



SERVICE MARKETING, VALUE CO-CREATION AND CUSTOMER SATISFACTION IN THE AIRSOFT INDUSTRY: CASE OF A TECHNOLOGY-BASED FIRM

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Abstract. The main objective of the paper is to examine whether offering a co-creation opportunity as a part of service marketing strategy influences customer value creation and satisfaction in the airsoft industry. Our study uses a case study of a technology-based firm from the airsoft industry which operates internationally. The methods employed included statistical analyses based on the data collected through a survey of the technology-based company customers (n=178). Coefficients of Spearman and Kendall were used to examine the correlations between respondents' particulars and elements influencing customer satisfaction. The study results reveal that there are different drivers involved in the marketing strategy of value co-creation and customer satisfaction, and some of them have a stronger impact on target customers. The research contributes to the present scientific publications by adding a comprehensive analysis of users' value co-production as part of a successful marketing strategy implementation by a technology-based firm. The study emphasizes the need for more empirically grounded support for the management of value co-creation processes incorporated in firm's marketing strategy.

Keywords: service marketing, value co-creation, customer satisfaction, airsoft industry, case study.

JEL Classification: M1, M3, M31, L8, L83.

Introduction

Involvement of customers in the process of value creation of products and services has been one of the fundamental research areas in service marketing and management for several past decades (Lovelock & Young, 1979; Kelley, Donnelly, & Skinner, 1990; Grönroos, 2011; Grönroos & Voima, 2013; Mustak, Jaakkola, & Halinen, 2013; Yang, Chen, & Chien, 2014; Hollebeek, Srivastava, & Chen, 2016). Changes observable in both marketing and marketplace over the last years tend to reveal the importance of the increasing role of customers' involvement in value co-creation leading to the achievement of better results. It might have

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intense consequences for different marketing phenomena (Prahalad & Ramaswamy, 2004; Grönroos, 2008; Heinonen et al., 2010; Zhang, Lu, Torres, & Chen, 2018).

Various services have become progressively significant for production firms. Despite the fact that these companies mostly concentrate on products, executives and researchers still need a complete framework to comprehend when they generate substantial investments in specific types of services (Cusumano, Kahl, & Suarez, 2015). Due to the growing importance of services in the modern world, over these past decades marketing philosophy has progressed from approaches concentrating on goods to those taking into account the service- and interaction approaches of service-dominant logic (Lusch, Vargo, & O'Brien, 2007; Vargo & Lusch, 2008; Skålén, Gummerus, von Koskull, & Magnusson, 2015). The mentioned logic has expanded the range of perception of the function of marketing. Nevertheless, the look on service-dominant logic is even now exceedingly production and interaction-concentrated. Research in this area related to firms manufacturing high-tech products is scarce, especially in the airsoft industry.

The main objective of the paper is to examine whether offering a co-creation opportunity as a part of service marketing strategy influences customer value creation and satisfaction in the airsoft industry. The research employs a case study of a technology-based firm which operates internationally in the airsoft industry. The paper is organised as follows: firstly, theoretical background related to service marketing and customer-dominant logic is presented. Secondly, the notion of value co-creation and the relationship of service marketing and customer satisfaction are described. Thirdly, the research methodology is presented. Next, the results are exemplified and discussed. Finally, the conclusions are formulated and future research opportunities are proposed.

1. Theoretical background

1.1. Service marketing and customer-dominant logic

There are differences between the roles that marketing plays in the space of physical goods and non-physical ones – services. In the traditional sense, a physical product is an outcome of how numerous resources, such as individuals, technologies, raw materials, know-how and information, have been managed in a manufacturing unit to integrate some features that customers in specific markets are searching for. Since the manufacturing process may be described as a closed, internal process, the customer may not directly participate in it. As a result, a product is created as a premanufactured bundle of resources and features, complete to be exchanged. In such situation, the main duty of marketing is to figure out what product properties the customers are looking for and to provide promises about those properties via external marketing actions. According to the product marketing triangle (Grönroos, 1996, p. 9), where three main functions of marketing concentrate on making promises, fulfilling promises and enabling promises, if the product owns qualities that customers need, it will accomplish the promises passed to the customers. This approach considers customers “in terms of markets of relatively anonymous individuals” (Grönroos, 2007, p. 61).

In case of service companies, the range and substance of marketing are getting more complex, since the idea of a premanufactured product with properties that customers are searching for is too restricted to be helpful here. A similar situation is observed under conditions of business-to-business marketing where the traditional product construct is very restrictive due to the fact that customer relationships frequently cover not only physical goods but also different categories of service processes as well as hidden services. Very often it is not known in detail what are the customer's wants and expectations at the beginning of the service process. Similarly, the company must decide itself what resources are required, as well as to what degree and in what composition they should be utilised. For instance, the service prerequisites of an electronic device that has been distributed to a customer may differ (training or financial issues). This leads to adjusting the firm's resources and methods of their use accordingly. Therefore, the service marketing triangle (Grönroos 1996, p. 10), contrary to the product marketing triangle, does not possess the preproduced product. According to Grönroos (2007, p. 62) "in process consumption, no preproduced bundle of features that constitutes a product can be present". Merely service perceptions and arrangements for a service process can be finished earlier and partially ready services can be existent. Thus, service marketing triangle encompasses three interwoven groups (customer, provider and the firm) that work together to create, promote and deliver service to the satisfaction of the customer.

