test, the proposed hypotheses H4–H8 (Table 9) were verified. Statistically significant differences between the formed clusters in terms of incorporating the principles of the own or sector code of ethics, socially responsible marketing, integrated marketing communication, and holistic marketing into marketing communication programs were rejected. The results of the ANOVA test were confirmed by the Tukey's HSD test (Table 10), and specific correlation in terms of significant differences between the clusters were determined. There was significant difference between cluster 3 and clusters 1 and 2 in terms of sponsorship. Sponsorship was implemented by cluster 3 less often in comparison to other clusters. Hypothesis H4 was verified in favor of the alternative one. Applying the code of ethics in the industry that the enterprise operates or in the area of activity was significantly different between all clusters. Cluster 1 was significantly different from clusters 2 and 3 in applying its own code of ethics (Hypothesis H5 was rejected). Clusters 1 and 3 were significantly different in applying socially responsible marketing (Hypothesis H6 was verified), and cluster 2 was significantly different from clusters 1 and 3 in applying holistic and integrated marketing principles (Hypotheses H7 and H8 were verified).

Following the research results, enterprises grouped in cluster 1 fail to realize the potential of customer databases not only useful in marketing communication but also able to be applied in a wide range of marketing activities in the context of the marketing mix. In addition, the enterprises in this cluster should be encouraged to apply integrated marketing communication representing a combination of traditional marketing activities (e.g., point-of-sale advertising) and new aspects such as involvement of social media. One-third of enterprises grouped in cluster 2 applied integrated marketing communication supporting its rising importance and effectiveness. Marketing passivists grouped in cluster 3 can find themselves in a difficult situation in the near future as many of them have neither customer databases nor CRM systems so they can be easily put under pressure by international companies entering the Slovak market with more sophisticated marketing programs. Enterprises in all clusters more or less were applied neither socially responsible nor holistic marketing. However, modern cultures need interactive communication through modern media and enterprises can raise their customers' awareness in the social sphere including environmental issues. A holistic marketing approach using integrated marketing communication is a powerful tool that, when applied responsibly,

can even lead to creating a better world. It is clear that SMEs do not have the potential of large companies. However, gradual investments can also improve their competitiveness on the local market.

The importance of CRM implementation is supported by several presented research results showing positive relationship between the use of CRM and customer loyalty (or profit). Positive correlation between e-CRM, perceived quality of relationships, and subsequent customer loyalty was confirmed in the Hong Kong banking industry [73]. In the area of cosmetic services in Beirut, there was also confirmed the positive impact of the examined elements of CRM (customer experience, employee behavior, and value proposition) on customer loyalty [74]. The research carried out in Bali presented similar results, where the implementation of CRM played a positive role in the relationship between the perceived quality of service and customer's loyalty [75]. Samaniotis et al. [76] published outputs confirming the positive relationship of successful CRM implementation in luxury Greek hotels, resulting in profit making. These studies suggested that successful CRM implementation can be a prerequisite for a positive impact on business performance and customer's loyalty also in the SME environment. Several authors agree with this assumption based on their partial findings [70–79]. Minh Ngo et al. [75] confirmed the assumption that value delivered to customers will be a decisive factor in the long-term survival and prosperity of SMEs. Genuine confirmation of this relationship with SMEs provides a potential subject for further research. Also, there is a lack of research presenting the real use of CRM by SMEs in various regions in Europe or in the world (which would allow comparison). In the Czech Republic, there are research results showing the use of CRM in small and medium-sized enterprises. According to Pohludka [1], 81% of SMEs (a sample of 319 enterprises) create customer databases. However, it does not mean they are also used for CRM. Conversely, 45% of SMEs use CRM, 3% of SMEs are in the implementation phase, 21% of SMEs consider the implementation, and 31% of SMEs do not consider implementing CRM (especially micro-enterprises). The research from the Moravian-Silesian region also presents interesting results [67]. Knowledge of the concept of CRM in SMEs was enhanced by 39% in the last 5 years. At the level of customer contacts (between 2005 and 2015), there is a slight increase in SMEs recording each customer contact (7.2%), customer responses through a specialized department (2.6%), and evaluating contacts (6%). The findings that the number of SMEs (with no desired effect of using the CRM) was very low is consistent with the results presented in the paper. Only a small number of SMEs considered CRM ineffective. Also, both surveys from the Czech Republic and our findings partially confirmed that the use of CRM grows in terms of the size of the business was almost the same [1,17,67,79]. Following the results mentioned in our paper, in the case of clusters 1 and 2 (mainly consisting of micro- and small enterprises with no significant difference in terms of the enterprise size), there are various approaches to creating and using customer database between studied groups. It is in compliance with the reasons mentioned by Guha et al. [13], who presented that the key issues are the lack of resources, the management, personal data protection and control, and their quality evaluation and use.

