# Customer engagement in Facebook brand communities: A case study from automotive in the Czech Republic

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Abstract: Social media is a valuable medium for customer engagement, maintaining existing customers and for acquiring prospective customers. Social media platforms are increasingly adopted as strategic communication tools for building brand equity and consumer engagement. The main objective of this study is to examine the roles of company-created content on Facebook in enhancing brand visibility and interaction between brand and consumer response. In this study, four official Facebook profiles from automotive brands were collected and surveyed and then the data were analyzed in detail using content analysis. Evaluation using the uses and gratification theory and the application of correspondence analysis of content related to the consumer's point of view brings new insights to brand communication using social media. The findings document how selected categories according to user gratification theory influence users' engagement. Both quantitative analysis of brand communication via Facebook and a qualitative survey of the posts with top engagement show differences in the marketing strategy of automotive brands in their social media communication. The findings of best-published posts could also be used as an example for benchmarking. The research provides a theoretical and practical understanding of social media marketing that can guide managers' decision-making when developing and improving their social media marketing activities focused on brand communities.

**Keywords:** Social media, brand community, engagement rate, uses and gratification theory, dialogic communication.

JEL Classification: M31, M37.

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### Introduction

Today, people all around the world use social media in its various forms and for a number of purposes (Appel et al., 2020; Datareportal, 2023a). Social media (SM) is considered a collective term for websites and applications and the type of media that are based on conversation and interaction between people online (Strauss & Frost, 2012; Tuten & Solomon, 2015).

The use of social media for business communication is an integral element of 21st century marketing (Alalwan et al., 2017; Felix et al., 2017).

The popularity of SM use has changed customers as well. It is important for companies and their brands that especially young people, as digital natives, who are members of Generation Z, Y and, in developed countries,

Generation X, use social media every day (Datareportal, 2023b; Statista, 2023a). Individuals also use SM platforms to communicate their feelings about their activities related to a company, product or service, or brand, Further, previous research (e.g., Bozkurt et al., 2021; Dessart et al., 2015) suggests that interacting on social media encourages customers to contribute to brand value directly (through purchasing) and/or indirectly (through referring, influencing, and suggesting).

Currently, consumers require immediate access, interactive communication, up-to-date information, and immediate response on-demand and at their own convenience at any time. Especially younger generations of consumers are turning away from traditional media like television, radio, newspapers and magazines and consistently demand and consume media that are built on ICT use, including the new forms of traditional media mentioned above. Companies are adapting to this change as well and many of them use SM as a tool to directly and regularly communicate with their online brand communities (Bozkurt et al., 2021; De Vierman et al., 2017; Novianti & Balgiah, 2023; Kotler et al., 2022).

These online brand communities, according to Jahn and Kunz (2012), are, e.g., Facebook or Instagram brand pages, through which the companies deliver unique and interesting content to (potential) consumers. Members share common interests, can participate in the community, interact with each other, and also communicate with their fellow network contacts (De Vierman et al., 2017).

Social media is becoming a valuable medium for the development of customer engagement, for acquiring prospective customers, and for maintaining the loyalty of existing customers. SM platforms are now increasingly being adopted as strategic platforms for building brand equity and consumer engagement (Dessart et al., 2015; Raji et al., 2020).

Social networks (SNs) such as Facebook or Instagram have provided a platform for organizations to maintain engagement with their customers through the use of organization-generated visual content (Dhanesh et al., 2022). Santini et al. (2020) found that customer engagement has substantial value for companies, and directly impacts firm performance, behavioral intention, and word-of-mouth. An organization's SM profile is also considered a fan page or an online brand community (De Vierman et al., 2017; Jahn & Kunz, 2012) that can contribute to the brand loyalty of the customer (Fernandes & Moreira, 2019; Santini et al., 2020; Zamrudi et al., 2016) and ultimately increase the purchase intention (Darsham, 2018; De Prez, 2022; Haili et al., 2014).

Most companies and industries are still looking for how to effectively use networking sites like Facebook and Instagram. Hendricks (2015) in relation to the automobile industry stated that if people view their automobiles as reflections of themselves, then it is no wonder social media is such a powerful marketing tool for automotive brands around the world. People use SM to fulfil their needs (see UGT (uses and gratification theory)), express themselves, share information about the things they love, and communicate about their automobiles' natural fit to this assumption. A group on SM where users support a specific brand online is defined as an online brand community where users can communicate with the brand (company) and with others who share their interests through SM (Huang et al., 2021; Mutinga et al., 2017). It is assumed that knowing that the members of the community have the same interests will motivate the members of the online community not only to actively participate but also build interactions with the brand and other community members (Novianti & Balgiah, 2023).

Most research studies focus on particular issues, such as purchase behaviour, customer relationship management, brand management, innovation management, and employee recruitment (e.g., Bartók & Matošková, 2022; Felix et al., 2017; Mičík et al., 2022; Novotná, 2018). However, only a limited number of researchers have considered studying SM content as a part of companies' marketing communication using brand communities (Dwivedi et al., 2021; Raji et al., 2020). Furthermore, although recent research has explored customer engagement (e.g., Cvijikj, & Michahelles, 2013; Dolan et al., 2016; Shahbaznezhad et al., 2021), in the extant literature still lacks empirical studies to assess customer engagement in response to SM marketing practices, especially in the automobile industry.

