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Determinants of the Engagement of Virtual Runs' Participants in the Co-creation of Customer Value during the Pandemic

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Abstract

The sports events market has radically changed during the time of the Covid-19 pandemic. The global crisis on this market, caused by cancelling the majority of the sports events, forces the organisers to seek alternative solutions. One solution may be the idea of organising virtual runs, as a replacement of the traditional ones. The article relies on the customer engagement concept, in the framework of the Service Dominant Logic theory, popular in the literature of the subject. So far, in the area of sport management and marketing this problem has been analysed from the perspective of the spectators. The innovative value of this article consists in the fact that it deals with this problem from the point of view of the active participants of these events. The study focuses on the research question of the determinants and motivating factors which stimulate consumers to engage in the co-creation of customer value, even though the product they are offered is merely a substitute for the one they are used to. The research focuses on the virtual runs and its subject are the runners participating in the Białystok Virtual Half-Marathon. There are two equivalent objectives of the study: (a) the identification and the assessment of the determinants of the runners' engagement, and (b) the segmentation of the virtual run participants on the basis of the diagnosed determinants of their involvement.

The article is based on the results of the survey conducted in 2020 on a sample of 419 runners, by means of the CAWI method. The respondents were asked to assess 17 factors related to the customer engagement in the co-creation of value, with reference to the virtual run in which they participated. The Białystok Virtual Half-Marathon, the second biggest virtual run organised in 2020 in Poland, was used as a point of reference for this survey. This run was an alternative proposal prepared by the organiser in response to the Covid-19 pandemic and the ban on the organisation of real runs in the whole country.

The research findings allowed for expanding the theoretical knowledge of the concept of the customer value co-creation and the consumers' engagement in this process. The research resulted in distinguishing four meta-factors determining the runners' engagement and establishing the strength of their influence on the customer value co-creation. The research also revealed the runners' motivation for participating in the virtual run. The runners' involvement was determined by the hedonistic and social factors, though the structure and the strength of their impact varied in relation to the respondents' demographics. All in all, four segments of runners were distinguished.

Managers in charge of organising sports events will learn from this article what motivates participants of such events, organised in the virtual form. The established factors differentiating the runners' behaviours may turn out to be

helpful for the segmentation of the potential participants, with a view to effectively encouraging them to join the event. The two types of factors determining the runners' engagement revealed by the research, the hedonistic and the social factor, may serve as a basis for creating the marketing communication strategy and as a clue as to what elements should be included in the offer of the customer value creation made by the organisers of virtual runs, or other virtual sports events.

Key words: Customer engagement, value for customer, customer behavior, value co-creation.

Introduction

Sport is one of the areas of the social and economic life severely affected by the results of the Covid-19 pandemic. In 2020 the majority of sports events have been cancelled all over the world, ranging from the Olympic Games in Tokyo to small, local sport-and-recreation events. It is too soon to fully evaluate the social and economic consequences of these limitations and cancellations of sports events, but there is no doubt that these effects will be painful and long-lasting. The return of the sports market to the level from before the pandemic will certainly take many years.

The situation on the running events market is similar to that in other disciplines of sport. Too high risk of infections was the reason why the majority of the runs planned for 2020 had to be cancelled. Some of the organisers of events scheduled for the spring 2020 initially postponed them to the autumn, but others immediately decided to move the events to the next year. The decision to put the events off till the autumn was too optimistic, as near the end of 2020 the global situation is still very hard. What is more, some of the events scheduled for the spring 2021 are already being postponed.

In this situation, a solution gaining huge popularity on the sports event market as an alternative for the runners, are virtual runs. The runners interested in taking part in them register on the platform of the event organiser and then cover the set distance, e.g. a marathon, a half-marathon, or 10 kilometres, in the set time, normally over a period of about two weeks. Such a run can take place anywhere, normally near the runners' homes, the route is optional and the entry fee must be paid. Therefore, there is no direct competition between the participants on one route, unlike the traditional running events. After covering the set distance, the runners send their results (the time of completing the run) by means of a special application to the organiser, who then, on the basis of these results, creates a ranking list of the finishers. Each of the finishers gets the so-called starting package with a commemorative medal by mail.

Virtual runs are not a new phenomenon. They have been organised occasionally in various places in the world, for instance during the global event Wings for Life. They were treated as an extra proposal for those who, for various reasons, could not take part in the real run. However, the popularity of the virtual runs has surged during the Covid-19 pandemic. This type of events should be treated as a substitute for the traditional running events, which, according to Davies, engage the runners in a direct, physical and emotional way (2019, pp.48-66). Due to their marginal significance so far, the virtual runs have not been the subject of in-depth scientific research. Therefore, the factors determining the runners' engagement in the co-creation of customer value through the participation in such runs have not been recognised yet.

The research problem this article focuses on is the concept of the customer engagement, which has recently been one of the more often analysed issues in the international literature in the area of management and marketing (Grunross, 2011, p. 294; Brodie et al. 2013, pp. 105-114; Alon & Brunel, 2007, pp. 371-400; Van Doorn et al., 200, p. 3; Verhoef et al., 2010, 249-250; Vivek et al., 2012, pp. 133-135), including the area of sports marketing (Grohs et al., 2020, pp. 69-87; Horbel et al., 2016, pp. 510-531; Yoshida et al., 2013, pp. 51-73; Hedlund, 2014, pp. 50-71).

