Presenting a systemic model for the effectiveness of marketing communication activities in social networks: with a political economy approach

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ABSTRACT

Considering the emerging potential of social media marketing for companies worldwide and the common gaps in social media research, attention to social networks in the consumer and corporate domains is an important goal. Political economy also studies social relations, especially power relations, which include mutual relations between production, distribution and consumption of resources such as communication resources. Considering the relationship between these two concepts, in the current research, the effective factors on the effectiveness of marketing activities in social networks have been investigated with an emphasis on the political economy approach. The purpose of this research is an applied research that is conducted in the retail industry (chain stores). Also, in terms of the type of research, it is a qualitative-quantitative research that is carried out in two phases. The statistical population of the current research includes Refah, Janbo, Haft, Ofog Korosh, Shahrvand chain stores that do marketing activities on the Instagram social network and have two separate statistical samples. In the qualitative stage, after coding and extracting the main and secondary themes, the desired model was checked and confirmed using structural equations. In the quantitative part, in response to the first question, the highest impact is related to the audience attraction structure, and it is concluded that due to the interactive nature of social networks, it is necessary to know the opportunities and challenges of using these networks in business and marketing matters, including interaction and communication with customers. In response to the second question, the highest impact related to the structure of cost reduction, followed by brand preference and brand awareness, and it is noted that companies that are not active in the field of social networks or have little activity in the world of competition in terms of price and also the correct and sufficient use of social networking pages as a sustainable competitive advantage will suffer from defects and in response to the third question that the highest effects are related to survey structures and influential people, it is suggested that companies use the contents of survey tools on their social pages more.

1. Introduction

$\mathcal{T}$he use of Internet marketing in all businesses, including small and medium-sized companies, has become very common, and online businesses have been recognized as a means of starting a business today. According to a study conducted by Deloitte, Americans check their information online about 46 times a day on average (Cutler, 2016), and social networks have been very effective in this regard. A social network is a set of web-based services that allow people to create public or private descriptions for themselves, or communicate with other members of the network, share their resources with them, and public descriptions of other people to find new connections (Boyd and Mason, 2012). Social networks are actually web-based services that allow people to create a public or semi-public profile within a limited system, communicating with other users and viewing the pages and details that other users have created within the system (Baran and Stock, 2015). Social network marketing can be introduced as a new and revolutionary field in business, like the marketing of goods and services, through social networks. Marketing activities through online programs generate information among users, and by changing the generated content, they enable the user to make predictions for the future of their business and monitor the buying behavior of their customers more closely. They also make it possible to attract new customers, create awareness, increase sales and create loyalty in customers and quick use and save time (Irvan Danhil, 2014). Marketing communication through social networks is an opportunity for entrepreneurs, start-ups, marketing managers, brand managers and people who are somehow involved in the development of their business. The main task of social network marketing communications is to create a kind of solidarity and intimacy between the customers (current and potential) of a brand and the brand itself. It is also one of the most essential tools for all kinds of businesses, especially internet startups.

Political economy includes the set of laws that support the economic decisions of policymakers in a rational way, for the optimal allocation of

public and private economic resources in line with future goals in order to increase performance in economic fields and leading sectors, which in the long term supports national competitiveness and well-being. (Fartash, 2018). Any reliable political economy must be designed based on the characteristics of the economic system and the long-term framework to support permanent patterns of economic development and long-term economic goals and innovation. Actors in the field of political economy should use past experiences and policy learning to stimulate industrial innovation (Baros, 2011) and pay attention to formulating policies to support innovation and productivity of power industries (Hobdi et al., 2019). One of the most important features of political economy is its interest in examining the social totality or the totality of social relations, which actually includes the economic, political, social, and cultural fields of life. Therefore, the fundamental unity of thought and action also has a special place in political economy. In addition, considering the expansion of network marketing and the importance of the influence of communication on it, in the present research, a model has been presented in order to measure and investigate the factors affecting the effectiveness of marketing communication activities in social networks, taking into account the political economy approach in this field. The purpose of this research is an applied research that was conducted in the retail industry (chain stores) that do marketing activities on the Instagram social network, and in terms of type, it is a qualitative-quantitative research that was conducted in two stages. Therefore, in this research, we seek to answer the following questions: What are the goals of marketing communication activities in social networks with a political economy approach?, What are the methods of marketing communication in social networks with a political economy approach?, What are the criteria for the effectiveness of marketing communications in social networks with a political economy approach?.

