Methodology for studying shifting customer engagement behavior on Instagram

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Customer engagement (CE) has witnessed enormous growth on social media (SM) as new tools such as reels, carousels, IGTV have prompted people to spend more time on different platforms. Many brands have reconsidered their approaches to marketing on SM to adapt to the new trends in the environment. One of the fields of business that has significant reliance on social media to attract customers is the hospitality industry. Namely restaurants use various promotion ploys to encourage higher engagement of customers and based on various analytical instruments – to precisely target their communication activities. The aim of this paper is to showcase and analyze the shifting customer engagement behavior on Instagram of popular Bulgarian restaurants and propose particular marketing communication activities. The methodology can be applied in other businesses within the hospitality industry worldwide.

 Key words: customer engagement, social media, Instagram

JEL Code: M14, M31, M37, M29

Introduction

Managing relationships between an organization and its current and potential customers is an ever-growing area of interest among marketing practitioners as there are increased opportunities to establish contact with them. In practice social media (SM) offers the most flexible and convenient ways of connecting with customers as technological transformations manifested by advanced online analytics, A.I. (artificial intelligence), ML (machine learning) and big data allow for very precise gauging of customer behavior, emotions, attachment and other important measures permit establishing in-depth engagement with clients.

Social media marketing (SMM) has undergone rapid transformations in recent years. Users spend more and more time on them to express their opinion, impressions and standpoints on topics of interest to them (Pelletier et al., 2020). However, with the development of SM, the number of brands that utilize the different platforms for marketing is growing. That is also

emerging within the context of integrated communication strategy and refers to commercial behavior expressed on and through social networks and media platforms (Felix, Rauschnabel and Hinsch, 2017). As a separate field of the company's marketing program, SMM enables companies to constantly increase their popularity and recognition. As a result, CE has become a key indicator and concept that every successful brand aims to improve in order to strengthen its brand image and relationship with its current and future SM audience. In this context, the scientific community defines the term 'engagement' as a key indicator used to identify the extent to which a brand and consumers are organically linked. Over the past few years, in a pandemic environment, we have witnessed many changes with the social network Instagram. The various possibilities offered by the content creation platform, such as photos, stories, IGTV and now Reels, have made users spend more time on SM. Brands also had to adapt very quickly to these environmental changes because the risk of missing the opportunity to increase their CE. The variety of types of posts on Instagram suggests that brands needs to create more content that is interesting, diverse and most of all - engaging. The latter makes it is difficult for businesses to determine the best strategy to focus their resources on. In this regard, and based on the practical experience of the authors, the paper attempts to present good practices on the Bulgarian market by studying the factors influencing changes in customer engagement towards popular restaurants on Instagram.

1. CONCEPTUAL UNDERPINNINGS OF CE ON SOCIAL MEDIA

Customer relationship management (CRM) has generated large academic interest in the years after 2000 (Xu et al., 2002; Payne and Frow, 2006; Guerola-Navarro et al., 2021). Various classifications have been made encompassing: the methodologies used, industries covered, statistical methods applied, etc. (Meena and Sahu, 2021). One of the central topics in CRM is tailoring the offerings of companies to the individual needs of clients and encouraging higher CE. Some authors postulate that CE plays a central role in reinforcing customer experience as part of the highly interactive business environment (Brodie et al., 2011). Customer engagement behavior has been extensively studied while some scholars suggest recognizing the impact and evolution of the relationships across their lifespan (Van Doorn et al., 2010).