Analysing the above, it is worth noticing the existence of two types of logic: one related to good and another related to services. Comparing two different logics of services and goods it has been argued that the earlier mentioned one fits well the settings of utmost goods manufacturing companies nowadays (Vargo & Lusch, 2004; Grönroos, 2006).

In this paper, we tend to apply a consumer dominant marketing logic, which according to Heinonen et al. (2010, p. 534) means "a view that positions the customer in the centre, rather than the service, the service provider/producer or the interaction or the system". This perception is unlike conventional concepts of customer orientation mainly because of changing the perspective. It concentrates on services utilisation by customers and service to complete their personal aims, instead of looking at what companies do to generate services that customers will favour. This logic allows firms to develop a business on an exhaustive understanding of customers' activities, experiences, practices, as well as context. The major matter is the life of a customer and functions that the offering is connected to (Heinonen et al., 2010) rather than perceiving the offering as traditionally as a result (material good, service, answer) or a process (service interrelation). This is especially important in industries where customer involvement in products and services creation is of importance, e.g. high-tech industry (Bosch-Sijtsema & Bosch, 2015). Marketing activities, in this case, concentrate on activities taking into account the customer's life in a broader perspective (e.g. involving customers hobbies and products related to those hobbies). Therefore, the customer's logic must be the basis of a customer marketing logic especially taking into account value co-creation from a customer perspective.

1.2. Value co-creation

Usually, the term "co-creation" is used by authors without clarifying whether they speak of customer involvement in the offering formation process, or his or her involvement in the

value formation process (Mustak et al., 2013). It is important to separate customer involvement in the formation of primary offerings from the development of value despite interrelatedness of these diverse concepts (Grönroos & Voima, 2013).

Different studies have concentrated on the relations between customer involvement in developing offerings and, nevertheless research thoroughly analysing these relations is a limited value (Lusch et al., 2007; Grönroos, 2008; Aarikka-Stenroos & Jaakkola, 2012; Kowalkowski, Ridell, Rönndell, & Sörhammar, 2012; Zhang et al., 2018). Similarly, researchers have studied different individual outcomes of customer involvement, such as customer satisfaction (Vega-Vazquez, Revilla-Camacho, & Cossío-Silva, 2013) or customer loyalty (Yang et al., 2014). Despite that, these results are fragmented and disclose little on the connection between the offerings formation and the value creation (Mustak et al., 2013). Thus, more studies on this phenomenon are needed.

In this study, co-creation is perceived according to Prahalad and Ramaswamy (2004) as the mutual value creation between the customer and the supplier and involves a joint effort of the parts making up commercial relationships in order to build experiences and to resolve problems. Contemporary studies in the service literature put the accent on dynamic customers that co-create value. Many researchers argue that customers seem to be the value or experience co-creators via the service distribution process (Grönroos, 2011; Mustak et al., 2013). According to Grönroos and Voima (2013), the value in service-dominant logic is created by the combined activities of co-creation between customers and firms. Based on this, it could be argued about the customers and firms value co-creation via relations and diverse contextual experiences (Zhang et al., 2018).

Even though numerous approaches have shaped the conceptualisation of value co-creation in very distinctive expressions, this idea is built principally on service-dominant logic (Vargo & Lusch, 2008; Skålén et al., 2015). Giving this logic, the firm can only declare value propositions but cannot provide value since customers are the co-creators of value (Vargo & Lusch, 2008). According to Hollebeek et al. (2016) value co-creation is recognised as one of important customer involvement profits (resource development, customer individual/interpersonal operant, and co-creation) to be useful within managing customer relationships.

Together with the evolving dominance of services, there is a growing stress on generating meaningful and impressive customer experiences (Homburg, Jozic, & Kuehnl, 2017). The essential premise is that firms cannot act alone in assuring services of high-quality but need to embrace customer-oriented approaches by sustaining longstanding and emotive ties with customers via co-creating of remarkable experiences (Vargo & Lusch, 2008; Troye & Supphellen, 2012).

It is also important to mention value for customers of participating in value co-creation (Mustak et al., 2013). Participation is related with enhanced observed quality and larger observed value by customers and gives customers an opportunity of having an influence and control over the process of product co-creation (Kelley et al., 1990; Prahalad & Ramaswamy, 2004; Vega-Vazquez et al., 2013). Moreover, customers' involvement in the offering creation process leads to customer engagement perceived as "the mechanics of a customer's value added to the firm, either through direct or/and indirect contribution" (Pansari & Kumar, 2017, p. 295). The level of customer commitment increases during their involvement in a

firm's innovation process and co-producing value with the company (Zhang, Lu, & Kizildag, 2017) by giving feedback and commentaries on products or services (i.e. suggesting improvements or "liking" innovative firm promotions). Some studies have proved that customers having more control collect information on different features of an offering, make crucial decisions consequently to a substantial level, and build societies of like mind customers, what aid them to generate higher value (Bagozzi & Dholakia, 2006).