2. Theoretical literature

1.2. Marketing

Marketing means determining and reaching human needs, and one of its shortest definitions is fulfilling needs in a profitable way. From the point of view of the American Marketing Association (AMA), marketing is a social and management process by which individuals and groups meet their needs and desires through the production and exchange of goods with each other (Cutler and Keller, 2009). According to Bleich, it is the process of planning, implementing, conceptualizing, pricing, promoting ideas, goods and services to create exchanges that satisfy individual (consumer) and time goals (Bleich, 2009). Peter Drucker also believes that the goal of marketing is to understand customers in order to create goods or services that suit them.

Researchers believe that the emergence of social networks is a real revolution in marketing communication and one of the most common types of activities on the Internet, which Emoforce defines as a new version of communication technology (Constantindes, 2014). Marketers have a set of activities to engage with customers, among which there are three popular activities to increase engagement in the digital age. First, marketers can use mobile apps to increase digital customers and second, marketers can use customer relationship management to interact and provide solutions. Finally, marketers can create desirable behavior in customers through gamification. Therefore, the use of mobile phones based on social networks, online customer relationship management and gamification for online exchanges can bring entrepreneurs closer to their customers (Beker and Blanmberg, 2014). One of the most popular recent trends in online marketing is the growth of social networks and the increase in their use by customers. People go to websites or social networks to buy their necessities, and by getting complete information about the desired product or service, they also have the opportunity to discuss and discuss with other users and their opinions about the product. Meanwhile, social networks are one of the most important tools for creating such a context. (Schwinski and Dabrowski, 2014)

Today, social networks have a significant impact on all aspects of the life of human societies, including political, economic, communication and interactions (Schwinski and Dabrowiski, 2014). Social networks provide a good opportunity for marketers to establish two-way communication with customers beyond traditional methods. One of the most important goals of communication measures with regard to the various stages of the life of the company and the product is to transfer information to the target market in order to facilitate the positioning of products and services in the desired part of the market and also to receive favorable reactions from customers (Manria et al., 2001). The set of marketing communications should be combined and synergistic, appropriate to the position of the product and the product line and even the company, appropriate to its life curve, and be able to determine their position with minimal error by determining the desired main and secondary indicators of the product in the target market and provide an appropriate, effective and coordinated message (Lopez et al., 2002). Meanwhile, social networks are an exceptional tool for company communication with consumers and marketing. In social media marketing, the company focuses more on visibility using different techniques. Because in traditional marketing, the message is ignored by many customers (Nober and Silvia, 2014). Digital marketing does not mean to replace traditional marketing, but these two should interact with each other on the way to the customer. The goal of traditional marketing is to generate results, while digital marketing focuses on initiating customer interaction and is therefore more successful. In addition, companies must use the power of the customer (Cutler, 2016).

2.2. Social media marketing

Social media marketing is defined as business marketing events or processes that use social media to positively influence consumer purchasing behavior (Dunn, 2010). Therefore, social media marketing is a process that promotes the promotion of websites, products, and services through online social channels (Weinberk, 2009) and deals with relationship building and

communication with current or potential consumers (Erdogmus and Saike, 2012) and presents marketers with significant opportunities to reach consumers in their social communities and create personal connections with them. In general, marketing based on social networks is a set of marketing activities that uses social relationships formed between people to increase the organization's sales (Hale et al., 2006). The growing trend of using social networks in different cultures and countries has seen an exponential increase in the levels of online communication around the world (Early and Dietrich, 2017) that is variable from consumer-to-consumer interactions, consumer-to-business interactions, company-to-consumer interactions, and company-consumer connectivity in computer-mediated social environments (CMSE) (Yadav and Palu, 2014). Emerging digital media technologies, especially the Internet, social networking websites (eg: Facebook, LinkedIn, Snapchat), mass communication websites (eg: YouTube) and mobile networks (based on Web 2.0) market and dynamics have transformed the business by changing the competitive positions of the companies. Social media websites have changed the rules of the game for marketers to understand online consumer behavior in social networks. Marketers try to understand the business strategy for survival in social environments and create several methods to identify the behavior of buying goods and services using decision patterns, behaviors (Yadav et al., 2013).

