

# **The Effect of Social Media on Customer Participation and Value Creation in Automotive Industry**

## **Abstract**

The purpose of this study is to examine the impact of social media on customer participation and value creation in the automotive industry. This study is in terms of practical purpose and the nature of data collection, it is a descriptive survey that was conducted in a mixed manner, where the indicators and components of the theoretical model were extracted in the qualitative part with the content analysis method, and in the quantitative part, the theoretical model was Structural equation modeling method and SmartPLS software have been tested. The research community in the qualitative section, including senior managers of the automotive industry, 15 people was selected by non-probability and purposeful sampling. In the quantitative part, the statistical population includes customers of the automotive industry, who were randomly selected, and 412 people. The findings of the qualitative part showed that the theoretical model includes the variable of social media with four components (including strategy, communication, trust, and information), customer participation with three components (information participation, growth participation, and innovation participation), and customer value creation with It has three components (functional value, social value, and emotional value). The findings of the model test show that there is a positive and significant effect between the dimensions of social media including strategy, communication, trust and information, and customer participation. Also, the dimensions of social media including communication, trust, and information have a positive and significant effect on customer value creation. Still, the relationship between social media strategy and value creation was not confirmed. Also, a positive and significant relationship exists between customer participation and value creation. Finally, customer participation plays a mediating role in the relationship between social media dimensions and customer value creation. This finding shows that using and focusing on social media can improve the creation of customer value through customer participation in production processes, and managers can use the opportunity created by social media to gain a competitive advantage.

**Keywords:** Social media, Customer participation, Value creation, Automotive Industry.

## **1. Introduction**

In today's competitive and complex and rapidly changing markets, customer satisfaction and retention is one of the ways to achieve a competitive advantage that organizations try to achieve by creating value for the customer. Basically, creating value for the customer is effective on brand loyalty and plays an essential role in brand pages (Kedem & Neiger, 2024). Therefore, through customer relationship management, managers can focus on creating customer value and ultimately on customer retention and satisfaction. But one of the challenges of marketing managers is how to manage customer relations in complex and rapidly changing markets to create value. To face these challenges, companies need to know how to use digital technologies strategically and what capabilities they need to acquire to quickly respond to market needs and transform their value creation process (Wijaya Murti et al., 2023). In the meantime, social media is one of today's smart technologies that provides new and fast capabilities and solutions for interaction and collaboration and communication with customers. The emergence of social platforms is considered for value creation activities and is a tool to increase the incentives of customers' participation in value creation. Social media can improve customer relationship challenges and understand mutual relationships. By sharing information about their products through interaction with people, they can provide better services and create value. Through communication in social media, businesses can listen and understand the needs of consumers and provide services, create long-term relationships and ultimately ensure long-term profits (Takunda Chiwaridzo & Masengu, 2024).

The main issue is that social media offers entirely new ways for brands and consumers to interact, and thus has become an important platform for brands looking to create value for the customer. Social media can facilitate the communication between consumers and the organization and influence the demands and expectations of users in business transactions, such as speed and accuracy in responding and providing a better level of service on creating customer value (Busque & Mingoia, 2021). By improving communication with their customers through social media, today's organizations try to increase their participation in developing and producing a product and providing better services, and many companies have turned their attention to this strategy in recent years and encouraged customers to Cooperation and partnership have been able to effectively create value, increase market share and experience profitability. Therefore, these advantages have caused organizations to use social media to communicate and create partnerships with customers to improve sales (Kiran et al., 2023).

Social networks have provided new opportunities for marketing and informing, encouraging and persuading consumers to change their purchasing behavior. Platforms have also facilitated the exchange of information between organizations and customers and reduced information asymmetry in several developing markets. In addition, time and place do not create any limits for company-consumer interactions, and communication in social networks is a two-way communication that is carried out effectively and efficiently compared to traditional one-way communication (Sanchez Garza et al., 2024). Through social networks, companies will be able to create a platform for consumers to share ideas, provide recommendations, and help create shared value within those companies. Customers who are active in social media play an important role in creating content, creating experience and creating customer value and referring products, services and brands to other customers, therefore, the participation of consumers in the value creation processes of companies increases and the key indicators of sales performance increase (Moon & Lewis, 2024).

The automotive industry has seen significant changes in the last few decades. At the core of this change are emerging patterns of direct interactions between customers and businesses that play a critical role in creating value. Mutual sharing of ideas and exchange of information forms a symbiotic relationship between the business and its customers. A high level of customer involvement in product design and strategies offers new opportunities in the market, and customers play an active role in value creation. Thanks to the influence of the Internet on business and the speed of information circulation in social networks, today car customers use the information provided by car companies to make their purchase decisions, and therefore car companies are looking for innovative solutions to cooperate with Customers are in the creation of customer value (Maadi Roudsari et al., 2023). Despite the automotive industry's focus on social media, the industry still suffers from a lack of understanding and knowledge about using social media tools. Although basic research points to successful strategies and key features of social media for managing businesses in the current era of shared value creation, research on how automotive industries can better utilize social media and user engagement and create value for their customers is scarce. Furthermore, few companies have achieved satisfactory results, as many have faced challenges in developing strategies to harness the potential of social media. Many companies have also struggled to adapt to an environment that requires more open and collaborative relationships. On the other hand, with customers' access to information in social networks, they can play important roles in creating the value of organizations through sharing knowledge and other resources. Therefore, how to use social media to create company-customer interaction and create value has always been considered in the literature. The variety of ways consumers interact with brands on social media has challenged brand managers to strategically deploy social media and create content in order for their interactions with consumers to lead to customer value creation. Due to the rapid growth of social media such as Instagram, Facebook, etc., their use by users has also increased greatly thanks to the speed of the Internet, and users use these technologies to obtain and share information to meet their needs (Habibi et al., 2023). Especially in recent years, with the spread of the Covid-19 disease, as well as in order to reduce time and cost, and finally by increasing the presence of users in social media, a potential opportunity has been created for business to create value and gain a competitive advantage (Haghiqi Nasab et al., 1402). . With so much information about the features of goods and services on social media, customers compare the features of their options and prefer brands that create value for them. Although the customers of the country's automobile industry have tried to diversify their production and improve their quality in recent years, they are still not completely satisfied with the products, and the customers always say that their demands and needs are still not met. Therefore, according to the rapid change in the needs and demands of customers in the automotive industry, marketing managers are looking for the use of social media strategies for user participation in order to quickly identify and respond to the needs and demands of customers in order to create and improve the creation of customer value in order to gain a competitive advantage. Therefore, this research has been conducted with the aim of the effect of social media on customer participation and value creation in the automotive industry.