Vivek, Beatty and Morgan define the customer engagement as a participation of a current or potential customer in the organisation's offers and activities, as well as the customer's connection to these offers and activities. This participation may be initiated by the company or the customer. Additionally, the above mentioned authors point out that this category consists of the cognitive, emotional, behavioural, and social elements (Vivek et al., 2012, p. 127). In compliance with this broad interpretation, the customer engagement includes not only their behaviours, but also the psychological aspects of these behaviours, including the cognitive and emotional ones (Harmeling et al., 2017, pp. 312-335; Potra et al., 2018, pp. 207-212; Zomerdijk & Voss, 2010). Moreover, the notion of the customer engagement refers to the customer-business relationship, i.e. it includes the connection that customers build with organisations, on the basis of their experience with these organisations' offers or activities (Vivek et al., 2012, p. 133; Kumar & Pansari, 2017; Brodie et al., 2011).

The customer engagement is closely related to the co-creation of value and the issue of prosumption, which are also the subjects of numerous studies (Ida, 2017, pp. 51-66; Smith & Colgate, 2007, pp. 7-23; Woratschek et al., 2016, pp. 6-24). The identification of the major achievements in these areas may be helpful in a better understanding of mechanisms ruling the customers' behaviours.

The term co-creation of value was coined in literature by Kambil, Freisen and Sundaram (1999). It has grown in popularity owing to C.K. Prahalad's and V. Ramaswama's work. These authors state that the term co-creation of value should be understood as the effect of the interaction between a company and consumers, which results from the integration of resources possessed by each of these two parties (Prahalad & Ramaswamy, 2004). It is noteworthy that, in the light of this concept, the market is understood as a platform where resources, ideas, competencies, experiences and anything that can be used to create new forms of interaction and mutual teaching mechanisms are exchanged between a company and consumers.

As for the prosumption, this term was coined by A. Toffer (1980) and it is a combination of two functions related to a consumer: production and consumption. However, Xie, Bagozzi and Troye (2008) understand this term as the actions taken by a consumer, leading to the value creation and resulting in the creation of products which are subject to experience and consumption. These authors point out that as a result of prosumption, the following integration processes take place on the consumers' side: (a) physical activities, related to production, sorting, adding more functionalities, assembling, (b) intellectual effort – generating new ideas, sharing ideas, communication with the company, supervision over the production process, and (c) socio-psychological experiences – emotional states and effects occurring in effect of the cooperation with the producer.

As it can be noticed, the customer engagement, the co-creation of customer value and prosumption are synonymous terms, but they should not be treated as identical.

So far, the customer engagement in the value co-creation with reference to substitute products has not been the subject of a broader scientific debate, which is an obvious gap in the theoretical knowledge. This article fills this gap to a certain degree.

For the purpose of the conducted research, the following research question was asked: what makes runners who participate in the running events in the role of prosumers, engage in the virtual runs? This article aims to identify the factors determining the runners' engagement and, on the basis of these factors, to formulate a segmentation proposal of the participants of the virtual runs.

The article is structured in the following way. In the first part, there is an overview of the literature from the area of customer value co-creation, customer engagement and prosumption in relation to the sports market. The second part is a case study describing the organisation of the Białystok Virtual Half-Marathon, one of the biggest virtual runs organised in 2020 in Poland. The next part presents the survey findings, which provide answers to the research questions. The final part is applicational in character and includes recommendations for managers organising running events, as well as the cognitive limitations and directions for further research.

Customer Engagement on the Sports Market

According to the assumptions of the Service Dominant Logic concept, a company can merely make an offer of a value, whereas the value itself is a result of the engagement of the consumer in its co-creation. (Vargo & Lusch, 2016, pp. 5-23; Bove, 2013, pp. 30-51; Vargo et al., 2008, pp. 145-152). It means that building a relationship, or at least initiating an interaction with a company is essential for the customer value creation (Gummerus, 2013, 19-46; Gronroos 2008, pp.298-314). The multitude of published research results prove that this statement is universal in nature, i.e. it is also true for the sports market (Gummerus, 2013, 19-46; Gronroos 2008, pp.298-314). The sports market is a sector where the consumers' engagement is particularly remarkable and desirable (Stander & de Beer, 2016; Pronschinske, 2012; McKelvey et al., 2012). Sport, due to its emotional character, has the ability to engage consumers, who may play the role of either spectators or active participants of the sport struggle (Hallmann & Zehrer, 2017).

The consumer engagement, indispensable for the interaction, is perceived in different ways, but in the opinion of the authors of numerous publications, in each case the primary role is played by the active consumer, involved in the process of the co-creation of value, sought by the consumer as the market participant (Eggert et al., 2018, pp. 80-90; Hilton et al., 2012, pp. 1504-1519). Another important element is the participation of the consumers in the exchange process. The exchange of information is emphasised here, i.e. communication between a consumer and a sports organisation (Kolyperas et al., 2019, pp. 201-220; Urich, 2014, pp. 25-49), or, increasingly frequently, thanks to the free access to the Internet – between consumers and other consumers (Fine et al., 2017, pp. 280-295; Figueiredo & Scaraboto, 2016, pp. 509-533; Healy & McDonagh, 2013, pp. 1528-1540; Luo et al., 2011, pp. 2163-2191). There is a consensus among researchers that the problem of the consumer engagement on the sports market should be analysed from the perspective of the theory of relations (Figueiredo & Scaraboto, 2016, pp. 509-533; Edvardsson et al., 2011, pp. 327-339). The assumptions of this theory allow for a better understanding of the behaviours of both active and passive participants of sports events (Grohs et al., 2020, pp. 69-87; Graf & Maas, 2008, pp. 16-21). Another conviction which seems to be widely accepted by the sports market researchers is that the experiences and emotions expected by the consumers strongly affect their market behaviours (Martin et al., 2008, 224-236; Chanavat

& Bodet, 2014, pp. 323-344; Ellis & Rossman, 2008; Lee et al., 2010, pp. 685-696). The influence of the emotional factors on the consumer engagement process has been documented by many research studies (Gentile et al., 2007, pp. 395-410; Pine & Gilmore 1998, pp. 97-105; Prahalad & Ramaswamy, 2004).