3. Research Background

Ziang and Sun (2023) have conducted a study on the use of organizational social network, knowledge acquisition and innovation performance. The results showed that the use of social network marketing in teams has a positive effect on knowledge acquisition and knowledge breadth, both of which are useful for innovation performance. Malik Shirabadi et al., (2022) by conducting a research titled validation of digital marketing on marketing intelligence in Isaco company, concluded that digital marketing has a significant impact on marketing intelligence. Rostgari et al., (2021)

conducted a research titled providing a model of the effectiveness of effective marketing strategies on Instagram. In this research, a final model was presented, which showed that there is a causal-hierarchical relationship between these factors, in such a way that the broad meaningful indicators of influence and the attractiveness of the influencer's innovative content have the most driving power compared to other factors. Ahadi and Saberian (2021) in a research conducted a comparative study of the effect of using content marketing in social networks and traditional marketing on consumer behavior and concluded that although both traditional and content marketing methods, in general, increase the willingness of insurance customers, the amount of increase in purchase intention of content marketing audience is significantly higher than the other group. In a research, Vaibovu et al. (2020) investigated customer behavior as a result of social media marketing, considering the role of social media marketing activity and customer experience in this research, and concluded that social media marketing activity and customer experience, have a significant effect on the quality of communication with the customer, which leads to a positive effect on the customer's behavioral results. In a research, Rahma Ebrahim et al. (2019) investigated the role of trust in understanding the impact of social media marketing on brand equity and brand loyalty and concluded that social media marketing activities only include three conventional dimensions, customization and word of mouth. These characteristics of social media marketing directly affect brand loyalty and indirectly affect brand equity through brand trust. In their research, Aghajan-Tabar Moghari et al (2019) provided a framework for designing a viral marketing campaign through social networks for business services to consumers in Iran and reached the final research framework with 13 steps. Khornia and Sisprasudjo (2018) investigated social media and the use of Instagram and its performance benefits in a research and concluded that compatibility has no effect on the use of Instagram, cost effectiveness has a strong positive effect on the use of Instagram, trust and interaction has a positive effect on Instagram usage,

Instagram usage has a strongly positive effect on non-financial performance and no effect on financial performance. In a study, Klerpack and Starzyszna (2018) presented a marketing communication model for social networks and concluded that the emergence of social media offers a set of communication channels that can add brand to a marketing communication strategy. In a study, Suleiman et al. (2018) investigated the factors affecting the use of Facebook among small and medium-sized companies and concluded that the use of Facebook has a positive effect on the financial performance of small and medium-sized companies as well as reducing marketing costs.

Malekiminbash and Shahriari (2017) in a research investigated the use of social networks for business in Iran, its challenges and opportunities and concluded that the opportunities include interaction and creating two-way communication with customers, the extent of social networks, guerrilla marketing. , branding and factors related to technology and challenges also include political factors, uncontrollability of messages and limited audiences. In a study, Roshandel Arbatani (2016) investigated the effect of social networks in improving customer and brand loyalty and communication and concluded that the presence of websites had a positive effect on increasing trust and loyalty to the brand from the customer. In a research, Tahoonchigolkhatmi and Chitsaz (2016) investigated the effect and role of social network marketing activities on consumer perception of brand names and concluded that social network marketing activities of brand names are an essential element in building a positive attitude towards brand names and as a result, achieving a higher brand value with the consumer.