## **2. Literature Review**

### **1-2- Social media marketing**

Social media marketing involves the use of platforms such as Facebook, Twitter, Instagram, WhatsApp, Facebook, YouTube and Twitter to achieve marketing goals through interaction and exchange of information, goods and services of an organization makes it possible. All these features ensure that both companies and customers create value for each other (Ramos & Rodriguez, 2023). To fully succeed in a dynamic business environment, companies must direct their business strategies to leverage social media to increase customer value. Social media analytics offer benefits to businesses in identifying and prioritizing customer complaints and aligning their efforts to improve product or service quality. For example, users use microblogs to chat with others to exchange and search for information. Other researchers consider aspects of social media for entertainment marketing, customer interaction, information sharing, customization of products and services, and word of mouth advertising (Koay et al., 2023).

### **2-2- Social media and customer value creation**

According to Garcia & Brooks (2023), customer value creation refers to the process by which producers and consumers, as equals, create value for themselves and each other. In this co-creation process, the two subjects co-create the personalized service experience through continuous dialogue and interaction. Therefore, social media is an essential tool for creating business value in organizations, as it provides them with benefits such as faster direct communication with customers, improved brand image, greater customer satisfaction, cost reduction, and sales growth. In this regard, Shawky et al. (2022) believe that social media platforms enable companies to improve customer engagement with the brand, strengthen customer relationships, and increase purchase intent. Therefore, social media marketing activities are significantly effective in increasing the company's current and future profits. On the other hand, social media behavior can positively affect value co-creation by persuading consumers towards companies' value creation logic. Vassey & Unger (2023) believe that effective social media marketing strategies lead to strengthening the co-creation of value. Consumers are entertained on social media platforms, receive customized services, interact with companies and other consumers, endorse the company through word of mouth, and ultimately become part of the social media trend. Therefore, they can be part of the company's value creation processes and thereby create value together.

### **2-3- The role of customer participation between social media and value creation**

Researchers have drawn that customer value is created based on the interaction between consumers and companies and the interaction between good subjects. Social media platforms are digitized and allow users to interact more with brands, learn more about goods and services, and participate in the value creation process. Social media is very important in this context to increase the shared value for the customer. Social media platforms provide value to organizations to actively communicate with customers and increase their engagement through value creation (Aminiyan et al., 2021). Customers create added value for each other through online interactions by providing shared information. Studies show that consumers enjoy interactions with organizations through social media to express their desires and seek to experience participation in value creation. A number of social network-based studies show a causal relationship between social interaction and value. Sharma and Bumb (2022) believe that social interaction can create value by creating participation in users. Interaction can increase consumers' understanding of the value of products and services. Cao & Matsuoka (2024) argued that social networking

capabilities and customer social management and consumer engagement based on social media have increased consumer benefits. Cingillioglu et al. (2022) also showed a similar result that social media provides by increasing customer interaction, facilitating collaboration to create shared value, co-creating new products and ultimately increasing customer loyalty. In the country, the study also shows that customer participation in social networks can affect the creation of customer value. According to the strength of the theoretical literature and the results obtained from previous studies, the fourth hypothesis is proposed: "Customer participation has a mediating effect on the relationship between social media and customer value creation".