This study will focus on detailed research in a specialized area of social media application in a marketing and management context with the aim to enrich current literature and provide new insights for branding development in this

field. The study aims to address theoretically and managerially important research gaps in the marketing of the automobile industry by exploring the following three research questions (RQs):

RQ1: How do selected automotive brands apply social media marketing for developing and maintaining their online brand communities?

RQ2: What factors demand consideration when managing communication between the automotive brand and their customers via social media profiles?

RQ3: Does the type of communication approach measured by selected content categories influence users' level of engagement on automotive brands' social networks?

The paper proceeds as follows. First, it provides a definition and conceptualization of branding via social media marketing, followed by a research question and hypotheses. Next, the research methodology is presented. This is followed by a section with the research analysis and results. Then follows a section that contains a discussion and conclusion. Finally, implications and limitations for automotive brands on SNs are presented.

### 1. Theoretical background Company's profile on social media, online brand community and engagement

Generally, specific objectives of social media marketing (Lee, 2022; McDonald, 2023) are usually focused on generating engagement using selected companies' profiles on SM, stimulating sales, increasing brand awareness, improving brand image, reducing marketing costs, and creating interaction with SM users and other stakeholders (Alalwan et al., 2017; Appel et al., 2020; Chmielecki & Lisowski, 2013; Dwivedi et al., 2021). Communication between companies and their customers using social media firm profiles helps to build brand loyalty beyond traditional methods (Alves et al., 2016).

Companies also analyze conversations in social media with the aim of understanding how consumers view their products and brands (Dwivedi et al., 2021; Vendemia, 2017). Insights gained from SM platforms are pivotal for companies to understand their products and brands' present position (Siahaan & Prasetio, 2022). Furthermore, conversations between companies and their customers and between customers on SM provide companies with new ideas for how to support brand awareness, brand recognition, and brand recall (Alves et al., 2016).

Felix et al. (2017) emphasize that specific objectives and challenges in SM may depend on factors such as the industry sector, the size of the company, and the difference also between B2B and B2C communication. The effectiveness of SM marketing may also depend on the specific needs of communication that consumers assign to companies and brands within the SM in selected industry sectors (Rival IQ, 2023). It should be underlined, in the context of this study, that the automobile industry is highly competitive (Nagy & Jámbor, 2018; Statista, 2023b) and using social media data can be a very efficient way for automobile companies to enhance their marketing targets and objectives.

In the car industry, it is commonly known that the brand of a car refers to the company (or brand) that manufactures the car. For example (in the Czech context), brands like Mercedes, Škoda, and Volvo are usually associated with the company's reputation, image, and overall quality of its cars. In addition to the brand's reputation (Sytyi, 2014), the car's brand can also influence the design and styling of the partial model. Both, company and model, differentiate car brands and influence buyers' decisions (EY Czech Republic, 2023).

These insights are valuable because the analyzed information from SM could be actual, highly personal, and reflects the true position of a company's product or service, and brand image from the consumer point of view. The visible and important factor in SM media data is customer interaction on the brand profile, e.g., on social networks. The analyzed "picture" often serves to represent the company's client's needs and wishes. Further, free, accessible and available insights from SM could be essential for companies' decision-making and market analysis purposes (Az-Zahra et al., 2021; Dwivedi et al., 2021). Previous research (e.g., Dessart et al., 2015; Novianti & Balqiah, 2023) has shown that community members' trust in a brand strongly and positively impacts brand loyalty and this has high value for the marketing of automotive brands (Mutinga et al., 2017).

Users of SM platforms such as Facebook or Instagram can share company posts across multiple communities of the network, which are then freely accessible online to a larger audience. Companies, using data mining, can for active monitoring of the consumer experience use the findings as essential aspects of their future marketing activities. Brand positioning can be analyzed both through big data from SM and through research probes examining communication in more detail, which can be vital in a competitive market analysis and for the necessary decision-making process.

Company-created content (Raji et al., 2020) represents the application of marketing strategy using profiles on Facebook or Instagram. There is the opportunity to expand brand awareness through the messages disseminated on selected SNs (Bozkurt et al., 2021), Companies' profiles on SN engage their users and support sharing of information and other promotional activities aimed mainly at existing and prospective consumers. The purpose of this part of the study is to contribute to the understanding of how social media content influences users' engagement behavior (Shahbaznezhad et al., 2021).

Customer engagement in SM is an important marketing outcome. Santini et al. (2020) found that customer engagement has substantial value for companies, and directly impacts firm performance, behavioral intention, and word-of-mouth. Engaged customers can play a key role in driving business performance by primarily providing word-of-mouth (WOM) about products, services, and brands (Brodie et al., 2011). For marketers, it is important to understand what drives customer engagement across interaction with company profiles on Facebook or Instagram is important because customer engagement initiatives have also a positive impact on financial returns (Kulikovskaja et al., 2023; Unnava & Aravindakshan, 2021). The company SM profile has the power to influence customers' behavioral manifestations that have a brand or firm focus (Van Doorn et al., 2010).