Nevertheless, there is no clear consensus in literature whether the consumer engagement as a research problem should include the events and relations between the customer and the company with the exclusion of the purchase act, or the purchase should be treated as a part of this engagement (Kumar & Pansari, 2017, pp. 297-298; Haro et al., 2014, pp. 68-81; Vivek et al., 2012, pp. 133-145). The authors of this article believe that solving this dilemma may be difficult, because the purchase is an integral part of the relations and the engagement of both sides can be observed in the pre-transaction phase, during the transaction and in the post-transaction phase (Davis & Longoria, 2003, pp. 17-23). The consumers' activity on the market is determined by both external and internal factors.

According to Schwartz and Hunter, the internal conditions for the customer engagement on the sports market are related to both attitudes and behaviours (2008, pp. 90-98). The attitudes result from the customers' values and beliefs, whereas the motivation for the engagement is related to the expected benefits, so it sets the action targets.

In the discussion on the consumers' activity on the sports market and their share in the co-creation of customer value, two main types of motivation have emerged: hedonistic and social (Grohs et al., 2020, pp. 69-87; Gursoy et al., 2006, pp. 279-294). The hedonistic factors are a group of determinants of the consumer engagement related to satisfying the need for possession, the pleasure of consumption, a chance for self-expression, or the feeling of joy (Gursoy et al., 2006, pp. 279-294; Hirschman & Holbrook, 1982, 92-101; Voss et al., 2003, pp. 310-320). The other group of determinants are those related to the need for building relationships, including the social relations with other participants, the need for belonging to a group of sports fans, being a part of the community, e.g. runners orientated around a sport brand or idea (Van Doorn et al., 2010; Grohs et al., 2020, pp. 69-87; Hedlund, 2014, pp. 50-71; Djaballah et al., 2015, pp. 48-76). This group of factors also includes the need for helping other entities, e.g. sport event organisers, during the Covid-19 pandemic. It can be referred to as charity or the consumer's pro-social awareness. In the light of these considerations, the broadly understood concept of customer engagement in the area of sports is: multidimensional, dynamic, complex, and context-dependent. It is based on the relations between consumers, sports event organisers and other participants of the markets (Woratschek et al., 2014a, pp. 6-24; Woratschek et al., 2014b, pp. 1-5).

Case Study: Białystok Virtual Half-Marathon

The PKO Białystok Half-Marathon is an international event with a few thousand runners from a dozen or so countries starting every year. Since 2013 this event has been organised in May in one of the most beautiful regions of Poland – Podlasie. The quality and the prestige of the PKO Białystok Half-Marathon is manifested by numerous distinctions, among others the victory in the Poland-wide competition for the best half-marathon in Poland in 2017, or the fact that this run is included in the so-called Crown of Polish Half-Marathons (an exclusive group of 10 half-marathons). Although the event has been organised only 7 times so far, including one virtual event, each edition is perfectly prepared, so its organiser, the Białystok Biega Foundation, can be defined as a challenger, competing with the other prestigious runs and building its position on the market of running events in Poland and in Europe.

This year's eighth edition of the PKO Białystok Half-Marathon was planned for 8 May, but due to the global COVID-19 pandemic, this date has changed. At first, the organizers had postponed the event until 8 November. Nevertheless, the deteriorating situation forced them to reschedule it for 2021.

At the end of April, it was announced that there would be the 1st virtual PKO Białystok Half-Marathon between 8 and 24 May, so despite the cancelled event, so runners could test their physical condition in a safe environment. The participants could complete the distance of 21.1 km at once or divide it into three phases and run at anyplace in the world. The 3741 runners took part in the virtual half-marathon, which is by almost 450 more than in the 7th, record-breaking in terms of attendance, edition in 2019.

The organizers initiated various activities in the social media in order to build the participants' engagement. For example, they organized open-access online workouts with a Polish handball champion, encouraged runners to share their experiences from the virtual event, and promoted a charity event. These activities increased the popularity of the PKO Białystok Half-Marathon and enhanced participants' involvement.

The Method

With a view to finding the determinants of the runners' engagement in the Białystok Virtual Half-Marathon, research was conducted by means of the CAWI method. It was carried out in July and August 2020, i.e. within two months after the end of the virtual run, on the full population of the participants – 3741 runners. They received e-mails with a request for filling out the enclosed questionnaire and an assurance of a total anonymity. The properly filled

questionnaires were returned by 419 runners, including 152 women and 267 men, which accounts for the survey return rate 11%. The research tool was an e-survey.

For the purpose of this research, 17 factors have been selected, meant to explain the runners' engagement in the co-creation of the customer value, in relation to the product substitute, which is the Białystok Virtual Half-Marathon. The factors were constructed in such a way that they reflect not only the hedonistic and social motivations of the runners' behaviours, but also those described as utilitarian and emotional. The identification of the factors was based on the literature (Filo et al., 2011, pp. 491-518; Kim et al., 2016, pp. 180-201; Tjønndal, 2018, pp. 223-242), as well as reports and posts on portals for runners, describing their behaviours (www.runningusa.org; www.runbritain.com). Finally, the findings of one the authors own research, conducted among Polish runners three times in 2014, 2016 and 2018, on the samples from 891 to 4406 runners, were also used (Waśkowski, Profile of Polish Runners).

The respondents answered the questions on the 6-degree Likert scale, where 0 meant – the factor has no influence and 5 – the factor has a very big influence. The analysis of the collected research material was conducted in two phases. In the first one, the initial number of variables was reduced by means of the main constituents, using the VARIMAX rotation procedure. In the second phase, the non-hierarchical cluster analysis by means of k-means was applied. The conducted analyses included the commonly accepted independent variables, such as age and sex of the respondents.