Other scholars indicate that customers may also accumulate economic value via involvement since they profit from discounts and cost reductions when taking part in the formation of offerings (Prahalad & Ramaswamy, 2004; Pansari & Kumar, 2017). Moreover, customer participation supports vendors in reducing worker expenditures, a portion of which can be transferred to customers. Furthermore, some vendors offer discounts responding to customer involvement, additionally increasing customers' profits.

1.3. Service marketing and customer satisfaction

Another important issue that service marketing attempts to achieve in order to build profitable relationships with customers is ensuring customer satisfaction. The idea of placing customers at the centre is not novel as such. Levitt (1960), in his landmark paper, claimed that firms are excessively concentrated on their own manufacturing processes and not satisfactorily concerned with customer satisfaction.

Customer satisfaction is perceived to be one of the most significant ideas of the marketing literature, since it permits to connect purchasing and consumption practices with after-purchase trends, such as repeated buying, a variation of attitude or brand loyalty (Vega-Vazquez et al., 2013). From the theoretical perspective, the curiosity rests in the facts that satisfaction guides to increase in loyalty and economic outcomes.

Customer satisfaction is a multifaceted concept that has been broadly discussed in the literature. Plentiful descriptions have been offered that sometimes are contradictive and vague. Satisfaction can be principally recognised as an individual appraisal of accomplishment contrasted with the expectation (Hunt, Geiger-Oneto, & Varca, 2012). Nevertheless, an increasing number of publications suggests that satisfaction appraisals are of social nature (Fournier & Mick, 1999). This point of view denotes a transformation from the tangible resources approach to intangible one (Vargo & Lusch, 2004). Among those immaterial resources are valued co-creation and relationships.

Service marketing activities may positively influence customer satisfaction. The empirical study of 924 customers of Bloemer and Ruyter (1999) exhibits that particularly in the high-involvement service settings where customers spend substantial time and meet sensual encounters (e.g. in eating places or vacation camps), partaking directs to greater customer satisfaction. Involvement has also been linked with greater customer loyalty, trust, and progressively positive appraisals of both the offering and its value results, all of which ultimately improve the seller-customer link (Rosenbaum, Ostrom, & Kuntze, 2005; Dabholkar & Sheng, 2012, Troye & Supphellen, 2012). Other results have proved that growth in customer satisfaction originating from participation in new service development directs customers to communicate their reactions via optimistic online evaluations or offline contact with personnel (Melián-González, Bulchand-Gidumal, & González López-Valcárcel, 2013).

Service marketing via its actions related to the marketing-mix tends to improve customer satisfaction and relationships. There are studies which prove a negative correlation between the degree of customer satisfaction and his or her price acceptance (Anderson, 1996). Furthermore, the existence of the strong and positive impact of customer satisfaction on a willingness to pay was discovered in other research (Homburg, Koschate, & Hoyer, 2005). Apart from the price, another marketing-mix element is placed, which is strictly connected with the spot where customers actually make a purchase. Nowadays, more and more customers decide for online shopping using vendor's websites, which quality has an immediate and positive impact on customer satisfaction (Bai, Law, & Wen, 2008). Furthermore, some elements of online store impact more on customer satisfaction than others (Kim & Stoel, 2004). Attitudes of the target customers toward promotion (e.g. product packaging and advertising campaigns) are also of importance. Testing those assumptions may be a basis for developing a future marketing strategy, which can take two directions: defensive marketing (e.g. complaint management) or offensive marketing (e.g. advertising). Some researchers have already proved that the defensive marketing activities can considerably reduce costs of offensive marketing (Fornell & Wernerfelt, 1987). Moreover, academics highlight that it is worth to verify in research the importance of socially sensitive factors such a salary (Srinivasan & Park, 1997).

Based on the theoretical foundations provided above, we propose the following hypotheses:

H1. The marketing mix of a technology-based firm has impact on customer satisfaction in the airsoft industry;

H1a. The product, in the marketing mix context, positively influences the customers with lower salary;

H1b. The price level is important for the customers with lower salary;

H1c. The customers with lower salary pay more attention to the product purchase place;

H1d. The promotion positively influences the customers with lower salary.

2. Data and methodology

2.1. Case background

This research follows “revelatory” case study approach (Yin, 2009). The applied case considers a fast-growing technology-based GATE company founded in Poland in 2008. The case matches the research objective as GATE engages its customers in value co-creation in order to learn if the company marketing strategy performs well and gain some hints for its future marketing actions. The GATE company was chosen as it has an interesting business model generating almost all of its inflows from the clients abroad. The unusual phenomena is that GATE's sales in 2017 increased by more than 180% comparing to 2016.

The value co-creation was the main reason for the company's success during recent years. Also, the GATE company can definitely be categorized as a technology-based firm (Groen, Cook, & Van der Sijde, 2015). Technology is embedded in the enterprise's culture and philosophy. Several experts manage the company and being completely independent of other already established firms, GATE exploits technologically innovative concepts. GATE bets on

an interactive collaboration with target customers and strive to co-produce value with airsoft players. Furthermore, no studies concerning the connection between marketing strategy, value co-creation and customer satisfaction in airsoft industry were found.