Customer engagement has been widely defined as the behavioral expression concerning the brand which extends beyond merely doing business (Brodie et al., 2011). The definition extends towards: (1) reviews; (2) posting information on blogs; (3) reposting; (4) recommendations, etc. (Van Doorn et al., 2010). More recent characterizations of CE include

the purposeful efforts of companies to encourage, empower and measure customer contributions to marketing (Harmeling et al., 2017). Conversely, some scholars argue that there is no uniform definition of CE and therefore suggest the term "customer engagement ecosystem" incorporating brand activities, customer brand experience, shopping behavior (among other factors) to explicate interactions within the ecosystem (Maslowska, Malthouse and Collinger, 2016). For all intents and purposes, customer engagement embodies actions and reactions between companies and customers which requires nurturing, cultivation and management. Recent studies also suggest establishing a customer engagement strategy through charting the various stages of customer relationships along the phases of the customer journey (Venkatesan, 2017). Other authors take a more narrow view of CE and explore service experience and emotional attachment as determinants of customer engagement (Kumar et al., 2019). Therefore, both academics and practitioners entail efforts to not only conceptualize the meaning of CE but also to bring about understanding its impact on marketing function (especially in terms of co-creation of value and aiding communication strategies), sales, branding investments, managing relationships with audiences, etc.

In the majority of studies, CE is commonly associated with SM which offers multiple opportunities to improve the overall customer experience. Likewise, untapped potential can be found in terms of using CE in the process of co-creation of value (Yen, Teng and Tzeng, 2020). CE is furthermore found to be triggered by customer satisfaction, trust and positive emotions in online setting (de Oliveira Santini et al., 2020). Extant literature also witnesses simmering interest in the ways SM enables CE (Sashi, Brynildsen and Bilgihan, 2019). In particular Facebook and Instagram have gained the most substantial attention for customer-brand interactions (Sashittal and Jassawalla, 2020). Above and beyond interactions between brands and visitors, SM has further encouraged CE as it also permits communication and relationship building between users (Prentice, Wang and Lin, 2018). In view of this, SM has evolved towards giving customers opportunities to share stories, reels and generate interactive content which is a powerful manifestation of CE. The latter needs to be managed amply in terms of application of the communication approaches.

As stated earlier, SM offers a strong communication platform with the capacity to establish personal contacts with the audience which is often referred to as CE. In view of this, a key method of broadening the audience is grouping in the so-called "communities of virtual brands" in the form of fan pages (Brodie et al., 2013), turning them into followers, or fans,

and finally - increasing the frequency of connections (Demmers, Weltevreden and van Dolen, 2020). In this regard, scholars have identified that content (including vividness of photos) plays a central role on SM as a way to prompt dialogue and encourage communication (Annamalai et al., 2021). Consequently, the study of the CE towards the content of a given brand becomes a crucial parameter for assessing the performance of that brand on SM. An indicator of its importance to academics and marketers is its recent inclusion as a significant research factor by the Institute of Marketing Sciences for the period 2020-2022 (MSI, 2021).

Various studies on the phenomenon of CE have revealed that planning content of a brand is considered to be its main success driver. For this reason, engagement is a critical component of social media content marketing strategy (Shahbaznezhad, Dolan and Rashidirad, 2021). In addition, recent studies on the effectiveness of online advertising show that the time of day or week when brand content is published can predict social media engagement (Kanuri, Chen and Sridhar, 2018). In this respect - social media marketers are well aware of the so-called hours of low engagement, regardless of the industry in which the brand is positioned. Yet, content planning on social media has not been systematically addressed in the academic literature, which needs to recognize the drivers of effective social media planning to justify the return on social media investment (Mochon et al., 2017). On the other hand, many studies in the field have focused on the impact of message length on engagement (Pancer et al., 2019; Gkikas et al., 2022). These studies stress on the existence of a positive relationship between the two variables: text length in the publication and CE. However, in the recent research on the impact of organic content factors engagement is mainly limited to describing the frequency of their use in publications (Cao et al., 2021).

The need to explore key content metrics is urgent, given the call of communication professionals for effective planning strategies that inspire CE and ultimately – lead to better sales performance. Additionally, precise models are needed in view of time-related interactions between customers and brands. Therefore, the purpose of this paper is to attempt to propose a model for increased CE by analyzing three business accounts from the same industry (restaurants) relying on date on the social network Instagram. The idea of the authors is to cover as large a perimeter as possible, as the studied business accounts are of different size, frequency of publication and number of publications. Thus it is intended to design a model that can be applied by other market players in different service industries and by virtue of it – increase CE. To achieve this, the following objectives are set: (1) Understand whether

publication planning/length of text message have an impact on CE; (2) To compare models related to the time and extension of these messages, achieving the highest interaction on Instagram; (3) To understand whether Bulgarian restaurant brands effectively use the analyzed factors that stimulate social network engagement; (4) To provide new knowledge/know-how to academics and professionals for the effective management of the analyzed factors that can optimize marketing strategy on SM.