Strong and successful brand equity becomes an important factor for automotive brands to differentiate themselves from competitors and ensure uniqueness (Adetunji et al., 2018) in the eyes of their brand community members (Grover & Mandan, 2017). Therefore, it is important to know which factors or features of the automobile are seriously taken into consideration in the decision-making process and which attributes and other assets of automotive brands are important for consumers (EY Czech Republic, 2023). As such, this study sets out to examine the differential effects of social media marketing communications with the focus on company-created content in terms of brand community on social media.

The following hypotheses were framed based on the literature and specific situation in the automobile industry in the selected country:

H1: Car brands that are more active in communication on their official Facebook profiles (number of posts/2022) achieve a higher engagement rate.

H2: The types of expositive resources (text. graphic, audio-visual) influence the level of engagement per post.

### Uses and gratification theory and communication on social media

This study uses content analysis to examine in detail the communication of selected automotive brands, especially on Facebook. Uses and gratification theory (UGT) is based on the origins of social and psychological needs and explains the concept of why people use media (Katz et al., 1973; Ruggiero, 2000). In the past, UGT focused on traditional media, while today, this theory is also suitable for researching social networks (Dolan et al., 2016; Muntinga et al., 2017). In other words, SM fulfils many expectations of both mass and interpersonal communication. They are a new dominion of human activity and also a new dominion for UGT research (Ruggiero, 2000) and this research follows that call. The basic questions in UGT research remain the same and this study brings an answer to the question of what gratifications users receive from the brand community on selected social media in the automobile industry?

In communication on SM, a brand's overt goal is to attract users (followers) by providing value, or gratification, through its content (Lin & Lu, 2011). Therefore, companies should design content on, for example, their official Facebook profile in a way that creates value for individual SM users to build a stronger level of engagement and facilitate brand communication. Individuals are motivated to fulfil their needs and wants, and that's how individuals take particular actions or access content on selected SM.

For example, Whiting and Williams (2013) provide a list of several gratifications in the context of SM. This study follows a new approach by Dolan et al. (2016) and their model, based on UGT, that shows how an organisation can stimulate positively valenced engagement behaviour through SM. From this perspective, the research objective is focused on identifying which types of gratification bring the highest engagement of users of automotive brand profiles on SM. Four key categories of gratifications (Dolan et al., 2016; Eger & Gangur, 2024) are categorised into four main groups based on the level of information, entertainment, remunerative and relational content.

The following research hypotheses were developed based on the literature above related to UGT:

H3: Greater implementation of the categories relational + remunerative + entertainment will yield a higher level of engagement per post.

H4: There exist differences in the communication of automotive brands on social networks according to the UGT categories.

# 1.3 Dialogic communication and companies' social media

Companies in a number of sectors have established and maintained an interactive online presence via SM and consistently seek how to better engage with potential and existing customers (Alalwan et al., 2017; Capriotti et al., 2023). Another recognized theory that now also focuses on evaluating communication through social media is dialogic communication theory. From this point of view, it is important to mention that social networks are also tools that can help expand and stimulate dialogue between companies and customers.

Big data from social networks and new methodological possibilities seem like a new research opportunity (Shahbaznezhad et al., 2021; Sommerfeldt & Yang, 2018). In this part of the conducted study, the research follows the recommendation by Capriotti et al. (2021), where effective communicative exchange involves continuous interactions between the organization and the online users, and further among the online users themselves, within the selected social network. The next important dimension is conversation, where recipients of the communication interact with the communicator and engage in conversations. It is assumed that greater implementation

of conversational exchange will represent a higher level of interaction. Capriotti et al. (2021) evaluated reaction, viralization and conversation rate.

The research will explore how experts responsible for selected automotive brand profiles on social networks implement dialogic communication (Buchanan-Oliver & Fitzgerald, 2016). Hence, the following hypothesis is framed based on literature:

H5: The selected automotive brands on social networks achieve a greater reaction rate than the viralization rate or conversation rate.

### 2. Research methodology

Relevant and widely available data sources are critical to evaluating brands and obtaining information about customer insights, as demonstrated, e.g., in research by Siahaan and Prasetio (2022), who also used Facebook as a data source in the automobile sector. To capture the quantitative data, the researchers used the analytical tool ZoomSphere (2022), which allows one to investigate the official Facebook profiles of selected automotive brands. This tool captures statistics about only publicly available social media posts through the API platform.

### 2.1 Sample selection

The quantitative part of the conducted research focuses on describing posting practices and selected engagement metrics of official Facebook profiles of selected automotive brands from the Czech Republic in 2022. The research takes into account the top ten passenger automotive brands with the highest sales in the Czech Republic in 2021 (Car Importers Association, 2023). However, these brands often use a global Facebook account and it is not possible to determine from publicly available sources, for example, the number of followers from the Czech Republic, which is necessary for engagement rate calculations. Therefore, the study focused on the official Facebook profiles of Hyundai CZ, Mercedes-Benz Czech Republic, Kia Czech and Toyota Czech Republic, where such data were available.

The researchers simultaneously collected, mapped, and coded posts published by selected automotive brands from their official Facebook profiles in detail with the aim of answering the posed research questions. For this purpose, six months of 2022 and three months

from the first half of 2023 were chosen, two with the highest sales (June, May), two with the lowest sales (February, July) and two with average sales of passenger automobiles in the Czech Republic per month (January, October).