4. Research method

In terms of the purpose, the current research is an applied research that was conducted in the retail industry (chain stores) and also in terms of type, it is a qualitative-quantitative research that was conducted in two stages. The statistical population of the current research includes Refah, Janbo, Haft, Ofoghe koroush, and Shahrvand chain stores that do marketing activities on

the Instagram social network, and it has two separate statistical samples in the qualitative and quantitative parts: Sample size and sampling method of the first group: The first sample is considered for the qualitative stage (foundation data theory) whose size is directly related to the researcher's decision-making and judgment and there are no predetermined rules for it. For this purpose, in this research, 15 experts were interviewed in the field of social network marketing, including professors and active experts, and interviews with professors were conducted until the categories reached theoretical saturation. The interview questions are open-ended and things like marketing goals and social media marketing effectiveness factors were investigated and the interview process was recorded and implemented. Sample size and sampling method of the second group: The second sample was considered for the quantitative stage, and its volume was calculated using Cochran's formula; According to this formula, the total sample size of 384 managers, experts, sales staff, and active marketers was considered, and stratified sampling method with proportional allocation was used to select the sample.

In the first stage (qualitative stage), thematic analysis was used to determine the components of the model, which was used according to 15 experts from most areas of Tehran, and the sampling method was clustered from the north, south, east, west and center regions. Data analysis in qualitative method started immediately after the beginning of data collection. In fact, data collection and analysis were usually done at the same time. In the grounded data theory, the conceptual coding method was used for data analysis, which included three stages of open coding, central coding, and selective coding, and the concepts were converted into categories by selective coding, and finally the theory was made from the categories. In the next stage (quantitative stage), the themes obtained were matched with the original model according to theoretical principles and distributed among 384 people from the statistical sample for the reliability and validity of the designed questionnaire model.

The methods of collecting information in research are divided into two categories: library and field. Regarding the collection of information related to the confirmation or rejection of the research question, a survey method was also used and related articles were reviewed to collect theoretical information related to the topic. In order to gather information about the theoretical model of the effectiveness of social network marketing communication, two methods of in-depth interview and specialized literature review were used. To conduct in-depth interviews, in the open coding stage, open interviews were used and in the central and selective coding stages, structured interviews were used.

5. Research Findings

5.1. Findings of the qualitative section

Validity of the qualitative part: Long-term involvement and continuous observation: Immersion or long-term involvement is one of the important actions of the researcher in the research process, and in this way, the researcher is fully involved in the research, establishes a correct and appropriate relationship with the participants, and is receptive to deep concepts which are revealed in the study process. The current research was carried out for about 2 and a half years and during this period, the contact number and communication of the researcher with the participants exist so that they trust the researcher and most likely tell the truth or correct the previous cases if necessary so that the assumptions of a deeper investigation and analysis should be done. Peer review: Peer review is an interaction between the researcher and other people who have experience in research methods. In this research, to conduct the audit, a summary of the interview notes was presented to a number of members, as well as the final model was sent and the opinions of the members were collected.

Review of contributors: it is a quality control process designed to improve the scientific accuracy and validity of the researcher's recorded credibility in the research interview. For review by the participants, one of

the interview questions allows the participant to state if a point was forgotten or could not be raised in the previous questions. In addition, communication methods, including email and contact number were provided to the participants so that in case of changing their opinions or finding new points, they would provide it to the researcher within a certain period of time. Triangulation technique: Triangulation refers to using multiple sources of data to draw conclusions about what constitutes the truth. For this purpose, in the case of triangulation, several interviews were analyzed for reliability and accuracy by professors and experts.

Reliability check of the qualitative part: Reliability refers to the consistency of research findings. In the qualitative method, using quasi-structured interviews, participants' opinions are obtained and required data are collected. In this research, the reliability of the qualitative method was controlled through the preparation and use of a written framework for the interview. This codified framework was used in all interviews after the approval of the professors and ensuring its effectiveness in covering the objectives. Considering that Cronbach's alpha is higher than 0.7 for all research variables, it can be said that the research tool has acceptable reliability. Also, all items are significant at the confidence level of 0.95, and the significance of the items was higher than ±1.96. Therefore, according to the obtained values, it can be said that the convergence validity of the measurement tool was confirmed.