5. Conclusions

The aim of the paper was to determine the clusters of SMEs in Slovakia based on using customer databases and CRM and to identify differences clusters according to the selected attributes. The research outputs that were focused on marketing communications and CRM in companies in Slovakia were presented in the paper. Following the results of the presented research, three typical groups of SMEs were defined depending upon creating the databases, their way of using and applying the CRM, as well as attitude and its effectiveness. The results are generalizable for SMEs in Slovakia in terms of access to the creation of customer databases, their use, use of CRM, and the evaluation of its effectiveness. Interpretation of percentage based on the size of enterprises is limited due to deviations of the research sample from the sample generated by the stratified sample. The results present the current state of creation and use of customer databases as well as CRM for marketing communications in Slovak SMEs. In general, two identical groups were identified by size of enterprises (majority was represented by micro- and small enterprises). These clusters (cluster 1 and cluster 3) have significantly different

attitudes not only to customer databases and CRM, but also to their own or industry code of ethics and socially responsible marketing. It can be stated that cluster 2, characterized by transnational activities, greater foreign presence, and the share of medium-sized enterprises, has a more progressive thinking within the principles of integrated marketing communication and holistic marketing.

Studying literary sources made it clear that sustainability of SMEs requires their adaptation to the increasing trend of CRM implementation in SMEs. From this perspective, a significant element of our outputs is that the enterprises using CRM evaluate its effectiveness positively. This means that SMEs appreciate the benefits of introducing CRM, and thus, it can be assumed that they consider investments in this area beneficial. Looking at the limited resources of SMEs and their way of using customer databases, it can be stated that CRM and selected marketing approaches are useful for these enterprises. They gain knowledge not only about their competition but also about the evaluation of the CRM effectiveness relating to small and medium-sized enterprises. Besides SMEs, the outputs of this article are beneficial for the authorities involved in supporting small and medium-sized enterprises because programs based on knowledge of the current state of SMEs in various areas are more likely to produce the desired effect.

The presented results of the article not only complement the knowledge base with a view on the creation and use of customer databases and on the application of CRM in SMEs within the local context of the Slovak Republic but also provide a broader context in terms of their characteristics, their attitude to the selected marketing approaches, as well as their assessment of CRM effectiveness. It can be assumed that similar findings would be gained in the Czech Republic as well as in economically comparable areas of the EU. Comparison with other countries is possible with a subsequent evaluation of the causes of the identified differences (e.g., different approach to SME support, regional development, and others). This can create a rich knowledge base for further research, e.g., in the area of marketing and sustainability of SMEs in the context of an effective support of SMEs. Additionally, potential can also be seen within the development of the digital era.

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References

1. Pohludka, M.; Štverková, H. The Best Practice of CRM Implementation for Small- and Medium-Sized Enterprises. *Adm. Sci.* **2019**, *9*, 22. [[CrossRef](#)]
2. Mura, L.; Marchevska, M.; Dubravska, M. Slovak Retail Business Across Panel Regression Model. *Mark. Manag. Innov.* **2018**, *4*, 203–211. [[CrossRef](#)]
3. Kampf, R.; Průša, P.; Savage, C. Systematic location of the public logistic centres in Czech Republic. *Transport* **2011**, *26*, 425–432. [[CrossRef](#)]
4. Motykova, J.; Svadlenka, L. Statistical Analysis and Forecasting of Rail Transport Accidents in the Czech Republic. In Proceedings of the SGEM 2016, BK 2: Political Sciences, Law, Finance, Economics and Tourism Conference Proceedings, Albena, Bulgaria, 24–30 August 2016; Volume V.
5. Sommerauerová, D.; Chocholáč, J.; Hyršlová, J. Sustainable development indicators of selected European countries in the field of transport sector. In Proceedings of the 22nd International Scientific Conference TRANSPORT MEANS, Trakai, Lithuania, 3–5 October 2018; pp. 645–650.
6. Riha, Z.; Nemeč, V.; Soušek, R. Transportation and environment-economic research. In Proceedings of the WMSCI 2014-18th World Multi-Conference on Systemics, Cybernetics and Informatics, Orlando, FL, USA, 15–18 July 2014; Volume 2, pp. 212–217.