#### 2.2 Data analysis

The ZoomSphere tool was used to extract quantitative data from the selected automotive brands' official profiles on Facebook (946 posts = 4 automotive brands/2022). The data were imported into an Excel file and the researchers conducted a descriptive analysis. Engagement metrics are commonly monitored to measure the effectiveness of communication using SNs. The research used engagement rate/year and, according to the survey by Rival IQ (2023), engagement rate per post (by follower) as the two primary metrics.

Engagement rate is a metric that is commonly used in analyzing social media (Dessart et al., 2015; Kim & Yang, 2017; Rutter et al., 2016) and is continually refined by other parameters that enter into the calculation. In the study, two variants of engagement rate are used. First, engagement rate per year (year 2022) = the total number of likes + comments + shares divided by the total number of followers (ER 2022 per follower). Second, engagement rate per post by follower (6 months/2022) = total number of likes + comments + shares per post divided by the total number of followers, then multiplied by 100. Additionally, we applied a specific engagement rate that puts the average of the brand's registered automobiles for the years 2021 and 2022 into the denominator (ER 2022 per automobile).

Next, using the collected data, an evaluation is conducted of the communication with the focus on the key dimensions of dialogic communication on SN according to Capriotti et al. (2021). To gain new insights into the communication of automotive brands through social networking sites, the values reaction rate, viralization rate and conversation rate indicators are calculated.

Furthermore, the unit of analysis is the post for a selected day. Post-level data were collected directly from publicly available profiles on Facebook for the selected period (629 posts/ 1, 2, 5, 6, 7, 10/2022, 291 posts/1, 2, 5/2023). The data were imported (May 2023 and April 2024) in chronological order on the posting date into an Excel file (post type, number of likes/ reactions, comments and shares). At the same time, the content was coded. Post-coding follows two perspectives. The first focuses on the coding of the UGT categories. The second encodes the content of the posts according to categories that correspond to what people look for when they choose an automobile. These categories were inspired by research by Statista (2022) and EY Czech Republic (2023) and the following categories were used: safety, price, brand, design, driving comfort, efficient operation, customer service, celebrity, engine.

Before the main content analysis, two pilot studies were conducted for the purpose of improving the codebook and training coders. Pilot study 1 tested the first version of the codebook in order to clarify the categories. The level of agreement was 86-91% (two sub-samples). Further, based on findings and discussion, the codebook was revised and improved. Pilot study 2 tested the revised code book. The sample of the second pilot study consisted of new posts from the Facebook profiles from two automotive brands published in one month that were not included in the final sample and which represent approximately 10% of the final sample's size. The level of satisfactory agreement was 94-96% (two sub-samples). This represents the required intercoder reliability. Finally, once the categorization and coding had been completed, descriptive statistics and correspondence analysis were conducted using Statistica. Correspondence analysis is used because it is a useful tool to uncover the relationships among categorical variables (Doey & Curta, 2011); it is a powerful statistical tool (Beh, 2004) with a clear graphical presentation.

In addition to the quantitative analysis of the communication of selected automotive brands on Facebook, a qualitative evaluation of the posts with the highest engagement is carried out. For each brand, the top posts were ranked and the top three are listed in Appendix 1. The qualitative approach used an expert evaluation of selected top posts aimed at content categories, application of call-to-action, UGT categories and differences between automotive brands in published content. The purpose of the qualitative part of this research study is to gather information about the communication that Facebook administrators and marketing experts use to reach engagement with the public via the company's Facebook profile. This mixed-methods research approach

allows researchers to explore a research problem in more detail from both perspectives (Creswell, 2014; Gray, 2009).

### 3. Results

# 3.1 Engagement rate and engagement rate per post (by follower)/year 2022

The list of selected automotive brands and basic information about their communication on their official Facebook profiles using the ZoomSphere tool for the year 2022 are

shown in Tab. 1. The data provide an example of the use of Facebook in the automotive industry by selected top automotive brands in the Czech Republic. The data show the number of posts published during the year 2022 on the Facebook profiles, the number of followers at the end of this year and values related to the level of reaction (likes + comments + shares). Tab. 1 presents the value of engagement rate per post (year 2022) for the four selected automotive brands.

Tab. 1: Automotive brands and engagement rate

	Facebook											
		No. of	posts		Lik Com		Sha	Followers	ER 2022	ER per	ER 2022 per	Average
Automotive brands	S	L	٧	Р		Com	Sna		per follower	post by F%	auto-mobile	auto-mobiles 2021/2022
Mercedes-Benz CZ	0	3	43	359	14,655	300	259	54,294	0.28	0.069	1.96	7,777.5
Hyundai CZ	0	56	28	239	104,442	7,785	2,505	135,873	0.84	0.261	5.91	19,402.0
Kia Czech	0	16	38	237	56,096	16,655	2,133	57,744	1.30	0.446	7.49	9,997.5
Toyota CZ	0	79	69	111	94,093	2,854	1,727	42,187	2.34	0.903	8.73	11,300.5

Note: S – statuses; L – links; V – videos; P – photos; Lik – likes; Com – comments; Sha – shares; ER – engagement rate; ER per post by F% – engagement rate per post by follower; the types of posts – measures from the Zoomsphere tool.

Source: own

Additionally, the engagement rates per average of the brand's registered automobiles for the years 2021 and 2022 are presented. The values of ER 2022 per follower, ER per post (by follower) and ER 2022 per automobile have the same order for these three metrics of the selected automotive brands.