Conceptual model extraction: To perform a qualitative analysis of the effectiveness of marketing communication activities in social networks with the theme analysis approach, first the conducted interviews were entered into a Word file, and then the text of the interviews was read many times by the researcher so that while familiarizing himself with the text, the least error would occur in coding. Finally, after knowing the text of the interviews and entering the texts into the Max Kyuda software, the coding process began in this software. By studying the text of the interviews and comparing with

other sections, significant propositions were identified that contain important and meaningful information related to the research question. In the following, a code was assigned to each of the meaningful propositions that the meaning of that proposition or theme is meaningful. After the completion of coding, all meaningful themes were extracted. It was re-transcribed along with the sub-themes so that a decision could be made for the next classification. The themes were studied and compared many times so that the codes that had the most similarities and could create a single meaning together were placed in one category, and classes of codes were created, and the term theme was assigned to these classes. In the end, all themes were placed in a specific category. After coding, sub-themes were extracted and finally, after categorizing and clustering sub-themes, main themes were created and 3 main themes, 7 sub-themes and 30 codes (concepts) were identified for the effectiveness of marketing communication in social networks. According to Table 1, which also refers to the frequency of the code and will be further investigated in the discussion section of this research, Figure 1 also shows the network of topics and the communication of topics with each other.

Based on the stated content, the schematic model of the research can be shown as Figure 2.

5-2. Findings of the quantitative section

Description of the statistical sample: In the quantitative part, the partial themes obtained were matched with the main model according to theoretical principles and designed for the validity and reliability of the questionnaire model, and given to 384 people from the statistical sample. The frequency table of the respondents of quantitative questionnaires is as described in Table 2.
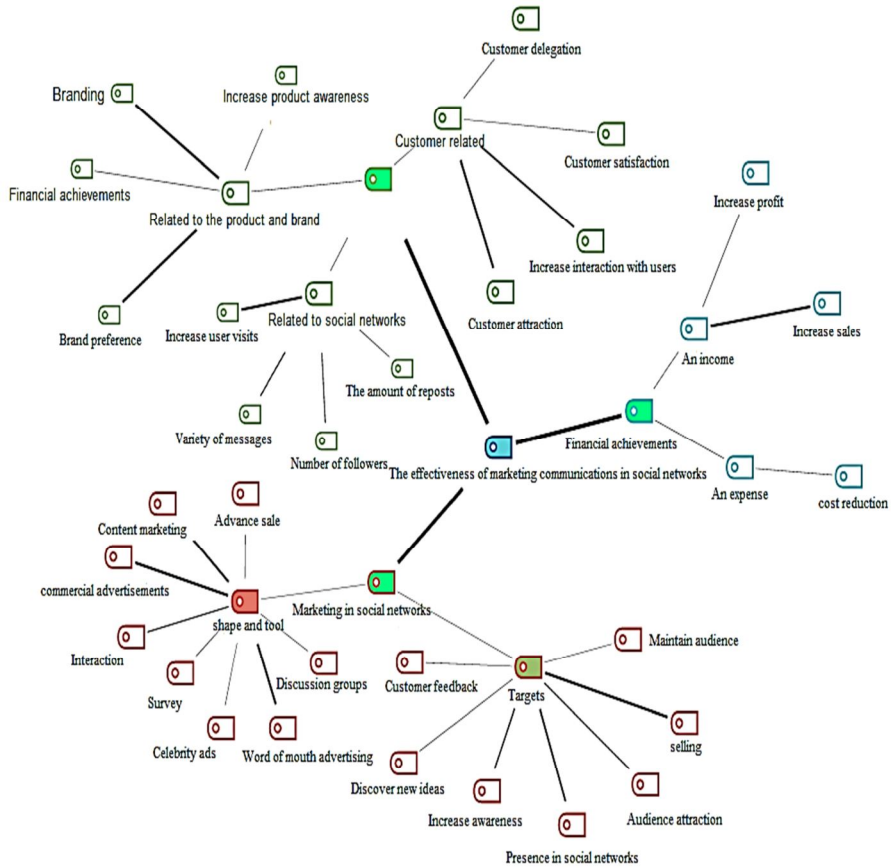
Fig 1. The network of themes and the connection of themes with each other