The analyses allowed for: (a) the recognition of the determinants of the runners' engagement in the co-creation of customer value with reference to a virtual run, (b) the segmentation of the runners according to the behavioural factors shaping their involvement.

The Research Findings and the Discussion

The Determinants of the Engagement of Runners in the Co-creation of Customer Value

Statistical analyses were conducted with a view to defining the influence of studied factors. These analyses allowed for distinguishing four constituents, which most explicitly differentiate the runners' motivation and behaviours. The distribution of the studied seventeen variables is presented in Table 1.

Table 1 Descriptive statistics of the researched variables

Factors	N	Minimum	Maximum	Mean	Standard deviation
Reputation and the strong brand of the Białystok Half-Marathon	419	0	5	3.0955	1.79725
Positive publicity for the run among runners	419	0	5	3.0907	1.88456
Encouragement from friends, acquaintances	419	0	5	1.6945	1.95823
The date of the virtual run was close to that of the planned real one	419	0	5	2.4391	2.01383
No direct competition on the run route	419	0	5	1.5084	1.85653
The organiser's credibility and trustworthiness	419	0	5	3.4224	1.70155
The flexible term of the run (two weeks)	419	0	5	3.5203	1.72414
I had enrolled in the Białystok Half-Marathon	419	0	5	1.7351	2.19045
I personally know an organiser of the Białystok Half-Marathon	419	0	5	0.7971	1.61019
Encouraging promotion of the run	419	0	5	2.7828	1.8888
The feeling of solidarity and community with other runners	419	0	5	3.2363	1.72069
Solidarity with the organiser of the run	419	0	5	3.389	1.72207
Financial support for the organiser during the pandemic	419	0	5	3.284	1.80854
I was missing a sport competition	419	0	5	2.9189	1.83744
For fun	419	0	5	3.2506	1.70468
Testing my present physical condition	419	0	5	3.4153	1.65849
To get a starting package	419	0	5	2.0358	1.81597

Source: own elaboration

For the purpose of reducing the number of variables and identifying the correlations among them, the factor analysis was conducted, using the method of the main constituents, by means of the VARIMAX rotation. It resulted in distinguishing 4 constituents, accounting for ca. 60% variations of the variables (cf. Table 2). The Bertlett's test for sphericity was on the satisfactory level $KMO=0.869$. The first constituent explained the highest proportion of the variances – ca. 26%, which makes it the most significant factor differentiating the runners attitudes. For the purpose of the further discussion, the constituents which can be defined as meta-factors have been named in the following way:

- Meta-factor 1 – Image/support
- Meta-factor 2 – Competition
- Meta-factor 3 – Consistency
- Meta-factor 4 – Conformity

Table 2 The variance explained by specific constituents in the factor analysis

Meta-factor	Sums of squared loadings after rotation		
	Total	% variances	% accumulated
Image/support	4.382	25.776	25.776
Competition	2.379	13.997	39.773
Consistency	1.683	9.899	49.672
Conformity	1.672	9.834	59.506

Source: own elaboration

The structure of correlations obtained by means of the factor analysis is presented in Table 3. The structure is clear and no cross factor loadings over the value of 0.4 have been noted.

Table 3 The matrix of rotated meta-factors

Variable	Meta-factor			
	Image/support	Competition	Consistency	Conformity
Reputation and the strong brand of the Białystok Half-Marathon	0.806			
Positive publicity for the run among runners	0.714			
The organiser's credibility and trustworthiness	0.795			
Encouraging promotion of the run	0.614			
The feeling of solidarity and community with other runners	0.725			
Solidarity with the organiser of the run	0.826			
Financial support for the organiser during the pandemic	0.757			
I was missing a sport competition		0.741		
For fun		0.656		
Checking my present physical condition		0.812		
To get a starting package		0.562		
The date of the virtual run was close to that of the planned real one			0.578	
I had enrolled in the Białystok Half-Marathon			0.784	
I personally know the organiser of the Białystok Half-Marathon			0.639	
Encouragement from friends, acquaintances				0.523
No direct competition on the run route				0.824
The flexible term of the run (two weeks)				0.546

*factor loadings below 0.4 were omitted

Source: own elaboration

The analysis identified the motivation for the runners' behaviours in relation to their participation in the virtual run. As a matter of fact, the four meta-factors describe a larger number of individual factors, determining the runners' engagement in the co-creation of the consumer value, as each meta-factor refers to a group of synonymous factors. The meta-factors can be interpreted in the following way:

Image/support – accounts for as many as 26% of the variances. The factors included in this group can be divided into two categories: internal and external. The internal ones, derived from the runners' beliefs and convictions, are: an expression of solidarity and a feeling community with the other runners, as well as the financial support for the organiser during the pandemic. As for the external ones, independent of the runners, they include: the reputation and the brand of the run, a good opinion it enjoys among other runners, the organiser's credibility and the organiser's encouraging promotional activities. As it can be seen, the runners' engagement is strongly affected by the objectives which can be defined as social (care for the others, offering support). They correspond to the organiser's reputation and their marketing actions. It proves the huge significance of the image of a running event. The more positive it is, and the stronger and the more recognisable is its brand, the easier it is for the organiser to attract participants, even if the offered product is a mere substitute, in this case a virtual run.

Competition – makes up 14% of the variances. It is noticeable that the factors describing it are concentrated around one larger type of motivation: a need for a confrontation with the other runners, entertainment, or the need for possession. The runners' own, hedonistic needs can be seen here. In the situation when there is no chance for the participation in a traditional run, these needs are strong enough to account for the runners' involvement in a virtual event.