As can be seen from the data in the Tab. 1, hypothesis H1 is not confirmed. Active automotive brands on their official Facebook profiles (number of posts/2022) do not achieve a higher engagement rate. Conversely, the two brands with fewer posts scored higher in all three metrics monitored.

As mentioned above, currently, engagement rate per post (by follower)/year is used to compare, for example, differences in results of companies' communication on SN (Rival IQ, 2023). The researchers mapped the communication of the selected brands on Facebook for the selected 6 months/2022. Thus, Tab. 2 presents the results of this partial task and the finding of engagement rate per post (by follower) mentioned. At the same time, the types of expositive resources (text, graphics,

audio-visual) and the level of their engagement per post are mapped.

Detailed content analysis was performed for 629 posts (2022), out of which only 11 would be in the text category in terms of source type. Tab. 2 shows that Toyota achieved a very high and distinct engagement rate per post (by follower). The photo post type is the most used in terms of medium, 364 of these posts were analyzed with an average value of 0.43. A slightly higher value was achieved by the photo album type, with an average of 0.46. Surprisingly, the multimedia type of post video scores even lower overall than the photo and photo album for individual automotive brands, with an average of only 0.12. As can be seen in Tab. 2, there are large differences between the minimum and maximum engagement rate per post (by follower) values for the text, photo and photo album post types (H2). Therefore, we added the qualitative assessment of the top published posts, as we consider this to be important in terms of benchmarking for managing brand communication on social media (Appendix 1).

Tab. 2: Expositive resources (text, graphic, audio-visual) and the level of engagement rate per post

	Facebook							
Automotive brand	No of poots	Engagement rate per post (by follower)						
	No. of posts	Min	Max	Average				
Text								
Mercedes-Benz CZ	1	0.02	0.02	0.02				
Hyundai CZ	4	0.01	0.10	0.06				
Kia Czech	2	0.02	0.04	0.03				
Toyota CZ	4	0.77	2.06	1.40				
Photo								
Mercedes-Benz CZ	118	0.00	0.23	0.08				
Hyundai CZ	90	0.01	1.26	0.29				
Kia Czech	89	0.02	4.95	0.36				
Toyota CZ	67	0.07	2.38	1.00				
Photo album	,		,					
Mercedes-Benz CZ	70	0.01	0.83	0.08				
Hyundai CZ	50	0.02	1.24	0.25				
Kia Czech	30	0.01	0.52	0.16				
Toyota CZ	17	0.10	3.05	1.33				
Video	,			•				
Mercedes-Benz CZ	20	0.00	0.24	0.06				
Hyundai CZ	17	0.00	0.45	0.09				
Kia Czech	13	0.01	0.25	0.06				
Toyota CZ	37	0.03	0.92	0.28				

Source: own

# 3.2 UGT categories and differences among automotive brands in their communication via official Facebook profile

RQ3 focuses the research on the UGT content categories and on the analysis of content categories related to the automotive brand. As mentioned above, brand communication via SM should attract users (followers) by providing value, or gratification, through published content. To examine the published content in detail, the researchers coded the selected sample of posts (Tab. 2) and performed correspondence analysis with the aim to get a deep understanding of the public relations and brand communication of the selected automotive brands on SM. In order to obtain sufficient data

for the correspondence analysis, the input data for 2022 was extended to include data for three months of 2023. Tabs. 3–4 present the final findings of the coding process.

After assessing the categories for each automotive brand, the result from Tab. 3 showed a significant  $\chi^2$  value of 67.2451 (p < 0.001), which indicated significant differences among the automotive brands' categories of posts on their official Facebook profiles. Two dimensions were extracted and Statistica can display the result in 2D in the form of a biplot (Fig. 1). In this model Dimension 1 explains the greatest variance in the model followed by Dimension 2, in summary 99.88% of variance is explained in this two-dimensional map.

Tab. 3:

UGT content categories and frequency of occurrence (Facebook, 6 months of 2022 + 3 months of 2023)

UGT content	Hyundai CZ	Toyota CZ	Mercedes- Benz CZ	Kia Czech
Informational	171	132	224	116
Entertaining	21	14	7	10
Remunerative	19	11	4	19
Relational	26	24	54	68

Source: own

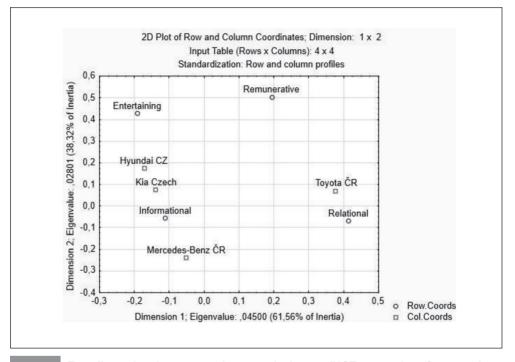


Fig. 1:

Two-dimensional correspondence analysis map (UGT categories of automotive brands on Facebook)

Source: own (using software Statistica)

Tab. 3 and Fig. 1 show that the least used content categories according to UGT were entertaining and remunerative content. Kia Czech and Hyundai CZ use remunerative content more than the other two brands. Informational content dominates for Mercedes-Benz CZ and Hyundai CZ. Entertaining content is closest to the brands Hyundai CZ and Toyota CZ. Kia Czech and Mercedes-Benz CZ pay attention to posts with relational content. In general,

the correspondence map shows that each automotive brand has a different content category to promote itself. Thus, *H4* is supported.