7. Kohnová, L.; Papula, J.; Salajová, N. Internal factors supporting business and technological transformation in the context of industry 4.0. *Bus. Theory Pract.* **2019**, *20*, 137–145. [[CrossRef](#)]
8. Kohnová, L.; Papula, J.; Papulová, Z.; Suchoba, M. Preparation for smart industry, introduction and the comparative study. In Proceedings of the Smart City 360 2016-2nd EAI International Summit, Bratislava, Slovakia, 22–24 November 2016.
9. Shkurupska, I.; Litovchenko, I. The development of marketing communications under the influence of the Industry 4.0. *Int. Sci. J. Ind.* **2016**, *1*, 103–106.
10. Bettiol, M.; Capestro, M.; Di Maria, E. Industry 4.0: The Strategic Role of Marketing. In Proceedings of the XIV Convegno Annuale SIM, Bergamo, Italy, 26–27 October 2017; pp. 1–7.
11. Kucharčíková, A.; Mičiak, M.; Hitka, M. Evaluating the effectiveness of investment in human capital in e-business enterprise in the context of sustainability. *Sustainability* **2018**, *10*, 3211. [[CrossRef](#)]
12. Tokarčíková, E.; Kucharčíková, A. Diffusion of innovation: The case of the Slovak mobile communication market. *Int. J. Innov. Learn.* **2015**, *17*, 359–370. [[CrossRef](#)]
13. Guha, S.; Harrigan, P.; Soutar, G. Linking social media to customer relationship management (CRM): A qualitative study on SMEs. *J. Small Bus. Entrep.* **2018**, *30*, 193–214. [[CrossRef](#)]
14. Arsić, S.; Banjević, K.; Nastasić, A.; Rošulj, D.; Arsić, M. Family business owner as a central figure in customer relationship management. *Sustainability* **2018**, *11*, 77. [[CrossRef](#)]
15. Siu, N. Customer Relationship Management and Recent Developments. *Adm. Sci.* **2016**, *3*, 7. [[CrossRef](#)]
16. Lecerf, M.; Omrani, N. SME Internationalization: The Impact of Information Technology and Innovation. *J. Knowl. Econ.* **2019**, 1–20. [[CrossRef](#)]
17. Pohludka, M.; Stverkova, H.; Slusarczyk, B. Implementation and Unification of the ERP System in a Global Company as a Strategic Decision for Sustainable Entrepreneurship. *Sustainability* **2018**, *10*, 2916. [[CrossRef](#)]
18. Wahlberg, O.; Strandberg, C.; Sandberg, K. Trends, Topics and Under-Researched Areas in CRM Research-A Literature Review. *Int. J. Public Inf. Syst.* **2009**, *3*, 191–208.
19. Nadanyiová, M. Global trends of the personnel marketing in service enterprises. In Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences, Rajecke Teplice, Slovakia, 5–6 October 2016.
20. Majerova, J.; Kliestik, T. Brand valuation as an immanent component of brand value building and managing. In Proceedings of the 4th World Conference on Business, Economics and Management, Ephesus, Turkey, 30 April–2 May 2015.
21. Glissmann, S.; Kolbe, L.; Romano, N.; Fjermestad, J. Minitrack: Electronic Customer Relationship Management. In Proceedings of the 40th Annual Hawaii International Conference on System Sciences (HICSS'07), Waikoloa, HI, USA, 3–6 January 2007; p. 149. [[CrossRef](#)]
22. Romano, N.; Fjermestad, J. Electronic Commerce Customer Relationship Management: A Research Agenda. *Inf. Technol. Manag.* **2003**, *4*, 233–258. [[CrossRef](#)]
23. Ngai, E.W.T. Customer relationship management research (1992–2002). An academic literature review and classification. *Mark. Intell. Plan.* **2005**, *23*, 582–605. [[CrossRef](#)]
24. Paulissen, K.; Mills, K.; Brengman, M.; Fjermestad, J.; Romano, N.C., Jr. Voids in the Current CRM Literature: Academic Literature Review and Classification (2000–2005). In Proceedings of the 2007 40th Annual Hawaii International Conference on System Sciences (HICSS'07), Waikoloa, HI, USA, 3–6 January 2007; p. 150c. [[CrossRef](#)]
25. Czinkota, M.R.; Ronkainen, I.A. *International Marketing*, 10th ed.; South-Western Cengage Learning: Mason, OH, USA, 2013; ISBN 978-1-133-62751-7.
26. Reicher, R.; Szeghegyi, Á. Factors Affecting the Selection and Implementation of a Customer Relationship Management (CRM) Process. *Acta Polytech. Hung.* **2015**, *4*, 183–200. [[CrossRef](#)]
27. Kotler, P.; Keller, L. *Marketing Management*, 15th ed.; Prentice Hall: London, UK, 2016; ISBN 978-0-133-85646-0.
28. Dohnal, J. *Řízení Vztahů se Zákazníky: Procesy, Pracovníci, Technologie*; Grada: Praha, Czech Republic, 2002.
29. Bohnné, K.K. *The Customer is Satisfied?* Public Press Ltd.: Budapest, Hungary, 2005.
30. Štarchoň, P.; Vetráková, M.; Metke, J.; Lorincová, S.; Hitka, M.; Weberová, D. Introduction of a new mobile player app store in selected countries of Southeast Asia. *Soc. Sci.* **2018**, *7*, 163. [[CrossRef](#)]