We carried out the research on airsoft players: the target customers of GATE company. The airsoft market can be characterized as a niche market of hobby goods. Nevertheless, taking into consideration the specific products delivered by GATE (electronics for airsoft guns and Android app), the part of the market in which GATE operates can be categorized as a high-tech industry. The company designs and manufactures electronic systems, which are then installed in airsoft replicas in order to upgrade them. Even though the company was focusing on involving customers in the development of ideas for new functions and innovative products, there was a need to engage the airsoft players in co-production in the field of marketing activity. GATE put into practice the concept of value proposition co-creation several years ago. The firm's strategy of value creation is consistent with the model of the co-creative practice of forming a value proposition developed by Kowalkowski et al. (2012). For instance, the GATE's customers were involved in value co-production in 2017 through participation in survey containing questions crucial for value formation in the future. Moreover, before a product launch, almost 50 beta-testers from around the world verified the product prototype, gave priceless feedback and hints with ideas for improvement of the ultimate version of the device. With their help, new and innovative functions can be introduced and product adjustments implemented, what makes the final product almost ideal.

The research perspective is consistent with studies conducted by many prominent academics as to mention: Prahalad and Ramaswamy (2000, 2004), Yang et al. (2014), J. K. Hsieh and Y. C. Hsieh (2015). Our research assumes that offering a co-production opportunity as a part of marketing strategy impacts on customer value creation and satisfaction in the airsoft industry.

2.2. Method

The analysis is based on data from the Internet survey. The link to the Google docs questionnaire was sent on the 12th of April 2017 via newsletter to 1033 clients from the company's newsletter database. According to the statistics from Freshmail (website through which the newsletter was sent), 479 recipients opened the email. Moreover, on the 12th of April 2017, the GATE published the survey on its Facebook fan page reaching 5717 Facebook users. The campaign lasted for the 12 days and gathered answers and valid data from 178 respondents from more than 30 countries in four continents (including Europe: 69.1%, North America: 21.3%, Asia: 8.4% and South America: 1.2%). The multitude of participants derived from the fact that for those who fulfilled the questionnaire, GATE offered a coupon code with 20% discount for shopping at GATE's online store.

Due to its limited sample size, the research is a demonstrative, a pilot study. The applied methods were thoroughly selected for this particular kind of study. The statistical application PQStat (version 1.6.4.122) was used in order to perform the statistical analyses. The inferential analyses of relations between the level of "Salary" and scales from the question "Rate each of the elements according to the importance" were analyzed by estimating the monotonic correlation coefficients of Spearman and Kendall. It allowed measuring the monotonic

dependence of those random variables. Thus, the correlation between two separate variables proved to be high when observations were of similar rank. The correlation was significant at $p < 0.05$ and highly significant at $p < 0.01$.

The survey was prepared based on the literature review on the value proposition, customer satisfaction and marketing. The questions also derived from some strategic plans of GATE company. The initial version of this questionnaire contained around 100 questions (including open answer and multiple choice questions). After delving deeper into the research and company needs, we limited and modified the questions, finally reaching 27 in total. There are seven categories of the survey questions: Introduce yourself; Products and functions; Manuals; Price; GATE; Airsoft; Satisfaction. There was also need to answer questions about respondent's particulars, sharing such information as a country, age, education, salary, the amount spent on airsoft and frequency of attendance in airsoft games. For the purpose of this research, the marketing-oriented questions were correlated with the levels of respondents' salary. The marketing-oriented questions included Likert-scales (1-5), where respondents rated the answers.

2.3. Findings and discussion

The survey questions analysed below concerned the marketing-mix (Table 1). The questions considering "Product" included such areas as product design, ease of installation, instructions, product functionality, quality, tutorial videos and warranty conditions. Then, the survey checked how important is a level of "Price" for the respondents. As GATE sales to ultimate customers through its online store, one of the questions considered the company website and with reference to four marketing P's, this question was categorized as "Place" meaning distribution channel. The last P: "Promotion" included questions about the after-sales service, the company brand name, packaging as well as sales promotion and advertising.

Generally, the most important for customer satisfaction (median 5) turned out to be: quality level, product functionality and tutorial videos. The least important (median 3) were: packaging and brand name. At this stage, considering the marketing mix, it looks like "Product" is most important for customer satisfaction in the airsoft industry. Comparably, a similar research was carried out in the insurance industry (Agarwal & Kapoor, 2014). One of their hypotheses was "There is a significant impact of marketing strategies on the Customer Satisfaction to win the competitive advantage". The researchers gathered data from a well-structured questionnaire on 300 customers and analysed, inter alia, correlations between different factors. They found out that 5 out of 13 elements of customer satisfaction play important role in this particular industry: brand popularity, innovation in policy, quick response to customers, building relationship network, and financial security. Their study also proved that those are the innovation and creativity which play important role in developing 4 P's of marketing. On the other hand, there was a research conducted in the market of mobile instant messages in China, which found out that trust, perceived service quality, customer value (including functional value and emotional value) are most important factors of customer satisfaction in this industry (Deng, Lu, Wei, & Zhanga, 2010).