Table 1. The main and sub-themes of the effectiveness of social media marketing communications

Code	Code (concept)	sub-theme	Main theme
7	Maintaining audience		
50	Sale		
27	Audience attraction	Objectives	
46	Presence in social network		
32	Increasing awareness (relative to the company, product brand(		

Code	Code (concept)	sub-theme	Main theme
9	Discovering new ideas	Shapes and tools	Marketing in social networks
9	Get feedback from customers		
7	Discussion groups		
47	Word of mouth advertising		
5	Influential and famous people		
10	Survey		
20	Interaction		
47	commercial advertisements		
40	Content marketing		
3	Advance sale		
2	Costumer loyalty	Customer related	Non-financial achievements of marketing communication in social networks
6	Customer satisfaction		
20	Increase interaction with customers		
27	Customer attraction		
7	Increase product awareness	related to the product	
66	branding		
7	Increase brand awareness		
66	Brand preference		
3	The amount of reposts	Related to social networks	
13	Number of followers		
13	Variety of messages		
26	Increase in users.visits		
14	Increase in profit	income	Financial achievements of marketing communication in social networks
50	sales increase		
137	Reduce costs	cost	

Source: research findings
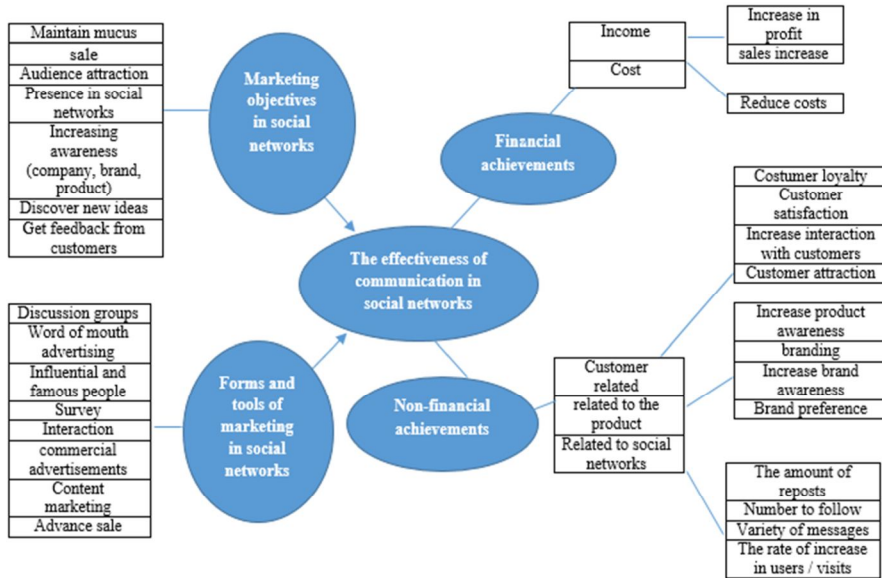
Fig 2. Conceptual model extracted from the qualitative section

Table 2. Distribution of respondents by gender

%	No	Feature	
16.4	63	Female	Gender
83.6	321	Male	
18.8	72	Less than 35	age
71.9	276	50-35	
9.4	36	Over 50	
0.25	96	BA and lower	Education
50.8	195	MA	
24.2	93	PhD	
39.1	150	Less than 1 year	History of using Instagram
7.0	27	Between 2 and 3	
53.9	207	More than 3	
43.8	168	foods	The company's field of activity
30.5	117	Clothes	
16.4	63	cosmetics	
9.4	36	others	

Source: research findings

The data in Table 2. shows that: Among the 384 respondents in terms of gender, 63 people, equal to 16.4%, were women, and 83.6 people, equal to 321%, were men. Among the 384 respondents in terms of education status, 50.8 percent, equivalent to 195 people, had master's degrees with the highest percentage of responses. Among the 384 respondents in terms of age, the highest respondents were in the age group of 35 to 50 years with 71.9%. Among the 384 respondents in terms of the status of the company's history of using Instagram, the highest respondents were in the category above 3 years with 207 people and 53.9 percent. Among the 384 respondents in terms of the company's field of activity, the highest respondents were in the food category with 168 respondents and 43.8%.