Hypothesis *H3* is related to hypothesis *H4* and focuses on achieving engagement rate by the UGT content categories. As can be seen from the coding of the 920 posts of the four automotive brands, remunerative content actually achieved the highest values. However, informative content also achieved high values

Tab. 4:

### UGT categories and engagement rate per post

UGT categories	No. of posts	Engaç	SD		
OGT categories	No. of posts	Min	Max	Average	טט
Informational content	643	0	4.23	0.32	0.526
Entertaining content	52	0	2.31	0.22	0.375
Relational content	172	0.01	3.77	0.33	0.517
Remunerative content	53	0	4.95	0.56	0.955

Source: own

and even surpassed relational and entertaining content. Hypothesis *H3* is, therefore, only partially confirmed and the subsequent qualitative analysis of the top posts (Appendix 1) provides further information that documents what achieved the highest engagement.

It should also be noted that Tab. 4 shows not only the maximum values achieved, but also that, in fact, for each category, there were posts published that users were not interested in and did not respond to.

Researchers, in this case, are mindful of assumptions and limitations when applying Chisquare test. Low frequencies in several items affect the calculation of the Chi-square, but at the same time, they are evidence of the observed issue of the content of communication on the social network. Performing correspondence analysis does not necessarily need to calculate a Chi-square test as it provides a multivariate graphical technique to explore relationships

within selected categorical data. Fig. 2 visualizes the strength and patterns of relationships between different selected categorical variables. The generated output from Statistica, shows that in the model used, Dimension 1 explains the greatest variance in the model followed by Dimension 2, in summary, 86% of variance is explained in this two-dimensional map.

Tab. 5 and Fig. 2 show how selected categories that are relevant to the automobile correspond with the selected four automotive brands on their Facebook profiles. It should be noted here that some categories are low in frequency (e.g., safety, price) compared to, e.g., brand and design. As can be seen from Fig. 2, the category brand is most closely associated with Hyundai CZ and Kia Czech. Design and driving comfort were the most often coded for the Mercedes-Benz CZ Facebook profile. Kia Czech works more with celebrities on Facebook than other brands, while Toyota CZ had

Tab. 5: Content categories related to the automotive brand and frequency of occurrence (Facebook, 6 months of 2022)

Content category	Hyundai CZ	Toyota CZ	Mercedes-Benz CZ	Kia Czech
Safety	2	14	2	8
Price	10	4	1	6
Brand	120	101	61	53
Design	36	21	101	35
Driving comfort	20	14	50	14
Efficient operation	18	19	39	26
Customer service	5	19	11	3
Celebrity	5	15	2	26
Engine	21	6	22	10

Source: own



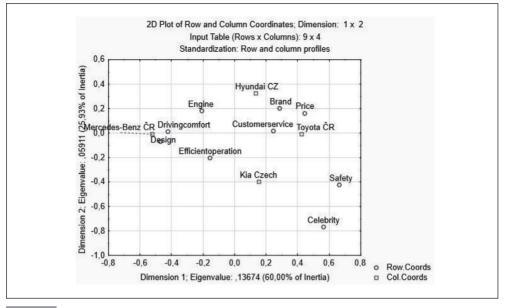


Fig. 2: Two-dimensional correspondence analysis map (automotive categories of automotive brands on Facebook)

Source: own (using software Statistica)

relatively more posts focused on the category safety. In general, this correspondence map also reveals that automotive brands use different content categories to promote themselves.

Additionally, for the sample of posts analyzed in detail, we observed how many of them were focused on electromobility (exceptionally hydrogen). It is evident that this is a topical issue, with Mercedes-Benz CZ and Hyundai CZ at 30.4%, Toyota CZ and Kia Czech at 18.8%.

# 3.3 Key dimensions of dialogic communication and selected automotive brands on Facebook

Furthermore, to assess reaction, viralization and conversation rate from the dialogic communication point of view using the approach by Capriotti et al. (2021), the same data for the year 2022 were used. Tab. 6 presents findings that support hypothesis *H5*. The dialogic communication of the selected automotive

Tab. 6: Car brands and dimensions for dialogic communication

	Facebook										
Automotive brand	No. of posts	Likes	Shares	Comments	Followers	Reaction rate (%)	Viralization rate (%)	Communi- cation rate (%)			
Mercedes-Benz CZ	405	14,655	259	300	54,294	0.067	0.001	0.001			
Hyundai CZ	323	104,442	2,505	7,785	13,5873	0.238	0.006	0.018			
Kia Czech	291	56,096	2,133	16,655	57,744	0.334	0.013	0.099			
Toyota CZ	259	94,093	1,727	2,854	42,187	0.861	0.016	0.026			

Source: own

brands on their official Facebook profiles achieved the highest level for reaction index.

Taking a closer look at the data in Tab. 6. we find that Kia Czech is very successful in the communication rate indicator, and its Facebook profile clearly receives more comments from users than the compared brands. Toyota CZ then achieved a relatively high number of reactions and shares in relation to the lower number of posts published. Dialogic communication is enhanced by the use of hashtags and hyperlinks in published posts. The following is information about the frequency of published posts with the monitored interactive elements, Mercedes-Benz CZ 98%, Hyundai CZ 58%, Toyota CZ 58% and Kia Czech 40%. Comparing these data with Tab. 5, this research shows that the number of hashtags and hyperlinks did not affect the selected indicators from dialogic communication, rather the opposite.