The findings of Haghighinasab et al., research (2024) title: "The Effect of Social Media Marketing on Brand Equity with the Mediating Role of Brand Experience and Social Media Benefits" showed that social media marketing activities affect brand equity, and paying attention to the dimensions of entertainment, novelty, customer interaction with media, and personalization of orders effectively improves brand equity. Managers can use these findings to improve their marketing strategies on social media. The findings of Balaji et al. research (2023) title: "Effectiveness of B2B social media marketing: The effect of message source and message content on social media engagement" showed that employee-generated content leads to higher social media engagement (i.e., intentions and behaviors) than firm-generated content. Content-based trust and engagement-based trust were found to be the underlying mechanisms by which message source impacts social media engagement. Furthermore, we observed that, for an employee-generated message, including emojis has a greater impact on customer engagement than when they are included in a firm-generated message. Finally, no evidence was found concerning the effectiveness of incorporating objective information in social media messages on customer engagement. These findings have marked implications for B2B marketers in developing effective social media message strategies. The findings of Assarian et al., research (2023) title: "Development of the native model of social media marketing for online stores" showed that presenting a paradigm model including six components of causal conditions (information and communication technology, time management and cost management), background conditions (infrastructure of online stores), intervening conditions (sanctions and economic problems, and risk management), strategies (The use of expert human resources and the use of influencers) has been the central phenomenon (social media marketing) and consequences (sustainability in the use of social networks, special value of the brand). The findings of Rosario & Dias research (2023) title: "Marketing Strategies on Social Media Platforms" showed that Social media is a flexible medium that companies can use in marketing strategies and build engagement and develop a communication plan and monitor performance. Marketing strategies in social media is a strategy to communicate brands, services, products, and ideas. Thus, it becomes evident that strategies in social media represent an intangible benefit related to marketing communication objectives. Research on social media strategy is an area of marketing communication, diverse and very fragmented, hindering its development as a promising research area. It is intended to conduct a review of the literature of social media strategies in order to take stock of theoretical and empirical development and identify research themes. The findings of Bahramzadeh et al., research (2023) title: "The role of influencer attributes on the purchase intention of customers" showed that social media influencer marketing strategies should be adjusted based on individual characteristics, traits and type of influencer. This article discusses the theoretical and practical applications of these findings. As user-generated content has increased in social media, users can become pioneer producers by actively producing and uploading personal stories and product and service reviews. The findings of

Badaoui research (2023) title: "Impact of Social Media Marketing on the Performance of Fast-Moving Consumer Goods Firms" showed that the findings highlight a positive correlation between effective social media utilization and FMCG firm performance. Important factors in optimizing social media impact include interactive content, timely responses, and influencer marketing. Challenges in this context involve managing negative reviews, maintaining brand consistency, and measuring ROI. The study contributes valuable insights and practical implications for FMCG firms seeking to leverage social media as a powerful marketing tool. The findings of Khosravi et al., research (2023) title: "Investigating the role of social media activities on brand equity and the reaction of Mahan Airlines customer" showed that marketing activities on social media have a positive and significant effect on brand awareness, brand reputation, brand loyalty, brand association and perceived quality as components of brand equity and also social media marketing has a positive and significant effect on customer response. Finally, brand equity has had a positive and significant effect on customer response. The findings of Jiang research (2023) title: "The Research on the Current Situation and Trends of Social Media Marketing" showed that social media marketing offers numerous opportunities for companies to reach and engage with their target audiences, but it also poses significant challenges, such as maintaining brand consistency and managing negative comments. The results also show that platforms such as Facebook, Instagram, Wechat and TikTok are the most popular among marketers, and that the trend of using social media influencers, video content, and user-generated content is on the rise.

### **3- Methodology**

This study has been conducted using a mixed method (both qualitative and quantitative) to analyze the effect of social media on customer participation and value creation in the automotive industry. Content analysis is used to identify the patterns emerging from the text by grouping the content into words, concepts and themes. Content analysis is useful for quantifying the relationship between all grouped content. Therefore, in the qualitative part, using the combined content analysis (conventional and directional), the components and indices of the variables were extracted with the coding technique, and then the model was tested using the structural equation modeling method and SmartPLS software. In this study, the authors used SmartPLS path modeling because SmartPLS has less demands on basic data distribution than covariance-based structural equation modeling. In addition, SmartPLS estimates the relationship between exogenous and endogenous variables, regression parameters to maximize the variance of the endogenous variable. SmartPLS combines factor analysis and path analysis into a much more precise statistical tool that is suitable for making measurements and making predictions and testing complex models. The research community in the qualitative part of the experts includes the senior managers of Khodor Sazi as well as university professors who were selected by purposeful and theoretical sampling of 15 people and with theoretical saturation criteria. These experts are considered in the interview section to extract indicators. The statistical population is a small part of the customers of the automobile company in Tehran province who have at least one experience of buying the company's new products. Unlimited statistical population and according to Cochran's formula, 412 questionnaires were randomly collected and analyzed. This questionnaire is in the form of a 5-point Likert scale in which customers have answered their expectations from the company and the desired situation. The validity of the qualitative part has been checked using the indicators of validity, reliability, adaptability, transferability and originality. Convergent validity and divergent validity methods have been used for quantitative

validity. For the reliability of the quantitative part, we have used factor loading coefficients, Cronbach's alpha and combined reliability (CR).

**Table 1. Demographic characteristics of interviewees in the qualitative section**

Row	Education	Qty	Percentage	Work Experience	Qty	Percentage
1	MA	9	60	Between 10 and 19 years	5	33
				From 20 to 29 years	6	40
2	Ph.D	7	40	More than 30 years	4	27