The survey questions contained some demographics such as country, age, gender, education, salary, money spent on airsoft hobby and frequency of playing airsoft. During analysis,

the evaluation of statements for the question “Rate each of elements [of customer satisfaction] according to the importance” was correlated with the scales from respondent’s particulars which considered „Salary (monthly in USD)”. The 15.2% of respondents earned less than \$500, whereas 12.9% of them had a salary between \$501 and \$1000. The group of 35.4% of respondents declared that they earned \$1001–\$2500. The 22.5% of airsofters indicated the range \$2501–\$3999. The 7.9% of respondents stated that they earn between \$4000–\$5999, whereas only the group of 6.2% could have admitted that their salary exceeds \$6000. Most of the respondents indicated the salary lower or equal to \$2500. This means that, surprisingly, most of GATE customers do not earn very much taking into consideration scales. Before the survey was carried out, GATE believed that its target customers are those who earn more, because GATE products are rather expensive comparing to competition. However, the results have shown that GATE should target in its marketing activities not specifically those who earn most, but particularly those who earn less. As the survey results are the basis for marketing strategy formulation, the strategy should be designed putting emphasis on those factors which are negatively correlated with a salary increase.

As shown in Table 1, there is no significant correlation between statements from “Product” category (design, ease of installation, manuals, product functionality, quality level, tutorial videos, warranty period) and the level of salary. This rejects the hypothesis (H1a) “The product, in the marketing mix context, positively influences the customers with lower salary”.

Table 1. Correlations between the scales of “Rate each of the elements [of customer satisfaction] according to the importance” and “Salary (monthly in USD)” (source: own study based on the questionnaire)

| | Spearman | | Kendall | |
|--|----------|--------|---------|--------|
| | r | p | tau | p |
| PRODUCT | | | | |
| Design (how the product looks like) | -0.0617 | 0.4134 | -0.0523 | 0.3002 |
| Ease of installation | -0.0735 | 0.3294 | -0.0620 | 0.2192 |
| Manuals (user-friendly and multilingual) | -0.0834 | 0.2685 | -0.0735 | 0.1453 |
| Product functionality | 0.0527 | 0.4851 | 0.0471 | 0.3505 |
| Quality level | -0.0442 | 0.5580 | -0.0399 | 0.4294 |
| Tutorial videos | -0.1284 | 0.0877 | -0.1074 | 0.0333 |
| Warranty period | -0.0612 | 0.4173 | -0.0512 | 0.3098 |
| PRICE | | | | |
| Price level | -0.2139 | 0.0041 | -0.1782 | 0.0004 |
| PLACE | | | | |
| Company website (online store) | -0.1850 | 0.0134 | -0.1566 | 0.0019 |
| PROMOTION | | | | |
| After-sales service | -0.0512 | 0.4970 | -0.0446 | 0.3773 |
| Brand name | -0.0376 | 0.6184 | -0.0305 | 0.5459 |
| Packaging | -0.1822 | 0.0149 | -0.1450 | 0.0040 |
| Sales promotion and advertising | -0.1773 | 0.0179 | -0.1450 | 0.0040 |

The strongest relation that was found in the correlation between the scale “Salary (monthly in USD)” and “Price”. These scales are negatively correlated on a low level. Both in case of Spearman’s and Kendall’s correlation it is highly significant ($p < 0.01$). Thus, the lower rate for the “Salary (monthly in USD)”, the higher rate for the “Price”. It proves that the higher the salary of respondents, the less important for them is the price. This confirms the hypothesis (H1b) “The price level is important for the customers with lower salary”. However, similar studies have proved that there is a negative correlation between the degree of customer satisfaction and the level of customer price tolerance (Anderson, 1996). Moreover, other researchers found out that there exist strong and positive influence of customer satisfaction on a willingness to pay (Homburg et al., 2005). Therefore, GATE should pay particular attention to keep the price at adequate level taking into consideration its target customers (those, who earn less according to this study).

The scale “Salary (monthly in USD)” is negatively correlated on a low level with evaluation of the statement “Company website (online store)” (see Table 1). Considering the Spearman’s correlation, it is significant ($p < 0.05$). However, in case of Kendall’s correlation, it is highly significant ($p < 0.01$). Consequently, the lower salaries of airsoft players, the more they pay attention to the online store at company’s website where they can purchase GATE products. This confirms the hypothesis (H1c): “The customers with lower salary pay more attention to the product purchase place”. To get the broader view on the topic, it is worth to mention that according to the study carried out on Chinese online visitors, the website quality has a direct and positive impact on customer satisfaction (Bai et al., 2008). Moreover, there was even a study showing which particular dimensions of the website have a direct influence on customer satisfaction in case of online shoppers (Kim & Stoel, 2004). Nevertheless, as GATE is going to target those who earn less (the majority of its clients), it should follow a totally different approach toward fields of marketing investments than actually is suggested in the other studies.