31. Stachová, K.; Papula, J.; Stacho, Z.; Kohnová, L. External partnerships in employee education and development as the key to facing industry 4.0 challenges. *Sustainability* **2019**, *11*, 345. [CrossRef]
32. Gródek-Szostak, Z.; Nesterak, J. Trade missions as the instrument for supporting international technological cooperation of enterprises—case study of Poland, Slovakia and Czech Republic. *Acta Oecon. Univ. Selye* **2017**, *6*, 57–68.
33. Lizbetin, J. Decision-making processes in introducing RFID technology in manufacturing company. *Nase More Znan.-Stručni Časopis More Pomorstvo* **2018**, *65*, 289–292. [CrossRef]
34. Tsipstsis, K.K.; Chorianopoulos, A. *Data Mining Techniques in Crm Inside Customer Segmentation*; Wiley: Hoboken, NJ, USA, 2013; ISBN 11-199-6545-4.
35. Bojica, A.M.; Estrada, I.; del Mar Fuentes-Fuentes, M. In Good Company: When Small and Medium-Sized Enterprises Acquire Multiplex Knowledge from Key Commercial Partners. *J. Small Bus. Manag.* **2018**, *56*, 294–311. [CrossRef]
36. Penrose, E.T. *The Theory of the Growth of the Firm*; Oxford University Press: Oxford, UK, 1959.
37. Ključnikov, A.; Mura, L.; Sklenár, D. Information security management in SMEs: Factors of success. *Entrep. Sustain. Issues* **2019**, *6*, 2081–2094. [CrossRef]
38. Stoian, M.C.; Dimitratos, P.; Plakoyiannaki, E. SME internationalization beyond exporting: A knowledge-based perspective across managers and advisers. *J. World Bus.* **2018**, *53*, 768–779. [CrossRef]
39. Hitka, M.; Lorincová, S.; Ližbetinová, L.; Bartáková, G.P.; Merková, M. Cluster analysis used as the strategic advantage of human resource management in small and medium-sized enterprises in the wood-processing industry. *BioResources* **2017**, *12*, 7884–7897. [CrossRef]
40. Hitka, M.; Závadská, Z.; Jelačić, D.; Balážová, Ž. Kvalitatívni pokazatelji zadovoljstva uposlenika kompanije i njihova razvoja u promatranome vremenskom razdoblju. *Drv. Ind.* **2015**, *66*, 235–239. [CrossRef]
41. Lorincová, S.; Hitka, M.; Štarchoň, P.; Stachová, K. Strategic instrument for sustainability of human resource management in small and medium-sized enterprises using management data. *Sustainability* **2018**, *10*, 3687. [CrossRef]
42. Jeck, T. *Malé a Stredné Podniky na SLOVENSKU a v európskej Únii: Bariéry, Financovanie a Inovačné Správanie*; Ekonomický Ústav SAV: Bratislava, Slovakia, 2014; ISSN 1337–5598.
43. Slovak Business Agency. *Malé a Stredné Podnikanie v Číslach v Roku 2018*; SBA: Bratislava, Slovakia, 2019; Available online: http://www.sbagency.sk/sites/default/files/msp_v_cislach_2018.pdf (accessed on 15 July 2019).
44. Statistical Office of the Slovak Republic. *Business Databases by Size*; Statistical Office of the SR: Bratislava, Slovakia, 2018. Available online: <https://slovak.statistics.sk> (accessed on 24 July 2019).
45. Álvarez Jaramillo, J.; Zartha Sossa, J.W.; Orozco Mendoza, G.L. Barriers to sustainability for small and medium enterprises in the framework of sustainable development—Literature review. *Bus. Strategy Environ.* **2019**, *28*, 512–524.
46. Smith, A. *The Wealth of Nations*; Knopf: New York, NY, USA, 1937.
47. Kotler, P.; Keller, K.L. *Marketing Management*, 14th ed.; Pearson Education: Hoboken, NJ, USA, 2012.
48. Kotler, P.; Keller, K.; Koshy, A.; Jha, M. *Marketing Management: A South Asian Perspective*, 13th ed.; Pearson Education, Inc.: Hoboken, NJ, USA, 2009.
49. Pop, N.A.; Vladoi, A.D. The Marketer—A Complex Specialist, A Man of Concept, Decision and Action. *Commer. Prof. Occup.* **2009**, *11*, 9–20.
50. Lucassen, G.; Jansen, S. Gamification in Consumer Marketing—Future or Fallacy? *Soc. Behav. Sci.* **2014**, *148*, 194–202. [CrossRef]
51. Purcarea, T.V.; Ratiu, M.P. How to Keep Loyal Relationships with Service Customers Using Holistic Marketing. *Holist. Mark. Manag. J.* **2011**, *1*, 39–45.
52. Tejedor, A.C.P.; Tejedor, J.P.; Elola, L.N.; Sodhi, M.; Sanch, G.P. Creating a Holistic Excellence Model Adapted for Technology-Based Companies. *Tour. Manag. Stud.* **2014**, *10*, 7–18.
53. Rao, K. *Services Marketing*, 2nd ed.; Dorling Kindersley: New Delhi, India, 2011.
54. Soliman, H.S. An Analytical Study of the Relationship between the Holistic Marketing and Overall Organizational Performance. *Int. J. Bus. Social Sci.* **2016**, *7*, 42–56.
55. Camilleri, M.A. Integrated Marketing Communications. *Travel Mark. Tour. Econom. Airl. Product* **2018**, *5*, 85–103.