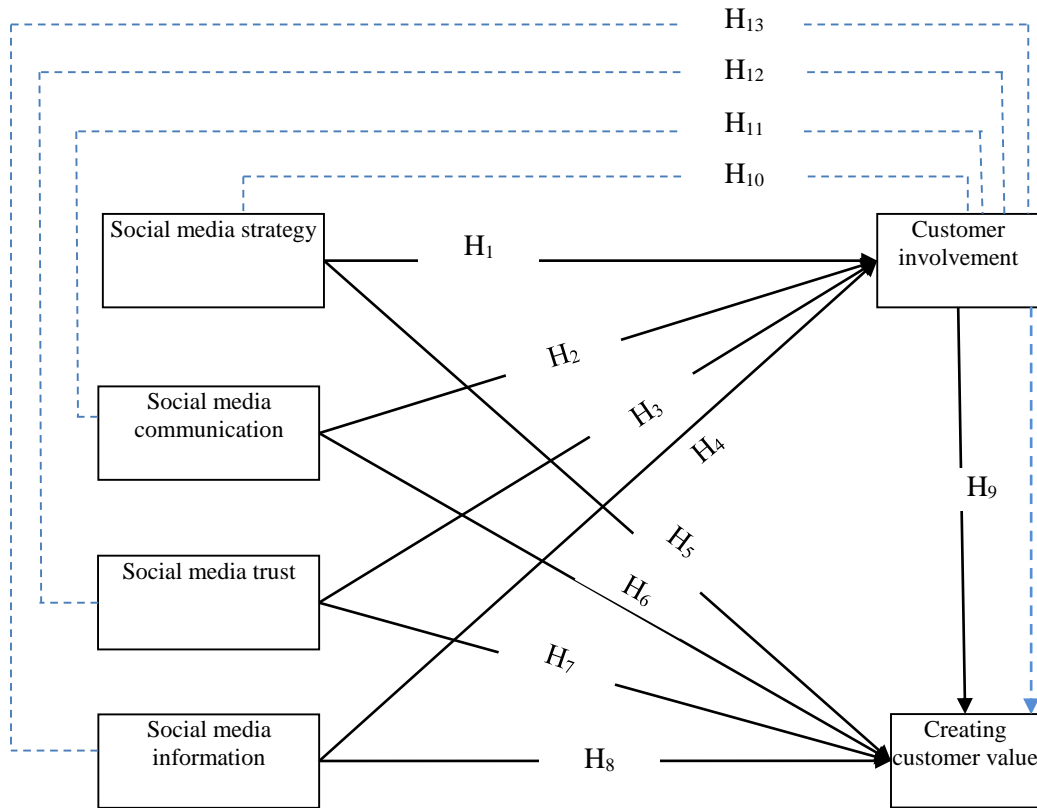
## 4- Findings

In this study, during semi-structured interviews with experts and also through the study of theoretical research literature, model indicators were extracted using open coding. In open coding, the key sentences of the interviews are given in the form of specific paragraphs in the tables based on the words of each interviewee. Then, in the second phase of axial coding, the concepts obtained from open coding were compared with each other, and the codes that were meaningfully compatible with each other and indicated a single topic, became a category and the components were formed. We used theoretical sources to name the categories so that people have the same conclusion from the results of the qualitative section. Table 2 shows the results of the qualitative part of the study:

**Table 2- indicators, components and variables extracted in the content analysis section**

Variables	Components	Indicators
Social media	Strategy	Using different social media - Social media marketing investment - Defining key performance goals - Social media marketing planning - Social media analysis.
	Relationship	Increasing and facilitating interaction with customers - Valuing users and responding - Listening to consumer preferences and understanding customer needs - Encouragement to interact with social media - News and product announcements - Promotional strategy.
	Trust	Attention and protection of privacy in social media - trust in information security - reducing perceived risks - increasing brand credibility.
	Information	Data analysis - enabling easy access to market information - sharing needs and preferences - gathering customer information - customizing information needs.
Customer involvement	Information sharing	Sharing important information needed - Sharing information between customers and employees - Sharing experiences.
	Growth partnership	Providing solutions by customers - Transferring customer knowledge to the company - Evaluation and modification of new products - Participation in the introduction of new products.
	Innovation partnership	Providing designs according to the needs of the client - sharing unique ideas.
Creating customer value	Functional value	The quality characteristics of the final product and service according to the customer's perception - the ratio of price to product value - innovation for existing products and services - the price of the product compared to competitors - the price of other services.
	Social value	Flexibility and speed in responding - Convenience in buying and delivering products - Improving the level of customer service - Strengthening customer relationships.
	Emotional value	Pleasantness of buying the brand - Brand honesty - Overall perceived value of the brand - Fulfillment of complete customer needs.

All the hypotheses proposed in this research are derived from the literature review and are presented in the form of a conceptual hypothetical research model, which is shown in Figure 1. The components of this model are extracted in the qualitative section. In the following, the model is evaluated using experimental data and the results are presented below.



**Figure 1- Proposed model of the effect of social media on customer participation and value creation in the automotive industry**

For data analysis, a two-step process suggested by Anderson and Gerbing (1988) was followed. In the first stage, the confirmatory factor analysis model is performed using SmartPLS software. The initial model is produced for the six structures of the proposed model and the results are used to analyze the fit and validity of the model structure. In the second stage of structural equation modeling, path analysis is performed to test the relationships between the theoretical constructs of the proposed model. After running the software for the proposed model in Figure 1, the confirmatory factor analysis model was obtained in standard coefficient estimation mode along with the statistical value of  $t$  for the measurement model. Figure 2 shows the output of the model.