Consistency – accounts for 10% of the variances. The analysis of the factors focused around this variance leads us to a conclusion that these motifs of the runners' behaviours can be described by the well-known in psychology rule of commitment and consistency (Cialdini, 2016). In this case, the runners' commitment and their participation in the virtual run resulted from the fact that they had already decided to take part in this event, by signing up for the traditional run. The fact that the date of the earlier scheduled traditional run was the same as that of the virtual event additionally motivated the runners, because it fitted in the schedule of the runs, created by the majority of runners for the whole year. The personal relationship with an organiser has a similar function.

Conformity – also accounts for 10% of the variances. The conformist motifs for the runners engagement and their participation in the run can be observed here. They are related with comfort and submission to the other people, known to the respondents. The opportunity of running the half-marathon in the set time of two weeks gives the participants a freedom of choosing the most suitable date for the run. Moreover, avoiding the direct competition on the route, however valued by some runners, might motivate other runners, especially the beginners or those who run more slowly. The encouragement from the others might finally be a decisive factor in favour of the participation for the hesitating runners. In the end, a few conformist factors accounted for the engagement of this group of runners. The structure of the meta-factors reveals a great heterogeneity of the factors determining the runners' engagement. This discovery has its theoretical and practical implications.

The Segmentations of the Runners by Means of the Meta-factors

The identified four meta-factors allowed for the segmentation of the runners by means of the method of the non-hierarchical k-means cluster analysis. 4 analyses were conducted (from 3 to 6 groups). The most stable results were obtained for 4 groups. These results are presented in Table 4.

Table 4. The values of the centroids for specific segments

Meta-factors	Fighters	Relaxing	Conformists	Egocentrics
Image/support	0.35012	-1.23354	-0.06158	0.88254
Competition	0.723	-0.57118	0.24662	-0.91418
Consistency	-0.46345	0.05307	0.30818	0.51939
Conformity	-0.37991	-0.47733	1.45724	-0.0933

Source: own elaboration

The analysis revealed four segments of runners:

Fighters – this segment consists of people strongly orientated for their own physical activity, related to: the competition, achievements, for their health, shape, etc. These runners choose sports events with a strong position on the market and a good reputation, offering high quality. In the group of respondents this segment dominated, accounting for 37% of the total. Middle-aged (35-44) men dominate (72%) this group of runners.

Relaxing – this segment comprises people less concerned with the sports achievements, but rather focused on pleasure and fun. Running plays a relaxing role for them and their well-being is more important for them than competition, or a presence at a prestigious event. These runners are consistent in their actions and they try to abide by the earlier decisions, regardless of the changing circumstances. This group makes up 24% of all the respondents, 64% of which are men and 36% - women. The most frequently represented age group is 35-44.

Conformists – the third group of respondents includes runners with a relatively low level of engagement, vulnerable to the difficulties resulting from the participation. In order to make a decision, they need a number of alternative options, otherwise they withdraw and do not involve themselves at all. They are characterised by individualism, although they are also susceptible to influence. This segment is represented by 19% of the total number of respondents, with the sex structure: 51% - men and 49% - women.

Egocentrics – This segment consists of people who take part in a run due to its prestige and the benefits from the participation in an important, exclusive event. What matters for them most is the mere fact of the participation and the pleasure of meeting other runners at an event with a good reputation and a strong brand. This segment includes 20% of the respondents, with the majority of men (63%) and a smaller proportion of women (37%), most frequently middle-aged. The segment structure of the researched group is presented in Table 5.

Table 5: The number of runners in the segments

Segment	No. of respondents	Proportion of respondents
Fighters	157	37%
Relaxing	100	24%
Conformists	79	19%
Egocentrics	83	20%
Total	419	100%

Source: own elaboration

Practical implications

During the Covid-19 pandemic, managers of running events are facing a very challenging task. They need to organise a run, without a direct contact with the runners, at any stage of the organisation. At the same time, the runners have no contact with each other. In a situation where the underlying elements of a running event value, such as: the joys of the co-participation, having fun together, direct competition at the run route, meeting new people, or building relationships cannot be offered to the participants, the key question is: what can motivate runners to take part in a virtual run? The research findings presented in the article give an answer to this question. The conclusions from this research may be used by managers as the clues as to why runners want to participate in a virtual run, even though it is only a substitute to a traditionally organised event. The research results can be regarded as innovative and revealing, as they have disclosed principles never before identified. They should turn out to be useful, especially in the communication with the runners, as a source of arguments which will effectively encourage them to participate in a virtual run.

The managers of sports events should bear in mind that, in compliance with the Dominant Service Logic (Vargo & Lusch, 2018, pp. 1-17), while making an offer of value to the runners, they should emphasise both the hedonist and the social benefits. The hedonist factors, which can convince runners to take part in an event, concentrate around such values as: the image and the reputation of the run, the flexible time of the event, the feeling of satisfaction from the participation, and a chance for testing one's own physical condition. The joy of competition, fun, and the time spent together should not be stressed, as they cannot be guaranteed by the organiser of the event.

As far as the social factors are concerned, the organisers should stress the chance for expressing solidarity with the other runners and with the organisers of the running events, who are in a difficult situation as a result of the Covid-19 pandemic, as well as manifesting their belonging to the community of runners.

On the basis of the knowledge of the four selected segments of runners, the managers of the running events should adequately diversify their marketing messages. Different arguments should be addressed to conformists, to egocentrics, to fighters, or the relaxing type of runners. What is key here is the runners' readiness to engage in the co-creation of the customer value, otherwise, according to the theory, the organisers' efforts will be limited to making an offer of creating value (Greenwell et al., 2014).