2. RESEARCH METHODOLOGY FOR STUDYING CE ON SM

Planning SM is a key element of an overall digital marketing strategy because it can increase companies' performance even without substantially increasing the budget (Kanuri, Chen & Sridhar, 2018). Based on the information so far and the set goals, a conceptual model for researching Instagram's engagement in the restaurant business/industry has been developed.

CONCEPTUAL MODEL
Research of the engagement in Instagram
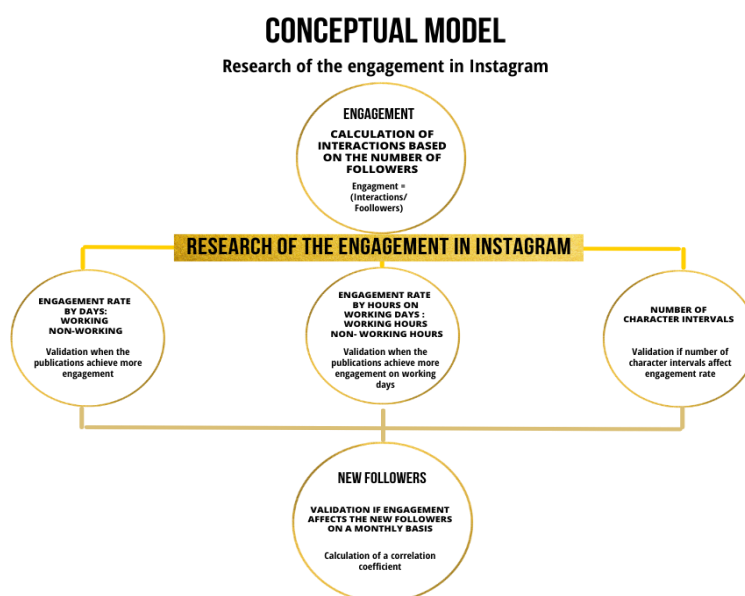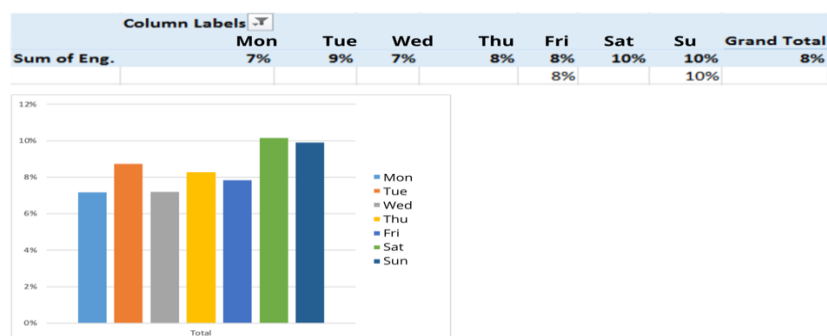
Source: Own elaboration

The stages of model development include: (1) Collection and summarization of raw data from 3 different brands in the same industry: publication ID, day of publication, time of publication, length of the text, reach, likes, comments, and sharing. Calculating the number of interactions for each post as a sum of likes and comments; the number of followers, and new followers on a daily basis; (2) Identification of content factors that may affect Instagram CE; (3) Calculation of the CE for each publication according to the formula Engagement = number of interactions/number of followers, conversion of the value into percentages; (4) Design of pivot table for that checks which weekday has the largest CE for the relevant brand. Studying the summarized data for the whole population has been performed. Checking

whether the obtained initial data are statistically significant, using a standard T-test, which groups CE on working days and non-working days; (5) Studying whether the "time of publication" factor affects CE; (6) Studying how the length of the publication affects CE (a pivot table is created for the individual brands summarizing data for all brands, in order to test the existence of dependency, grouping the length of posts by 400 characters); (7) Analyzing CE, interactions, and new followers for a certain period.