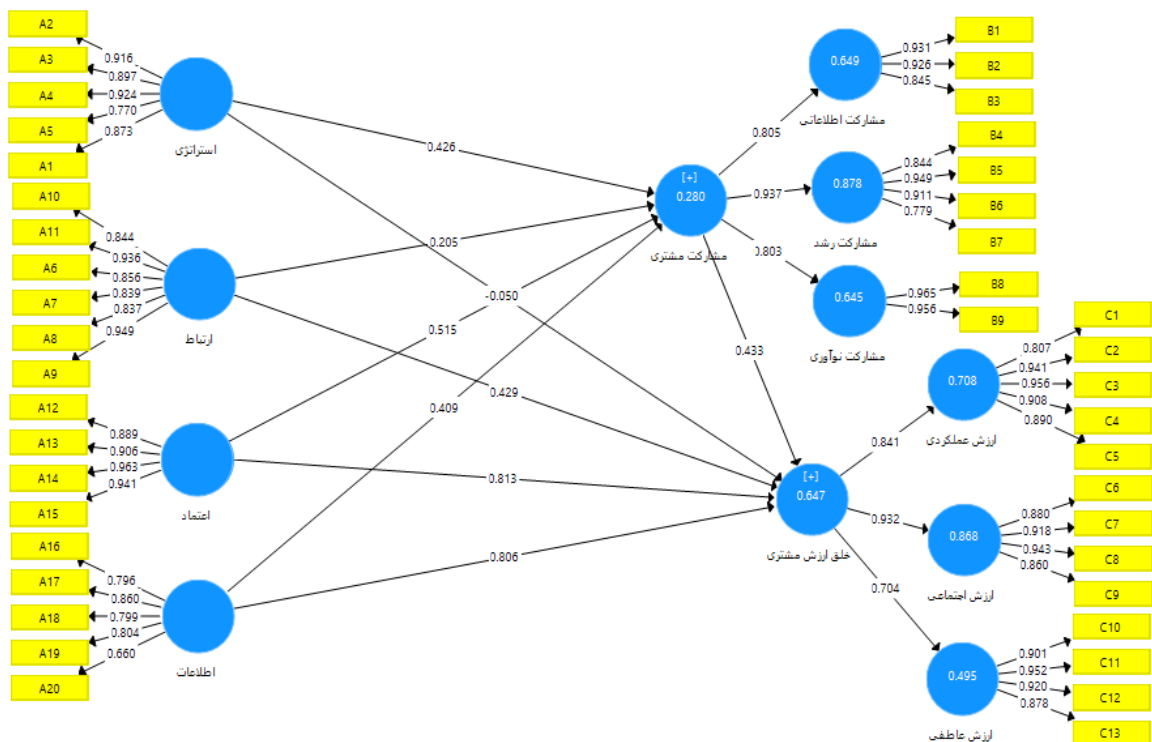


Figure 2- Factor load and path coefficient (correlation) of PLS algorithm

To calculate the reliability of the external model, we used composite reliability (CR), internal consistency reliability (Cronbach's alpha) and factor loading. Also, for the convergent validity of the variables, we used the average variance (AVE), and these findings are shown in Figure 2 and Table 3. According to the findings of Figure 2, the factor loading for our model is greater than 0.7 and the statistical value of t is greater than 1.96, so the factor loading is significant at the 95% confidence level and the measurement model is strong enough and the constructs They were approved without removing any of the items.

Table 3- Evaluation of the measurement model

Structures	Convergent validity	Reliability	
		Cronbach's alpha	Composite reliability
Strategy	Average variance 0.770	0.925	0.943
Relationship	0.771	0.940	0.953
Trust	0.856	0.944	0.960
Information	0.619	0.868	0.890
Customer involvement	0.604	0.917	0.932
Creating customer value	0.561	0.932	0.942

Based on the findings in Table 2, Cronbach's alpha and composite reliability for all constructs are greater than 0.7, and the findings show that the scales are reasonably reliable for all constructs. Also, the findings show that the average variance for all structures is above 0.5, so convergent validity was confirmed for the model of this research. In addition, HTMT analysis for

the divergent validity of latent constructs was also obtained from Fornell and Locker's criterion and cross-validation and based on Henseler et al. (2014). Table 4 shows the findings of Fornell's and Locker's criteria for divergent validity of the model. Table 3 shows that all correlations were smaller than the square root of the average variance applied along the diameters, which indicates satisfactory divergent validity. This finding confirmed that the observed variables in each construct represent the given latent variable, which confirms the divergent validity of the model. Also, based on the findings of Table 5, the HTMT correlation is less than the acceptable range (HTMT <0.90) and this shows that the correlation value for all constructs is acceptable and confirmed.

**Table 4- Fornell-Larcker criterion test**

	Relationship	Strategy	Information	Trust	Creating customer value	
Relationship	0.878					
Strategy	0.513	0.878				
Information	0.655	0.240	0.787			
Trust	-0.747	-0.331	-0.845	0.925		
Creating customer value	0.457	0.293	0.479	-0.227	0.749	
Customer involvement	0.307	0.459	0.211	-0.126	0.609	0.777

**Table 5- HTMT correlation matrix**

	Relationship	Strategy	Information	Trust	Creating customer value	
Relationship						
Strategy	0.564					
Information	0.772	0.256				
Trust	0.798	0.354	0.900			
Creating customer value	0.470	0.310	0.433	0.252		
Customer involvement	0.318	0.492	0.233	0.155	0.666	

After confirming the external measurement model, in this section we evaluate the internal structural model of the theoretical model. Based on this, we can proceed with the structural external model to test the study hypotheses. Coefficient of determination (R<sup>2</sup>), path coefficient ( $\beta$  value) and T-statistic value, effect size ( $f^2$ ), predictive relevance of the model (Q<sup>2</sup>), and goodness-of-fit index (GOF) are key standards for evaluating the internal structural model. Table 6 shows the coefficients of determination and predictive correlation values of the model. Based on Table 6 and Figure 2, the coefficients of determination in the second-order constructs of the customer value creation variable show that this variable is influenced by the predictive dimensions of functional value 71%, social value 87% and emotional value 50%, which according to the predictors The measured variables were good. The value of R<sup>2</sup> for the variable of customer participation was equal to 0.280 and it showed that the external variable of customer participation is influenced by the predictive variables of social media effectiveness, including

strategy, trust, communication and information. Also, the coefficient of determination for the customer value creation variable shows that about 64.7% of the change in customer value creation is due to five hidden structures including customer participation, strategy, trust, communication and information in the model, which is a significant and confirmed value. Is. Also, the correlation values between the models show that this value for the customer participation variable was equal to 0.151 and for the customer value creation variable it was equal to 0.331, which was higher than the limit of 0.15 and shows that the correlation of the path model prediction is suitable for endogenous structure.