With reference to the “Promotion” category of the marketing mix, the “After-sales service” and “Brand name” are not significantly correlated with the customers’ salary. However, we found out a significant correlation between the scale “Salary (monthly in USD)” and “Packaging”. The rate for „Packaging” is negatively correlated on a low level with the level of „Salary (monthly in USD)”. In case of Spearman’s correlation it is significant ($p < 0.05$) whereas in case of Kendall’s correlation it is highly significant ($p < 0.01$). Therefore, the lower rate for the „Salary (monthly in USD)”, the higher rate for the „Packaging”. This means that those who earn less, care more for the “Packaging”. Moreover, as shown in Table 1, the evaluation of the statement “Sales promotion and advertising” is negatively correlated on a low level with the scale “Salary (monthly in USD)”. Taking into consideration the Spearman’s correlation, it is significant ($p < 0.05$), but looking into Kendall’s correlation, it is highly significant ($p < 0.01$). Thus, the lower the respondent’s salaries, the more attention they pay to the sales promotion and advertising. Taking into consideration the findings, the hypothesis (H1d) “The promotion positively influences the customers with lower salary” turned out to be true only partly.

The above results have rejected one hypothesis: (H1a), partly confirmed one hypothesis (H1d), as well as confirmed two: (H1b) and (H1c). Nevertheless, they proved that the main hypothesis (H1) “The marketing mix has an impact on customer satisfaction in the airsoft industry” is partly true. To fully understand the study findings, it is important to highlight

that similar studies have been already performed in other industries. Those were: analyses of the impact of co-brand marketing mix strategies on customer satisfaction, brand and loyalty for Korean traders and manufacturers (K. Kim, Y. Kim, Lee, & Youn, 2014); research of user's satisfaction with e-payment system (Adeyinka & Isah, 2015); identification of factors affecting customer satisfaction in case of online travel agencies from India (Sabyasachi, Chauhan, & Chauhan, 2017) as well as analyses of relations between sacrifices, quality, value, satisfaction and loyalty in tourism (Gallarza, Gil-Saura, & Arteaga-Moreno, 2017). Moreover, the relation between expectations, quality, price and customer satisfaction was examined in Swedish market (Anderson, Fornell, & Lehmann, 1994). These studies proved that it is possible to identify customer satisfaction elements in different industries, to rate them and correlate with other factors in order to validate different hypotheses connected with the relationship between customer satisfaction, marketing-mix, and value.

Conclusions

The study results have revealed that there are different drivers involved in the service marketing strategy related to value co-creation and customer satisfaction, and some of them have a stronger impact on target customers. The research contributes to theory development by providing a comprehensive analysis of users' value co-production as part of a successful marketing strategy implementation by a technology-based firm. The study emphasis supports the need for more empirically based guidance for the management of value co-creation processes incorporated in firm's marketing strategy.

Moreover, the practical contribution of our findings is related to the direct impact of the value co-creation of GATE company and its customers. The research has shown how GATE is performing in the field of marketing activity and has highlighted the areas on which the company should focus on future marketing undertakings. Therefore, the implications for marketing strategy creation are as follow: firstly, focus on targeting those airsoft players who earn \$2500 or less. Then, pay attention to the elements of marketing strategy which are crucial to their satisfaction: low price, well designed and user-friendly online store, refined packaging and frequent promotions.

Apart from those presented in the paper, the company shall consider also other kinds of co-producing value. For example, the managers could invite airsoft players to the headquarters in order to test prototypes. Moreover, GATE could engage its employees from R&D department in taking part in airsoft meetings (where they could play airsoft, get to know the customers and use in the games the products they designed). This would accelerate the new product development process (time-to-market launch), and make the new products address the customer needs adequately. In case of the GATE company, those are the most proper ways to co-create value.

The obtained results should be treated carefully due to some limitations of the study concentrating on the technology-based firm operating in the airsoft industry. It shall be highlighted that characteristics of the technology-based firm in this niche industry of hobby items might be totally different than in case of technology-based firms operating in other industries. Moreover, in case of a non-technology-based company targeting airsoft players, the findings may not ap-

ply. Future research should broaden its scope to other companies from the airsoft industry or other technology-based firms in different industries. Furthermore, it would include not only respondents who are familiar with the brand name of a particular company, but also individuals who do not know the brand but still might become users of the company's products in the future. Moreover, it is suggested for the future to adopt a service company as a research company and analyze it from the point of view of 7P referring to service marketing.