3. RESULTS AND DISCUSSION

In order to achieve the set objectives and find the possible relationship between the studied variables, the authors classify the content factors created by the brand, i.e. controlled by the company (independent variables) and the communication generated by the user or CE, i.e. uncontrolled by the company (dependent variable). This classification is in line with previous SM engagement studies (Shahbaznezhad, Dolan & Rashidirad, 2020; Cuevas-Molano, Matosas-López & Bernal-Bravo, 2019). Interactions with each publication were analyzed in order to determine which elements received more CE (N = 1032). Interactions were calculated based on the number of followers that each fan page had at particular times (Sabate et al., 2014) using the following formula: *Engagement = number of interactions/number of followers* (IAB Spain 2020a, p.8). In the study of the whole population, it was observed that a greater activity or degree of engagement of followers was achieved on Saturday (10.0%) and Sunday (10.0%) (Figure 1). These findings do not confirm that content published on weekdays is more engaging. Calculations show that there is approximately 28% higher engagement on weekends. To calculate whether this percentage was statistically significant, the authors used a T-test, $P = 0.0170$. Based on the information, although companies focus their publications on weekdays, they may consider publishing content on weekends as well.

Fig. 1: Weekly customer engagement

Source: Own elaboration

Concerning the "working and non-working hours" factor, the same method as on the "day" factor is applied to check whether the selected restaurants use the time ranges for publication. For this purpose, the total CE in the 3 restaurants is considered, grouped by two factors "working day" + "working time" and "working day" and "non-working time" as a % ratio. It was established that the posts have a higher engagement on working days during non-working hours; for this reason, it is germane to plan the weekly content in this time range. The data proves that a higher engagement with the target audience shall be achieved on Instagram if the content is published during non-working hours of a working day.

Fig. 2: CE according to different time slots of the day

Column Labels		
	Working day + working hours	Working day + non-working hours	Grand Total
Average of Eng.	7,0%	9,5%	8%
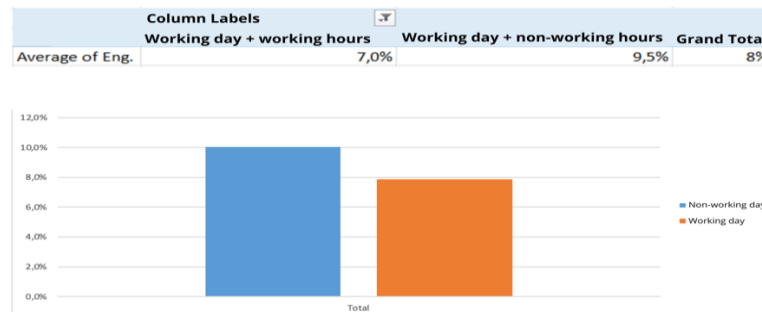
Source: Own elaboration

In terms of the length of the publication, the authors have examined how it affects the CE of different restaurants. The authors group the "publication length" factor by 400 characters. Figure 5 visualizes that shorter posts, less than 400 characters, and longer ones, more than 1200 characters, achieve higher CE. In addition, this analysis allows to recommend restrictions on the extension of the publication in order to achieve greater CE.