Limitations and the Directions for Further Research

The conducted research allowed for the identification of four meta-factors which, to a large degree, describe the runners' involvement in the co-creation of value of a virtual run. However, further research would be desired, so as to verify the universality of these meta-factors. It is possible that they are spatially conditioned, which means that they do not necessarily describe the runners' behaviours in different parts of the world. Another limitation of the interpretation of the research findings presented in the article is the range of the Białystok Virtual Half-Marathon. Except for a small group of 20 foreign participants, the rest of the runners were from Poland. Other research studies show that the motivation for a participation in a run organised abroad, which is more expensive and time-consuming, is different from the motives of the runners who live in the vicinity of the run (Shipway & Jones, 2007, pp. 373-382). It is probable that the same is true of the virtual runs. The strength of the determinants of the runners' engagement in a global event, such as the virtual marathons in London, Tokyo, Chicago, or New York might not be the same as those identified by the research presented in this article. The list of seventeen hedonist, social, utilitarian and emotional factors determining the runners engagement created for the purpose of the research, after the analysis has been reconfigured, losing the clarity of the division. On the one hand, it confirms the suspected complexity and multidimensionality of the researched phenomenon. On the other, it makes interpretation more difficult and reduces the cognitive value of the research findings. Another still unsolved problem is the volatility of the runners' behaviours over time. The virtual runs remain a substitute to the traditionally organised running events. Those events ensured direct competition, the accompanying events, and the presence of the public, which created an unforgettable atmosphere and guaranteed strong emotional feelings to the participants. There is a risk of a phenomenon described in literature as diffusion of innovation and, in a short time, the virtual runs might lose its appeal to the runners. Alternatively, the formula of their organisation might evolve, which would entail some changes in the runners' engagement and its determinants.

Nevertheless, it is justified to continue research into the determinants of the consumer engagement in the co-creation of virtual value. This problem is still valid and still far from recognised.

Conclusions

The concept of the consumer engagement, which is the subject of this article, assumes that consumers are willing to involve themselves in the value-creation processes, which are expected to bring them benefit and satisfy their needs. The strength and the scope of the customer engagement are the key factors determining the end effect of the effort made by both sides. However, these factors depend on other determinants which shape the customer's willingness to get involved.

The findings of the research into the Polish runners, presented in this article, allowed for the identification of the major factors accounting for the behaviours of the participants of virtual running events. These are:

- a. Seeking the lost benefits, which would normally be provided by the traditionally organised running events,
- b. A will and a need for keeping up the relations with the community of runners, in the virtual space, thanks to the new formula of the runs,
- c. Periodical testing of their physical condition and confronting it with the other runners, which satisfies the runners' need for testing themselves,
- d. The feeling of community and the willingness to support others, in this case the event organisers, who are presently in a difficult economic situation.

The research results should be deemed innovative, as they refer to the new reality on the sports events market, caused by the Covid-19 pandemic. The area of the consumer behaviours in the conditions of the pandemic and, after some time, post-pandemic is a new, interesting and significant research problem, as it includes unrecognised mechanisms shaping the behaviours of the market entities. Sports as an economic sector is one of such areas and sports organisations express their interest in the research findings explaining the behaviours of consumers in the entirely unrecognised reality.

Both the identified determinants of the runners' engagement in the co-creation of customer value and the proposed segmentation of the runners are a significant contribution to the current state of knowledge. Moreover, they may become an incentive for further research.

Bibliography

- Alon, A. T., & Brunel, F. (2007). Dynamics of community engagement: The role of interpersonal communicative genres in online community evolutions. In R. W. Belk, & J. F. Sherry (Eds.), *Consumer culture theory (research in consumer behavior)*. 11, 371–400. Bingley: Emerald Group Publishing Limited.