**Table 6- Relationship between model prediction and coefficients of determination**

Structure	R2	R2
Relationship	-	-
Strategy	-	-
Information	-	-
Trust	-	-
Creating customer value	0.331	0.647
Customer involvement	0.151	0.280

The degree of influence of each exogenous latent construct on the endogenous latent construct was evaluated under the title of effect size measurement. Table 5 shows  $f^2$  of the calculations, according to which the effect size for communication is 0.021 (weak), strategy is 0.182 (moderate), information is 0.065 (weak), and trust is 0.081 (weak). Customer participation. Also, the effect size for communication is 0.183 (moderate), strategy 0.004 (weak), information 0.485 (strong), trust 0.381 (strong) and customer involvement 0.383 (strong) on creating customer value. . Hence, according to Cohen's recommendation,  $f^2$  of all five exogenous latent constructs had a positive effect on customer value creation with an R2 value of 64.7%, which indicates that the independent constructs of communication, strategy, information, trust and customer participation in this The model contributed an acceptable amount of 64.7% in the dependent variable of customer value creation.

**Table 7- The results related to the effect size of  $f^2$**

	Relationship	Strategy	Information	Trust	Creating customer value	Customer involvement
Relationship					0.183	0.021
Strategy					0.004	0.182
Information					0.485	0.065
Trust					0.381	0.081
Creating customer value						
Customer involvement					0.383	

Finally, we used the GOF index to fully fit the model. To calculate this index, we took the help of the relation  $GOF = \sqrt{(AVE \times R^2)}$ , in which the average AVE was equal to 0.761 and the average coefficient of determination was equal to 0.646. After placing the values in the relation  $\sqrt{(AVE \times R^2)}$ , the GOF value equal to 0.701 and greater than 0.36 was obtained, which indicates that the experimental data satisfactorily matches the model and the fit of the model is good and a cost-effective and acceptable model. After evaluating and confirming the structural model, it is possible to interpret the relationships between the variables of the model. The values of the t test

along with their significance values for the significance level test of the path coefficient ( $\beta$  values) are presented in Figure 3.

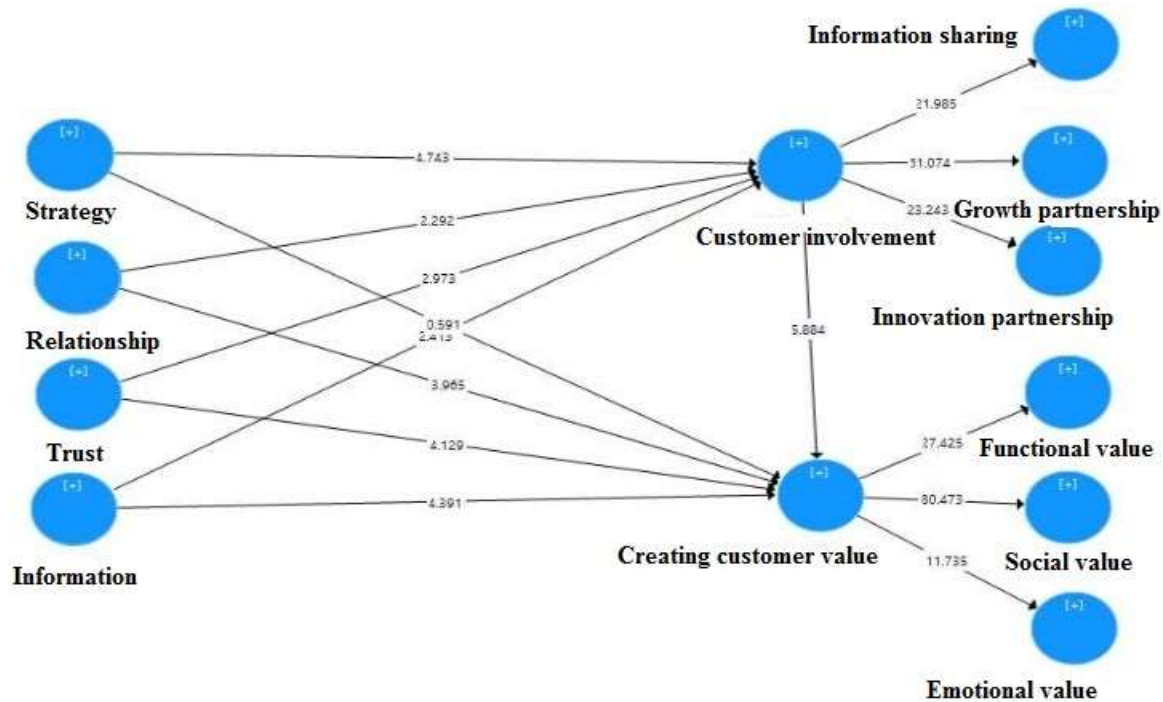


Figure 3- Structural model of significant coefficients (T)

Table 7 shows the summary of the test results of the relationships between the variables of the social media effect model on customer participation and value creation in the automotive industry. Hypotheses are accepted if their p-value is less than 0.05 and t-value is more than 1.96.