### 4. Discussion

The integration of SM into organizations' overall communication and marketing strategy has changed their communication activities and PR. Marketing communication using SM has the potential to improve brand equity and can enhance consumer responses that could further effectively influence the consumer decision-making process (Alalwan et al., 2007; Dessart et al., 2015; Tajudeen et al., 2018).

Siahaan and Prasetio (2022) underline that insights gained from SM platforms are also important for companies to understand their products and brands' present position. Companies and experts responsible for branding are looking for the optimal potential of content published on their official SM profiles with the aim of enhancing the acceptance of their brands and stimulating favourable behaviours from their SM users/ consumers. Social media is a form of interactive communication and allows them not only to inform users but also to maintain a relationship with them and even turn them into content creators in so-called branding communities (De Vierman et al., 2017; Kumar & Kumar, 2020).

The automotive industry is highly competitive, which requires that automotive brands actively communicate with existing and prospective customers (Rebeiro, 2023; Shukri et al., 2015; Svobodová et al., 2019). Companies should carefully analyze and follow SM users' opinions in order to achieve a competitive advantage in the automotive market.

The first finding from this research shows that a higher number of posts published on a company's official Facebook profile does not mean a higher engagement rate. This finding underlines the need for a more detailed and in-depth analysis of automotive brands' social media communication. Brand community engagement is evolving as a prominent relationship marketing variable and needs further consideration (Kumar & Kumar, 2020). Moreover, the Hootsuite study emphasizes that it is true that on the one hand good engagement rate is between 1% to 5%, but on the other hand, the more followers the SM profile has, the harder it is to achieve a higher engagement rate (Sehl & Tien, 2023).

Second, the conducted research mapped the types of expositive resources (text, graphics, audiovisual) and the level of their engagement per post using detailed data from four automotive brands' official Facebook profiles (Tab. 2). The photo and photo albums categories achieved higher engagement than the multimedia video type of post. In this part, the research follows a study by Dhanesh et al. (2022) and examines the role of visuals in enhancing public engagement. It should be also mentioned, that the relationship between image content and engagement is more complicated. For example, Li and Xie (2020) underlined that image characteristics also affect user engagement. High-quality and professionally shot pictures consistently lead to higher engagement, but our research did not evaluate the quality of the posted photos.

The key part of this research evaluated companies' communication on their official Facebook profiles using the UGT categories. The results (Tab. 3, Fig. 1) indicated significant differences among the selected automotive brands. It is evident that managers responsible for branding communication are not taking advantage of UGT insights and are unaware of the potential effectiveness of entertaining and remunerative content. The analysis shows how the application of UGT can influence the behaviour of brand community members and adds to the research findings by Dolan et al. (2016). The results can be very useful in practice in managing companies' communication on SN. In addition, available field studies confirm that social media does indeed have a significant impact on car buyers (De Prez, 2022), and similarly, nearly half of the dealers intentionally use social media to target and drive sales (Seymour, 2024).

Expanding the content analysis provides insights into how automotive brands are communicating content on their social networks. As a reminder, the categories were determined based on two international surveys (EY Czech Republic, 2023; Statista, 2022). The findings show differences and, as mentioned by Raji et al. (2020), company-created content represents the application of marketing strategy using their profile on Facebook.

To complete the analysis of the communication of the selected four automotive brands on their official Facebook profile using UGT, we added an analysis of basic indicators from dialogic communication (Caprioti et al., 2021). The results show that the two automotive brands, which published fewer posts on their official Facebook profiles achieved higher values in the selected indicators, namely in reaction rate and viralization rate. Surprisingly. the number of hashtags and hyperlinks does not correlate with the achieved level of dialogic communication indicators. Also, this finding resulted in important implications for company communication and practitioners as well as for researchers focused on SM.

Detailed qualitative analysis of the top posts shows that the selected automotive brands use different strategies for SM marketing and maintaining communication with users. Mercedes-Benz CZ mostly published posts that were informative and aimed at promoting the brand and the efficiency, high quality, and technical characteristics of Mercedes engines and automobiles, and the posts did not use a action. The people responsible for communication on the SM of this brand often use links and a hashtag. An analysis of Hyundai's Facebook posts demonstrates a slightly different strategy. This brand, like the previous one, mainly publishes posts in the photo or photo album form. The content is mostly informative in relation to the promotion and popularization of the Hyundai brand, as well as the technical characteristics and advantages of the offered automobiles. Each of the five selected top-performing posts of this brand contained a call-to-action to support the interaction of followers with the brand page. The use of external links is lower.

The analysis of Kia's Facebook content strategy differs from the previous two in that all the top posts offer some sort of reward for SM profile users (contest, UGT = remunerative). Top posts apply call-to-action but do not use external links and hashtags. The fourth brand whose social pages on Facebook were analyzed and researched is Toyota in the Czech Republic. This brand also published mostly informational posts. Calls-to-action are used with less emphasis, but external links quite often.