56. Sommerauerova, D.; Hyrslova, J. Corporate Social Responsibility from the Perspective of Companies Producing Passenger Cars in the Czech Republic. In Proceedings of the 12th International Days of Statistics and Economics, Prague, Czech Republic, 6–8 September 2018.
57. Tokarčíková, E.; Kucharčíková, A.; Ďurišová, M. Corporate social responsibility managers and their decision making. *Turk. Online J. Educ. Technol.* **2017**, *654–664*.
58. Potrashkova, L.; Raiko, D.; Tseitlin, L.; Savchenko, O.; Nagy, S. Methodological provisions for conducting empirical research of the availability and implementation of the consumers' socially responsible intentions. *Market. Manag. Innov.* **2018**, *3*, 133–141. [[CrossRef](#)]
59. Belz, F.; Schmidt-Riediger, B. Marketing strategies in the age of sustainable development: Evidence from the food industry. *Bus. Strat. Environ.* **2010**, *19*, 401–416. [[CrossRef](#)]
60. Shamma, H.; Hassan, S. Customer-driven benchmarking: A strategic approach toward a sustainable marketing performance. *Benchmarking* **2013**, *20*, 377–395. [[CrossRef](#)]
61. Sadler, D.R. Interpretations of criteria-based assessment and grading in higher education. *Assess. Eval. High. Educ.* **2005**, *30*, 175–194. [[CrossRef](#)]
62. Rakić, V.; Hughes, J. Guest Editorial: Reflections on Moral Enhancement: Can We? Should We? *Camb. Q. Healthc. Ethics* **2015**, *24*, 3–6. [[CrossRef](#)]
63. Starcevic, V.; Billieux, J.; Schimmenti, A. Selfitis and behavioural addiction: A plea for terminological and conceptual rigour. *Aust. New Z. J. Psychiatry* **2018**, *52*, 919–920. [[CrossRef](#)]
64. Řehák, J.; Brom, O. *SPSS–Praktická Analýza Dat*, 1st ed.; Computer Press: Praha, Czech Republic, 2015; ISBN 978-80-251-4609-5.
65. Litschmannová, M. *Introduction to Statistics, Electronic Scripts and Additional Interactive Materials*; Skriptum VŠB-TUO: Ostrava, Czech Republic, 2012.
66. Meloun, M.; Militký, J.; Hill, M. *Computer Analysis of Multivariate Data in Examples*; Academia: Praha, Czech Republic, 2005.
67. Starzyczná, H.; Pellešová, P.; Stoklasa, M. The Comparison of Customer Relationship Management (CRM) in Czech Small and Medium Enterprises According to Selected Characteristics in the Years 2015, 2010 and 2005. *Acta Univ. Agric. Silv. Mendel. Brun.* **2017**, *65*, 1767–1777. [[CrossRef](#)]
68. Slovak Business Agency. *Malé a Stredné Podnikanie v Číslach v Roku 2017*; SBA: Bratislava, Slovakia, 2018.