- Ballantyne D., Frow P., Varey R.J., Payne A. (2011), *Value propositions as communication practice: Taking a wider view*, Industrial Marketing Management, No. 40(1).
- Bove, D. (2013). Value co-creation in the Australian Football League (AFL): A service-dominant logic (SDL) approach to an old problem. ESMQ Special Issue: Value co-creation in sport management. *Marketing*, 73(5), 30–51.
- Brodie R.J., Hollebeek L. D., Jurić B., Ilić A. (2011), *Customer engagement: conceptual domain, fundamental propositions, and implications for research*, Journal of Service Research, No. 14(3).
- Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66, 105–114.
- Chanavat, N., & Bodet, G. (2014). Experiential marketing in sport spectatorship services: A customer perspective. *European Sport Management Quarterly*, 14(4), 323–344.
- Cialdini, R., (2016), Wywieranie wpływu na ludzi, Teoria i praktyka. Gdańskie Wydawnictwo Psychologiczne, Gdańsk.
- Davies, M., Hungenberg, E., & Aicher, T. (2019). The relationship between runner environmental paradigm and their motives to participate in an urban or rural marathon. *International Journal of Event and Festival Management*, 10(1), 48-66.
- Davis, S., Longoria, T. (2003). Harmonizing your “touchpoints”. *Brand Packaging*, 1, 17-23.
- Djaballah, M., Hautbois, C., & Desbordes, M. (2015). Non-mega sporting events’ social impacts: A sensemaking approach of local governments’ perceptions and strategies. *European Sport Management Quarterly*, 15(1), 48–76.
- Edvardsson, B., Tronvoll, B., & Gruber, T. (2011). Expanding understanding of service exchange and value co-creation: A social construction approach. *Journal of the Academy of Marketing Science*, 39, 327–339.
- Eggert, A., Ulaga, W., Frow, P., & Payne, A. (2018). Conceptualizing and communicating value in business markets: From value in exchange to value in use. *Industrial Marketing Management*, 69, 80–90.
- Ellis, G. D., & Rossman, J. R. (2008). Creating value for participants through experience staging: Parks, recreation, and tourism in the experience industry. *Journal of Park and Recreation Administration*, 26(4).
- Figueiredo, B., & Scaraboto, D. (2016). The systemic creation of value through circulation in collaborative consumer networks. *Journal of Consumer Research*, 43(4), 509–533.
- Filo, K., Funk, D. C., & O'Brien, D. (2011). Examining motivation for charity sport event participation: A comparison of recreation-based and charity-based motives. *Journal of Leisure Research*, 43(4), 491-518.
- Füller, J., Jaweckı, G., & Mühlbacher, H. (2007). Products and services development in collaboration with online communities. *Décisions Marketing*, 48, 47–58, Octobre-Décembre,.
- Garcia Haro, M.A., Martinez Ruiz, M.P., Martinez Canas, R., Value Co-Creation Process: Effects on the Consumer and the Company, *Expert Journal of Marketing* (2014) 2 , 68 -81.
- Gentile, C., Spiller, N., & Noci, G. (2007). How to sustain the customer experience: An overview of experience components that co-create value with the customer. *European Management Journal*, 25(5), 395–410.
- Graf, A., Maas, P., (2008), Customer value from a customer perspective: a comprehensive review, Working papers on risk management and insurance no. 52, University of St. Gallen, Institute of Insurance Economics.
- Greenwell, T.Ch, Danzey-Bussell, L.A., Shonk, D.J., (2014). *Managing Sports Events*, Human Kinetics, Champaign.
- Grönroos, C. (2008). Service logic revisited: Who creates value? And who cocreates? *European Business Review*, 20(4). 298–314.
- Grunross, C., (2011). Value co-creation in service logic: a critical analysis, *Marketing Theory*, 11, 294.
- Gummerus, J. (2013). Value creation processes and value outcomes in marketing theory: Strangers or siblings? *Marketing Theory*, 13(1), 19–46.
- Gursoy, D., Spangenberg, E. R., & Rutherford, D. G. (2006). The hedonic and utilitarian dimensions of attendees’ attitudes toward festivals. *Journal of Hospitality & Tourism Research*, 30(3), 279–294.
- Hallmann, K., & Zehrer, A. (2017). Event and community involvement of sport event volunteers. *International Journal of Event and Festival Management*, 8(3), 308-323.
- Harmeling, C. M., Moffett, J. W., Arnold, M. J., & Carlson, B. D. (2017). Toward a theory of customer engagement marketing. *Journal of the Academy of Marketing Science*, 45(3), 312-335
- Healy, J. C., & Mcdonagh, P. (2013). Consumer roles in brand culture and value co-creation in virtual communities. *Journal of Business Research*, 66(9), 1528–1540.
- Hedlund, D. P. (2014). Creating value through membership and participation in sport fan consumption communities. *European Sport Management Quarterly*, 14(1), 50–71.
- Heinonen, K., Strandvik, T., & Voima, P. (2013). Customer dominant value formation in service. *European Business Review*, 25(2), 104–123.
- Hilton, T., Hughes, T., & Chalcraft, D. (2012). Service co-creation and value realisation. *Journal of Marketing Management*, 28(13–14), 1504–1519.

- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, methods and propositions. *Journal of Marketing*, 46(3), 92–101.
- Horbel, C., Popp, B., Woratschek, H., & Wilson, B. (2016). How context shapes value co-creation: Spectator experience of sport events. *The Service Industries Journal*, 36(11–12), 510–531.
- Ida, E. (2017). The role of customers' involvement in value co-creation behaviour is value co-creation the source of competitive advantage? *Journal of Competitiveness*, 9(3), 51-66.
- Ida, E., The Role of Customers' Involvement in Value Co-creation Behaviour is Value Co-creation the Source of Competitive Advantage? *Journal of Competitiveness*, Vol. 9, Issue 3, pp. 51
- Jaakkola E., Alexander M., (2015). *The Role of Customer Engagement Behavior and Value Co-Creation. A Service System Perspective*, *Journal of Service Research*, 17(3).
- Kambil A., Freisen B, Sundaram A., (1999), Co-creation a new source of value, *Outlook*, (2), pp. 38-43
- Kim, S., Liu, J. D., & Love, A. (2016). The impact of event prestige on intent to continue sport participation. *Journal of Sport Behavior*, 39(2), 180-201.
- Kolyperas, D., & Sparks, L. (2018). Exploring value co-creation in Fan Fests: The role of fans, *Journal of Strategic Marketing*, 26(1), 71–84.
- Kolyperas, D., Maglaras, G., & Sparks, L. (2019). Sport fans' roles in value co-creation. *European Sport Management Quarterly*, 19(2), 201–220.
- Kumar V., Aksoy L., Donkers B., Venkatesan R., Wiesel T., Tillmanns S., (2010). *Undervalued or Overvalued Customers: Capturing Total Customer Engagement Value*, *Journal of Service Research* 13(3).
- Kumar V., Pansari A. (2017), *Customer engagement: the construct, antecedents, and consequences*, “*Journal of the Academic Marketing Science*”, No. 45 (3).
- Lee, J. S., Lee, C. K., & Choi, Y. (2010). Examining the role of emotional and functional values in festival evaluation. *Journal of Travel Research*, 50(6), 685–696.
- Luo, M. M., Chen, J. S., Ching, R. K., & Liu, C. C. (2011). An examination of the effects of virtual experiential marketing on online customer intentions and loyalty. *The Service Industries Journal*, 31(13), 2163–2191.
- Martin, D., O'Neill, M., Hubbard, S., & Palmer, A. (2008). The role of emotion in explaining consumer satisfaction and future behavioural intention. *Journal of Services Marketing*, 22(3), 224–236.
- McKelvey, S., Sandler, D., & Snyder, K. (2012). Sport participant attitudes toward ambush marketing: An exploratory study of ING New York City marathon runners. *Sport Marketing Quarterly*, 21(1), 7-18.
- Neghina C., Caniels M. C. J., Bloemer J. M. M., & Van Birgelen M. J. H. (2014). Value co-creation in service interactions: Dimensions and antecedents. *Marketing Theory*, 15(2), 1-22.
- Pine, B. J., & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*, 76(4), 97–105.
- Potra, S., Pugna A., Negrea R., Izvercian M., (2018) Customer perspective of value for innovative products and services, *Procedia - Social and Behavioral Sciences* 238, 207 – 213
- Prahalad, C. K., & Ramaswamy, V. (2004). *The future of competition: Co-creating unique value with customers*. Boston: Harvard Business School Press.
- Pronschinske, M., Groza, M. D., & Walker, M. (2012). Attracting facebook 'fans': The importance of authenticity and engagement as a social networking strategy for professional sport teams. *Sport Marketing Quarterly*, 21(4), 221-231.
- Reinhard Grohs, Verena E. Wieser & Matthias Pristach, Value cocreation at sport events, *European Sport Management Quarterly*, 2020, VOL. 20, NO. 1, 69–87
- Schwartz E.C, Hunter J.D., (2008), *Advanced theory and practice in sport marketing*, Butterworth-Heinemann, Burlington.
- Shipway R., and Jones I., (2007), *International Journal of Tourism Research*, *Int. J. Tourism Res.* 9, 373–383
- Smith J.B., Colgate M. (2007): Customer Value Creation: A Practical Framework. *Journal of Marketing Theory and Practice*, Vol. 15, No. 1, pp. 7-23
- Stander, F. W., & de Beer, L.,T. (2016). Towards engagement: A comparison of fan groups in the context of a major south african football club. *SA Journal of Industrial Psychology*, 42(1), 1-10.
- Stieler, M., & Germelmann, C. C. (2018). Actor engagement practices and triadic value co-creation in the team sports ecosystem. *MARKETING ZFP – Journal of Research and Management*, 40(4), 30–43.
- Tjønnedal, A., (2018). Identifying motives for engagement in major sport events. *International Journal of Event and Festival Management*, 9(2), 223-242.
- Toffer, A., (1980), *The third wave*. New York, NY: William Morrow
- Uhrich, S. (2014). Exploring customer-to-customer value co-creation platforms and practices in team sports. *European Sport Management Quarterly*, 14(1), 25–49.
- Van Doorn, J., Lemon, K.N., Mittal, V., Nass, S., Pick D., Pirner, P., Verhoef, P.C. (2010). Customer engagement behavior: theoretical foundations and research directions. *Journal of Service Research*, 13, 3.

- Vargo, S. L. & Lusch, R. F. (2008). Service-Dominant Logic: Continuing the Evolution. *Journal of the Academy of Marketing Science*, 36(1), 1-10.
- Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of servicedominant logic. *Journal of the Academy of Marketing Science*, 44(1), 5–23.
- Vargo, S. L., Maglio, P. P., & Akaka, M. A. (2008). On value and value co-creation: A service systems and service logic perspective. *European Management Journal*, 26, 145–152
- Vargo, S.L. & Lusch, R.F. (2016). Institutions and axioms: an extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, 44(1), 5-23.
- Vargo, S.L., Lusch, R.F., (2018), Evolving to a New Dominant Logic for Marketing, *Journal of Marketing*, 68, 1-17.
- Verhoef, P.C., Reinartz, W.J., Krafft, M. (2010). Customer engagement as a new perspective in customer management. *Journal of Service Research*, 13, 3, 249–250.
- Vivek, S.D., Beatty, S.E., Morgan, R.M. (2012). Customer engagement: exploring customer relationships beyond purchase. *Journal of Marketing Theory and Practice*, 20, 2.
- Voss, E., Spangenberg, E. R., & Grohmann, B. (2003). Measuring the hedonic and utilitarian dimensions of consumer attitude. *Journal of Marketing Research*, 40(3), 310–320.
- Waškowski, Z., (2014, 2016, 2018). *Profile of Polish Runners, Research reports*. Poznan University of Economics and Business.
- Woratschek, H., Horbel, C., & Popp, B. (2014). The sport value framework—A new fundamental logic for analyses in sport management. *European Sport Management Quarterly*, 14(1), 6–24.
- Woratschek, H., Horbel, C., & Popp, B. (2014a). The sport value framework – a new fundamental logic for analyses in sport management. *European Sport Management Quarterly*, 14(1), 6–24.
- Woratschek, H., Horbel, C., & Popp, B. (2014b). Value co-creation in sport management. *European Sport Management Quarterly*, 14(1), 1–5
- Woratschek, H., Horbel, Ch., Popp, B. (2016). The sport value framework: a new fundamental logic for analyses in sport management, *European Sport Management Quarterly* 14(1) 6-24
- Xie, C., Bagozzi, R.P., Troye, S.V., (2008), Trying to prosume: toward a theory pf consumers as co-creators of value, *Journal of the Academy of Marketing Science*, 36(1), pp. 109-122
- Yoshida, M., James, J., & Cronin, Jr., J. (2013). Value creation: Assessing the relationships between quality, consumption value and behavioural intentions at sporting events. *International Journal of Sports Marketing and Sponsorship*, 14(2), 51–73
- Zomerdijk L. G., Voss Ch. A. (2010), *Service Design for Experience-Centric Services*, *Journal of Service Research*, No. 13(1)

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