**Table 8- The results of structural equations and the relationship test of the effect of social media on customer participation and value creation in the automotive industry**

Relationships	Independent variables	Dependent variables	Beta	t statistic	p	Direction of relationship	Result
Hypothesis 1	Social media strategy	Customer involvement	0.426	4.743	0.000	+	Confirmed
Hypothesis 2	Social media communications	Customer involvement	0.205	2.292	0.025	+	Confirmed
Hypothesis 3	Social media trust	Customer involvement	0.515	2.973	0.004	+	Confirmed
Hypothesis 4	Social media information	Customer involvement	0.409	2.413	0.018	+	Confirmed
Hypothesis 5	Social media strategy	Creating customer value	-0.050	0.591	0.557	Rejected	
Hypothesis 6	Social media communications	Creating customer value	0.429	3.965	0.000	+	Confirmed
Hypothesis 7	Social media trust	Creating customer value	0.813	4.129	0.000	+	Confirmed
Hypothesis 8	Social media information	Creating customer value	0.806	4.391	0.000	+	Confirmed
Hypothesis 9	Customer involvement	Creating customer value	0.433	5.884	0.000	+	Confirmed

Hypothesis 10	Communication → Customer involvement	Creating customer value	0.185	3.775	0.000	+	Confirmed
Hypothesis	Trust → Customer involvement	Creating customer value	0.089	2.076	0.041	+	Confirmed
Hypothesis	Information → Customer participation	Creating customer value	0.223	2.646	0.010	+	Confirmed
Hypothesis	Information → Participation	Creating customer value	0.177	2.207	0.030	+	Confirmed

As Table 8 shows, the relationship between all variables (except hypothesis H5) was confirmed positively and significantly, and therefore hypotheses H1, H2, H3, H4, H6, H7, H8, H9 were supported, but The effect of social media strategy on customer value creation is insignificant ( $\beta=0.050$ ,  $t=0.591$ ,  $p<0.000$ ) and hence, hypothesis H5 was not supported. The results also provide data on the specific indirect effect to test the mediating effects of customer involvement in the relationship between the four dimensions of social media on customer value creation (Table 9). All specific positive and significant indirect effects supporting the mediating effects of customer involvement in the relationships between: strategy and customer value creation ( $\beta=0.185$ ,  $t=3.775$ ,  $p<0.000$ ), communication and customer value creation ( $\beta=0.089$ ,  $t=2.076$ ,  $p>0.000$ ), trust and customer value creation ( $\beta=0.223$ ,  $t=2.646$ ,  $p>0.000$ ), information and customer value creation ( $\beta=0.177$ ,  $t=2.207$ ,  $p>0.000$ ). Therefore, all the hypotheses H10, H11, H12 and H13 were confirmed on the mediating effect of customer participation in the relationship between social media influence and customer value creation. Table 8 shows that information and trust variables have the highest path coefficient  $\beta < 0.806$  compared to other  $\beta$  values in the model, which shows that it has a higher variance value and a high impact on customer creation. Also, in customer participation, trust variable had the greatest impact on customer participation with  $\beta = 0.515$ .

## 5- Discussion and Conclusion

In the automotive industry, product quality and value creation is a key factor in influencing customer satisfaction. The competitive scenario forces companies to use smart technologies such as social media to communicate and create collaboration with customers to improve products and services. For this reason, companies seek to use social media and become experts in it to increase network knowledge and perform important marketing activities. But how and to what extent companies can use social media tools to attract customer participation in the process of creating new services and creating value for customers has always been a fundamental question for organizations. Therefore, this research is aimed at the effect of social media on customer participation and value creation in the automotive industry. To achieve the goal and answer the research questions, we presented the conceptual framework of the study by highlighting the research gap and the purpose of conducting the research. Then we made research hypotheses and developed a theoretical model based on examining the effect of social media, customer participation and value creation.

In this study, the theoretical model includes social media variables with four components (including strategy, communication, trust and information), customer participation with three components (information participation, growth participation and innovation participation) and customer value creation with three components (functional value, social value and emotional value) has been extracted by content analysis and approved by experts. These findings show that

the strategy of using social media for marketing activities should be in line with the achievement of organizational goals and its purpose is to create strong and appropriate communication and interaction with customers in order to identify needs and share data. In addition, the concerns of online business and privacy and security are one of the values perceived by customers for cooperation in online business and especially social media that the automotive industry must gain the trust of customers.

The findings of the evaluation and test of the theoretical research model showed that the social media strategy has a positive and significant effect on customer participation. This finding shows that the existence of a long-term goal along with marketing plans in social media provides a strategic perspective to the organization to advance social media activities in line with the organization's goals. The findings of the present study showed that the use of social media leads to the effectiveness of customer engagement during marketing activities, which provides more insights into the use of social media types, investment, and having marketing goals and plans in social media. According to Rosario & Dias (2023), social media networks, as a digital tool, provide a platform for customers to participate in the activities of organizations and enable them to encourage customers to interact effectively in joint activities. The study of Cingillioglu et al. (2023) shows that the up-to-date strategy and structure of social networks can improve the level of customer participation.