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References

- Aarikka-Stenroos, L., & Jaakkola, E. (2012). Value co-creation in knowledge intensive business services: a dyadic perspective on the joint problem solving process. *Industrial Marketing Management*, 41(1), 15-26. <https://doi.org/10.1016/j.indmarman.2011.11.008>
- Adeyinka, T., & Isah, A. (2015). Predictors of users' satisfaction with e-payment system: a case study of staff at the university of Ilorin, Nigeria. *Organizacija*, 48(4), 272-286.
- Agarwal, B., & Kapoor, N. (2014). Impact of marketing strategies on customer satisfaction in insurance sector. *Pranjana: The Journal of Management Awareness*, 17(1), 37-46.
- Anderson, E. W. (1996). Customer satisfaction and price tolerance. *Marketing Letters*, 7(3), 265-274. <https://doi.org/10.1007/BF00435742>
- Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: findings from Sweden. *Journal of Marketing*, 58(3), 53-66. <https://doi.org/10.2307/1252310>
- Bagozzi, R. P., & Dholakia, U. P. (2006). Antecedents and purchase consequences of customer participation in small group brand communities. *International Journal of Research in Marketing*, 23(1), 45-61. <https://doi.org/10.1016/j.ijresmar.2006.01.005>
- Bai, B., Law, R., & Wen, I. (2008). The impact of website quality on customer satisfaction and purchase intentions: evidence from Chinese online visitors. *International Journal of Hospitality Management*, 27(3), 391-402. <https://doi.org/10.1016/j.ijhm.2007.10.008>
- Bloemer, J., & Ruyter, K. D. (1999). Customer loyalty in high and low involvement service settings: the moderating impact of positive emotions. *Journal of Marketing Management*, 15(4), 315-330. <https://doi.org/10.1362/026725799784870388>
- Bosch-Sijtsema, P., & Bosch, J. (2015). User involvement throughout the innovation process in high-tech industries. *Journal of Product Innovation Management*, 32(5), 793-807. <https://doi.org/10.1111/jpim.12233>
- Cusumano, M. A., Kahl, S. J., & Suarez, F. F. (2015). Services, industry evolution, and the competitive strategies of product firms. *Strategic Management Journal*, 36(4), 559-575. <https://doi.org/10.1002/smj.2235>
- Dabholkar, P. A., & Sheng, X. (2012). Consumer participation in using online recommendation agents: effects on satisfaction, trust, and purchase intentions. *Service Industries Journal*, 32(9), 1433-1449. <https://doi.org/10.1080/02642069.2011.624596>

- Deng, Z., Lu, Y., Wei, K. K., & Zhanga, J. (2010). Understanding customer satisfaction and loyalty: an empirical study of mobile instant messages in China. *International Journal of Information Management*, 30(4), 289-300. <https://doi.org/10.1016/j.ijinfomgt.2009.10.001>
- Fornell, C., & Wernerfelt, B. (1987). Defensive marketing strategy by customer complaint management: a theoretical analysis. *Journal of Marketing Research*, 24(4), 337-346. <https://doi.org/10.2307/3151381>
- Fournier, S., & Mick, D. G. (1999). Rediscovering satisfaction. *Journal of Marketing*, 63(4), 5-23. <https://doi.org/10.2307/1251971>
- Gallarza, M., Gil-Saura, I., & Arteaga-Moreno, F. (2017). Exploring competing models on sacrifices, quality, value, satisfaction and loyalty with PLS and partial correlations. *European Journal of Tourism Research*, 17, 116-135.
- Groen, A., Cook, G., & Van der Sijde, P. (2015). *New technology-based firms in the new millennium*. Bingley: Emerald Group Publishing. <https://doi.org/10.1108/S1876-0228201511>
- Grönroos, C. (1996). Relationship marketing logic. *Asia-Australia Marketing Journal*, 4(1), 7-18. [https://doi.org/10.1016/S1320-1646\(96\)70264-2](https://doi.org/10.1016/S1320-1646(96)70264-2)
- Grönroos, C. (2006). Adopting a service logic for marketing. *Marketing theory*, 6(3), 317-333. <https://doi.org/10.1177/1470593106066794>
- Grönroos, C. (2011). Value co-creation in service logic: a critical analysis. *Marketing Theory*, 11(3), 279-301. <https://doi.org/10.1177/1470593111408177>
- Grönroos, C. (2007). *Service management and marketing. customer management in service competition* (3rd ed.). West Sussex: John Wiley & Sons.
- Grönroos, C. (2008). Service logic revisited: who creates value? And who co-creates?. *European Business Review*, 20(4), 298-314. <https://doi.org/10.1108/09555340810886585>
- Grönroos, C., & Voima, P. (2013). Critical service logic: making sense of value creation and co-creation. *Journal of the Academy of Marketing Science*, 41(2), 133-150. <https://doi.org/10.1007/s11747-012-0308-3>
- Heinonen, K., Strandvik, T., Mickelsson, K. J., Edvardsson, B., Sundström, E., & Andersson, P. (2010). A customer-dominant logic of service. *Journal of Service Management*, 21(4), 531-548. <https://doi.org/10.1108/09564231011066088>
- Hollebeek, L. D., Srivastava, R. K., & Chen, T. (2016). SD logic-informed customer engagement: integrative framework, revised fundamental propositions, and application to CRM. *Journal of the Academy of Marketing Science*, 1, 1-25.
- Homburg, C., Jozic, D., & Kuehnl, C. (2017). Customer experience management: toward implementing an evolving marketing concept. *Journal of the Academy of Marketing Science*, 45(3), 377-401. <https://doi.org/10.1007/s11747-015-0460-7>
- Homburg, C., Koschate, N., & Hoyer, W. D. (2005). Do satisfied customers really pay more? A study of the relationship between customer satisfaction and willingness to pay. *Journal of Marketing*, 69(2), 84-96. <https://doi.org/10.1509/jmkg.69.2.84.60760>
- Hsieh, J. K., & Hsieh Y. C. (2015). Dialogic co-creation and service innovation performance in high-tech companies. *Journal of Business Research*, 68(11), 2266-2271. <https://doi.org/10.1016/j.jbusres.2015.06.009>
- Hunt, D. M., Geiger-Oneto, S., & Varca, P. E. (2012). Satisfaction in the context of customer co-production: a behavioural involvement perspective. *Journal of Consumer Behaviour*, 11, 347-356. <https://doi.org/10.1002/cb.1370>
- Kelley, S. W., Donnelly, J. H. Jr, & Skinner, S. J. (1990). Customer participation in service production and delivery. *Journal of Retailing*, 66(3), 315-325.
- Kim, K., Kim, Y., Lee, M., & Youn, M. (2014). The effects of co-brand marketing mix strategies on customer satisfaction, trust and loyalty for medium and small traders and manufacturers. *Ekonomie a Management*, 17(1), 140-151. <https://doi.org/10.15240/tul/001/2014-1-011>
- Kim, S., & Stoel, L. (2004). Apparel retailers: website quality dimensions and satisfaction. *Journal of Retailing and Consumer Services*, 11(2), 109-117. [https://doi.org/10.1016/S0969-6989\(03\)00010-9](https://doi.org/10.1016/S0969-6989(03)00010-9)