Fig. 3: CE according to character intervals

Source: Own elaboration

593
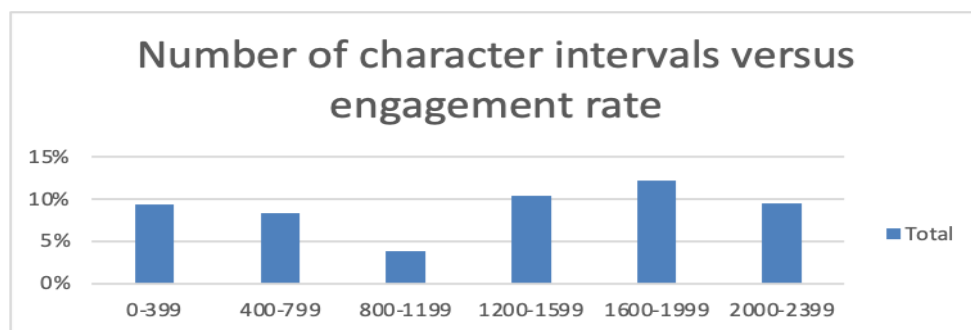
In order to plan a proper marketing strategy for Instagram of a brand in the restaurant business, we consider the total CE by months of the respective brand. Figure 3 shows a sharp decline in the engagement at the end of the period. Figures 4 and 5 show that although the followers for the period increase, the iterations decline, which in turn leads to a decrease in engagement. This causal relationship affects the number of new followers for a future period.
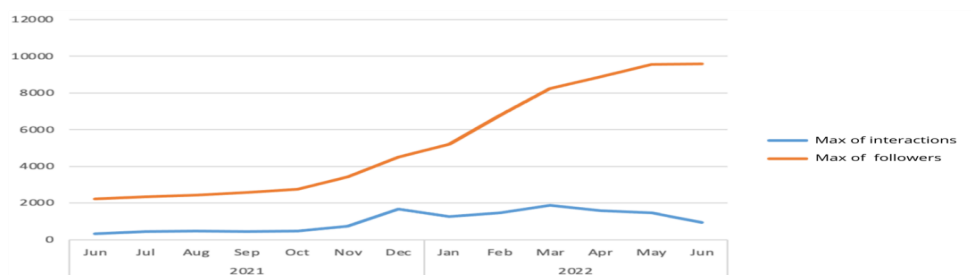
Fig. 4: CE across the studied period
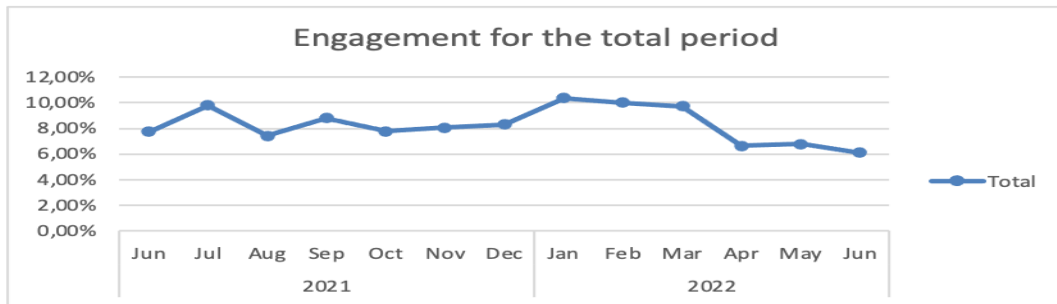
Source: Own elaboration

The authors have also calculated whether CE affects new followers on a monthly basis. In this regard, the interaction was calculated using an Excel standard correlation formula that compares the CE for the entire period with the new followers by months for the entire period.

Fig. 5: CE vs. new followers

Source: Own elaboration

The results of the calculation conclude that the analysis carried out through the correlation equation between number of new followers on Instagram depend on CE rate. Due to the high goodness of fit $\rho = 0.482.$, we can confirm that as the CE increases, so do new followers.

Conclusion

Based on the results, it can be concluded that when planning the content on a weekly basis, if restaurant brands focus their key content over the weekend, they will achieve higher CE. The

latter has the potential to witness increase if some of the content is targeted on weekdays but during non-business hours. Length does not matter significantly in terms of resulting CE. The authors of this paper prove that Instagram CE is an important factor in increasing the number of new followers because of the direct correlation with the number of new followers monthly. Overall, the data in this study confirms the reliability of the proposed analysis to identify the factors related to time (day and time slot) and the length of the publication that stimulates CE on SM, which in turn increases the number of new followers. On the other hand, these findings point to a series of useful guidelines for marketers to define their SM strategy and decide which content features they may use in posts to improve CE on the social network Instagram. The study can be applied to other businesses in the hospitality industry worldwide.

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