69. Gallo, P.; Šambronská, K.; Matušíková, D.; Šenková, A.; Mitříková, J. Analysis of marketing activities and presentation of the destination at the example of chosen organisation. In Proceedings of the 29th International Business Information Management Association Conference-Education Excellence and Innovation Management through Vision 2020: From Regional Development Sustainability to Global Economic Growth, Vienna, Austria, 3–4 May 2017; pp. 1410–1417.
70. Gogolová, M.; Ivánková, K. The application of marketing strategy model of its in Slovakia as a value for customer. In Proceedings of the International Conference TRANSPORT MEANS, Kaunas, Lithuania, 22–23 October 2015; pp. 30–33.
71. Moravcikova, D.; Krizanova, A.; Kliestikova, J.; Rypakova, M. Green marketing as the source of the competitive advantage of the business. *Sustainability* **2017**, *9*, 2218. [[CrossRef](#)]
72. Urdzikova, J.; Beno, P. Information Security in Integrated Marketing Communication. In Proceedings of the Conference-Marketing Identity: Explosion of Innovations, International Scientific Conference on Marketing Identity: Explosion of Innovations, Slovak Acad Sci, Smolenice, Slovakia, 4–5 November 2014; pp. 559–573.
73. Lam, A.Y.C.; Cheung, R.; Lau, M.M. The Influence of Internet Based Customer Relationship Management on Customer Loyalty. *Contemp. Manag. Res.* **2013**, *9*, 4. [[CrossRef](#)]
74. Saleh, L.; El Saheli, L. The Impact of CRM Strategy on Customer Loyalty in SMEs'. *Int. Bus. Res.* **2018**, *11*, 37. [[CrossRef](#)]
75. Minh Ngo, V.; Pavelkova, D.; Thi Phan, Q.P.; Van Nguyen, N. Customer Relationship Management (CRM) in Small and Medium Tourism Enterprises: A Dynamic Capabilities Perspective. *Tour. Hosp. Manag.* **2018**, *24*, 63–86. [[CrossRef](#)]
76. Sarmaniotis, C.; Assimakopoulos, C.; Papaioannou, E. Successful implementation of CRM in luxury hotels: Determinants and measurements. *EuroMed J. Bus.* **2013**, *8*, 134–153. [[CrossRef](#)]
77. Mailangkay, A.B.L.; Edhi, J. Crm Strategy, Social Crm, and Customer Loyalty: A Proposed Conceptual Model. *J. Ilm. WIDYA* **2015**, *3*, 56–60.

78. Kesuma, I.A.W.; Hadiwidjojo, D.; Wiagustini, N.L.P.; Rohman, F. Service Quality Influence on Patient Loyalty: Customer Relationship Management as Mediation Variable (Study on Private Hospital Industry in Denpasar). *Int. J. Bus. Commer.* **2013**, *2*, 1–14.
79. Grančičová, K.; Hrušovská, D. Traditional Tools Version New Forms and Trends in Marketing Communication of Companies in Slovakia. *Trends Bus.* **2014**, *5*, 3–12.



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