- Kowalkowski, C., Ridell, O. P., Rödell J. G., & Sörhammar, D. (2012). The co-creative practice of forming a value proposition. *Journal of Marketing Management*, 28(13), 1553-1570. <https://doi.org/10.1080/0267257X.2012.736875>
- Levitt, T. (1960). Marketing myopia. *Harvard Business Review*, 38(4), 45-56.
- Lovelock, C. H., & Young, R. F. (1979). Look to consumers to increase productivity. *Harvard Business Review*, 57(3), 9-20.
- Lusch, R. F., Vargo, S. L., & O'Brien, M. (2007). Competing through service: insights from service-dominant logic. *Journal of Retailing*, 83(1), 2-18. <https://doi.org/10.1016/j.jretai.2006.10.002>
- Melián-González, S., Bulchand-Gidumal, J., & González López-Valcárcel, B. (2013). Online customer reviews of hotels: as participation increases, better evaluation is obtained. *Cornell Hospitality Quarterly*, 54(3), 274-283. <https://doi.org/10.1177/1938965513481498>
- Mustak, M., Jaakkola, E., & Halinen, A. (2013). Customer participation and value creation: a systematic review and research implications. *Managing Service Quality: An International Journal*, 23(4), 341-359. <https://doi.org/10.1108/MSQ-03-2013-0046>
- Pansari, A., & Kumar, V. (2017). Customer engagement: the construct, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 45(3), 294-311. <https://doi.org/10.1007/s11747-016-0485-6>
- Prahalad, C. K., & Ramaswamy V. (2004). Co-creating unique value with customers. *Strategy & Leadership*, 32(3), 4-9. <https://doi.org/10.1108/10878570410699249>
- Prahalad, C. K., & Ramaswamy, V. (2000). Co-opting customer competence. *Harvard Business Review*, 78(1), 79-90.
- Rosenbaum, M. S., Ostrom, A. L., & Kuntze, R. (2005). Loyalty programs and a sense of community. *Journal of Services Marketing*, 19(4), 222-233. <https://doi.org/10.1108/08876040510605253>
- Sabyasachi, D., Chauhan, R. K., & Chauhan, K. (2017). Factors affecting customer satisfaction of online travel agencies in India. *Tourism & Hospitality Management*, 23(2), 267-277. <https://doi.org/10.20867/thm.23.2.3>
- Skålén, P., Gummerus, J., von Koskull, C., & Magnusson, P. R. (2015). Exploring value propositions and service innovation: a service-dominant logic study. *Journal of the Academy of Marketing Science*, 43(2), 137-158. <https://doi.org/10.1007/s11747-013-0365-2>
- Srinivasan, V., & Park, C. S. (1997). Surprising robustness of the self-explicated approach to customer preference structure measurement. *Journal of Marketing Research*, 34, 286-291. <https://doi.org/10.2307/3151865>
- Troye, S. V., & Supphellen, M. (2012). Consumer participation in coproduction: 'I made it myself' effects on consumers' sensory perceptions and evaluations of outcome and input product. *Journal of Marketing*, 76(2), 33-46. <https://doi.org/10.1509/jm.10.0205>
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1-17. <https://doi.org/10.1509/jmkg.68.1.1.24036>
- Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10. <https://doi.org/10.1007/s11747-007-0069-6>
- Vega-Vazquez, M., Revilla-Camacho, M. A., & Cossío-Silva, F. J. (2013). The value co-creation process as a determinant of customer satisfaction. *Management Decision*, 51(10), 1945-1953. <https://doi.org/10.1108/MD-04-2013-0227>
- Yang, C., Chen, C., & Chien, Y. (2014). Customer expertise, affective commitment, customer participation, and loyalty in B&B services. *International Journal of Organizational Innovation*, 6(4), 174-183.
- Yin, R. K. (2009). *Case study research: design and methods* (4th ed.). London: SAGE.
- Zhang, T., Lu, C., & Kizildag, M. (2017). Engaging generation Y to co-create through mobile technology. *International Journal of Electronic Commerce*, 21(4), 489-516. <https://doi.org/10.1080/10864415.2016.1355639>
- Zhang, T., Lu, C., Torres, E., & Chen, P. (2018). Engaging customers in value co-creation or co-destruction online. *Journal of Services Marketing*, 32(1). <https://doi.org/10.1108/JSM-01-2017-0027>