Liadeli et al. (2023) mentioned that one of the most common mistakes of SM campaigns is the lack of an overall content strategy. The conducted research from the automobile industry brings evidence and maps brand communication from social media in the context of the Czech Republic. To create online communities around their brands, managers must understand the nature of online behaviour (Brogi, 2014; Coelho et al., 2018).

In summary, the findings of this research provide additional knowledge needed for understanding SM marketing that can guide managers' decision-making when developing and improving their strategic marketing activities on SM. First, the study offers insights into understanding the role of the content format through how this variable may influence the effectiveness of specific types of posts on SM customer engagement behavior. Exploring these relationships to the detailed level of individual content types (including top posts) is crucial for managers as they can understand how and why the selection of a suitable format of the post and selected content will engage users, which means prospective or current customers of the car brand. The SM platform can be used in the form of an online brand community. Second, findings also provide insight, into how to adjust content characteristics depending on the SM platform, they intend to use to maximize content effectiveness. Third, our findings can guide SM marketers in identifying effective communication when conducting brand-related activities. A start point may be to monitor metrics such as UGT categories, and interactions with specific contents. Finally, consumers engage in different behaviors based on their attitudes. Marketers can segment SM users based on these attitudes, as well as on their motivations for using SM, and provide desired or expected gratification.

### Research limitations

This research was focused on company profiles on Facebook in the context of the automobile industry in Czech Republic, further, it is important to investigate the role of the type of platform (Facebook vs. Instagram) in facilitating social media engagement behavior.

Second, unfortunately, it is not possible to get relevant data (publicly accessible) for all top car brands concerning their Facebook profile and assess engagement rates. Thus, the study investigated four car profiles in depth in a selected context and time.

Third, an online brand community is a user group created online around a brand. Commonly, followers are a key measure for this research, but in fact, not only followers may interact with the brand page. Conversely, some followers may only be lurking.

Fourth, the study was focused on Facebook alone, and further research should investigate the marketing communication of automotive companies through other social media with new relevant indicators, such as LinkedIn, Twitter, and YouTube.

Last, this study did not directly investigate users. Researchers are unable to consider and research the characteristics of users who are engaged with posts on selected car brand profiles.

### Conclusions

Companies are encouraged to continuously monitor online conversations and to engage in communication with their followers via social media networks. This research has built on previous theoretical underpinnings relating to company communication and social media with a focus on online brand communities. The conducted research demonstrates how selected brands in the automotive sector apply social media marketing, and what factors demand consideration when practitioners manage communication between an automotive brand and their customers using the brand community on SM with the general aim to enhance the brand visibility. Using knowledge from UGT, as well as paying attention to the types of expositive resources, yields higher engagement. This is also evident in the evaluation of communication from a dialogic communication perspective. The best posts with a message that meets users' needs in relation to social media communication are evidence of this and an example for benchmarking.

The research results are dependent on the selected automotive brands in the context of the Czech Republic in the post-COVID 19 era. Further research could expand the existing knowledge of automotive brand communication on SM and include additional variables that would be capable to better capture the current situation in the area of the automotive industry and their customers on Facebook.

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### Appendix

### Top posts (four automotive brands)

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Date	Type of post	R	С	S	Content categories	Call-to -action	UGT categories	Link/hashtag	ERP	Electric car	Brief information about content
Mercedes-Benz Cze	ch Repub	olic									
14 May 2023	Video	600	20	39	Brand	No	Entertaining	Yes	1.20	No	Video focusing on the history of transport and women (Mother's Day), brand promotion
10 May 2023	Photo album	465	157	5	Driving comfort	No	Informational	Yes	1.14	No	Presentation of new Dolby system for Mercedes
7 January 2022	Photo album	394	46	16	Efficient operation	No	Informational	Yes	0.83	Yes	Information and photo album about the new luxury eco-prototype
Hyundai CZ		•									
19 July 2022	Photo	2,713	70	8	Engine	Yes	Informational	No	2.05	Yes	Photo of two concept cars with smileys and a question for user selection
1 February 2023	Photo album	1,600	245	4	Design	Yes	Relational	Yes	1.36	Yes	Call for user votes on two versions of the Kona
3 July 2022	Photo album	1,470	258	17	Engine		Informational	Yes	1.28	No	Photos of two IONIQ car models (with smileys) and question for followers about their choice
Kia Czech											
14 October 2022	Photo	1,100	1,600	171	Brand	Yes	Remunerative	No	4.95	No	Contest – Kia is official sponsor of FIFA World Cup, question and answers, photo with logo
12 May 2023	Photo	2,100	77	6	Driving comfort	No	Relational	No	3.77	No	Inviting users to vote on whether they prefer to be a driver or a passenger in the car
28 January 2022	Photo	711	1,100	101	Brand	Yes	Remunerative	No	3.3	No	Contest – Kia customer prize, photo of auto detail with logo and question and answers
Toyota Czech Repub	blic										
15 February 2023	Photo album	1,700	62	76	Brand	No	Informational	Yes	4.23	No	Sad event, information about the death of the son of the founder of the brand
10 February 2023	Photo album	1,300	94	25	Brand	No	Informational	No	3.26	No	Photo album, a memory of a legendary car model
30 January 2023	Photo	1,300	68	16	Design	No	Informational	Yes	3.18	No	Photo of off-road car model plus question

Note: R - reactions; C - comments; S - shares.

Source: own