According to the hypothesis 2, social media communication has a positive and significant effect on customer participation. This hypothesis confirms that the use of social media in marketing processes, along with high levels of ability to communicate with customers, significantly enhances customer engagement performance. This research helps companies to focus more on stimulating customer engagement through communication quality. The findings of the present study are consistent with the findings of Bahramzadeh et al. (2023) and Jiang (2023) show that the use of social media plays a vital role in customer participation in company activities.

The hypothesis 3 was also confirmed as the effect of social media trust on customer participation in a positive and meaningful way. According to the confirmation of this relationship, trust in social media and the safety of networks can stimulate customer participation in the development of products and services. The research findings of Assarian et al. (2023) support the results of this research and agree that the importance of social media marketing activities is in increasing user interaction in the light of trust.

According to hypothesis 4, social media information has a significant effect on customer participation. This relationship shows that the provision of information needs in social media by the company can drive customer participation in line with its goals and manage them. In line with confirming this hypothesis, Badaoui (203) emphasizes that sharing information on social media will encourage customers to participate.

According to the fifth hypothesis, the impact of social media strategy on customer value creation was not supported. But according to theoretical literature, social media marketing provides an opportunity for interaction and collaboration to co-create products and services.

The findings of hypothesis 6, showed that social media communication has a significant effect on creating customer value. According to this hypothesis, customers should be able to obtain their expected values when communicating and interacting with company-sponsored social media content. Khosravi et al. (2023) reached a similar result of the impact of social media consumer interactions on creating and combining value.

According to hypothesis 7, social media trust has a significant effect on customer value creation. The safety of marketing activities in social media makes customers trust the brand of the

company and the risk of buying products decreases. None of the past studies have addressed the relationship between social media trust and customer value creation. The results of similar studies were not found in this regard so that the results can be compared.

According to hypothesis 8, social media information has a significant effect on customer value creation. By collecting information through social media, marketing managers can see customer needs in their product designs and create value for them and the creation organization by providing products according to customers' wishes. Previous studies have not addressed the relationship between these two variables.

The hypothesis 9, showed that customer participation has a significant effect on customer value creation. Based on this hypothesis, the customer's participation in the design of services and products through social media can create their satisfaction and receive products according to the desired value. In this regard, the academic community has emphasized the positive role of customer participation in the innovation process and knowledge sharing in improving product quality and customer satisfaction.

The 10th, 11th, 12th and 13th hypotheses showed that customer participation has a mediating effect on the relationship between social media dimensions and customer value creation. Hence, focusing on social media marketing activities with the four dimensions of strategy, communication, trust, and information in supporting customer participation in the service creation process stimulates value creation among the company's customers. The findings of this hypothesis show that creating a positive experience of communication with organizations through participation by social media is important because it affects the successive results of value creation and product branding. The findings of Haghighinasab et al.'s research (2024) showed that user interaction acts as a mediator between social media marketing activities and brand communication.

## **Suggestions**

- Considering the variable impact of social media strategy on the variables of customer participation and customer value creation, it is suggested to the managers of the automotive industry to carry out social media marketing activities in line with the key goals and considering the appropriate strategy, and to invest in content creation and management support to attract a higher level of customer engagement. These strategies should be in such a way that they can better understand the customers' behaviors and improve the company's service creation processes. Therefore, customer engagement through social media is expected to provide access to customer-centric services. Hence, companies can help make personalized customer suggestions in product manufacturing to improve customer satisfaction. In addition, automotive companies should use incentive schemes and impressive prizes as a suitable strategy to encourage customers to participate so that the best contributions and incentive schemes are announced. To achieve a higher level of customer engagement, the company should create a tool on social media where customers can submit ideas and designs for new services or test existing products and services. Therefore, it is expected to help customer participation in the process of creating new products and services by improving marketing innovation activities in social media;
- In order to improve the impact of social media communication with the variables of customer participation and customer value creation, it is suggested to improve the key criteria of customer interaction such as likes, shares, comments, and communication

clicks, and to give appropriate answers to customers' comments and questions. In general, companies should work on managing customer requests. Also, a lot of effort should be made to introduce innovative activities. In addition to training employees to properly communicate with customers through social media, having incentives such as a reward system to motivate employees to help customers create shared value and practical offers. Also, to better communicate with customers and encourage them to participate, content creation strategy in social media is suggested. The content should have informational and personalized benefits so that the organization can establish a stable relationship with customers;

- In order to increase the variable effect of social media trust on customer participation and value creation, it is recommended to manage and control online business risks in social media. Risks such as the risk of providing products according to customers' demands, advertising risks, technology risks and privacy and security risks increase the concerns of customers that marketing managers should succeed in reducing the perceived risks in order to gain the trust of customers for more participation;
- Finally, to improve the relationship between the variable of social media information and customer participation and value creation, it is suggested to the managers of the automobile industry that the automobile company creates and activates a panel forum for its customers, the purpose of which is to collect useful information about the perceptions and feelings of users about the issues different, identifying and assessing the needs of consumers and exchanging and sharing information between users and managers so that customers can easily provide solutions regarding production development, respond to the organization's requests, or express their complaints.

### **Research limitations**

The main limitations of the present study include the generalization of its findings to other organizations, including service organizations, which should be done with caution. In addition, variables such as social marketing activities, value creation results, and organizational capabilities have been ignored in this study. Therefore, it is suggested that researchers investigate the impact of value creation on financial performance in future studies. Also, the impact of social media marketing activities on customer engagement can be another relevant topic. Finally, the moderating role of e-commerce capabilities should be considered in theoretical models.



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