Checking the normality of the data: In examining the distribution of the research variables based on the most important central indicators (average), it was found that the average of content marketing and audience attraction was higher than the average of other variables, and other variables, in terms of average, were sales promotion variables, discussion groups, word of mouth advertising, and influencer individuals,, survey, engagement, commercial advertising, audience acquisition, presence on social networks, raising awareness, receiving feedback, discovering new ideas, related to social networks, customer loyalty, satisfaction, customer, customer interaction, branding, brand preference, awareness of Brand was product awareness, sales, profit, cost reduction. In this part, in order to test the hypotheses, the method of structural equations has been used, but the default of this method is the normality of the data, the results of which can be seen in Table 3.

Table 3. Checking the normality of research variables

Result	Significant level	Normal distribution parameter		Variable abbreviations	Variable
		SD	**mean**		
normal	0.2083	0.778	2.997	Z1	Advance sale
normal	0.3703	0.746	3.123	Z2	Discussion groups
normal	0.1993	0.739	3.057	Z3	Word of mouth advertising
normal	0.7513	0.769	3.083	Z4	influential people
normal	0.1353	0.754	3.073	Z5	Survey
normal	0.2813	0.741	3.052	Z6	Interaction
normal	0.1703	0.658	3.089	Z7	commercial advertisements
normal	0.7123	0.770	3.133	Z8	Content marketing
normal	0.2993	0.758	3.133	Z9	Maintain audience
normal	0.3133	0.693	3.084	Z10	Audience attraction
normal	0.1563	0.703	3.081	Z11	Presence in social networks
normal	0.1503	0.743	3.104	Z12	Increasing awareness
normal	0.9443	0.716	3.115	Z13	Get feedback
normal	0.2283	0.599	3.109	Z14	Discover new ideas
normal	0.3003	0.689	3.041	Z15	Sale (goal)
normal	0.3123	0.625	3.047	Z16	Related to social networks
normal	0.7833	0.691	3.039	Z17	Customer satisfaction
normal	0.2833	0.624	3.022	Z18	Customer interaction
normal	0.5003	0.607	3.031	Z19	branding
normal	0.8573	0.753	3.061	Z20	Brand preference
normal	0.1503	0.746	3.003	Z21	Brand awareness
normal	0.4803	0.667	3.052	Z22	Product awareness
normal	0.7813	0.720	3.047	Z23	sales increase
normal	0.9103	0.741	3.035	Z24	Profit
normal	0.3693	0.722	3.023	Z25	Reduce costs
normal	0.583	0.703	3.081	Z26	Costumer loyalty
normal	0.625	0.743	3.104	Z27	Customer attraction

Source: research findings

Judging according to the Kolmogorov-Smirnov test table, if the significance level (sig) for all variables is greater than the test level (0.05), the data distribution is normal.

Quantitative validity review: In this next step, it is determined whether the theoretical concepts are correctly measured by the observed variables. For this purpose, the construct validity of the model is examined, and the convergence validity criterion is used to measure it, the results of which can be seen in Table 4.

Table 4. Factorial results of questionnaire items (measurement model algorithm)

Result	t statisctis	Path coefficient	The path that fits the hypotheses	result	t statistics	Path coefficient	The path that fits the hypotheses
Confirmed	46.17	0.79	Q48 ← aimfrosh	Confirmed	17.75	0.35	Q1 ← pishbord
Confirmed	14.70	0.70	Q49 ← aimfrosh	Confirmed	20.24	0.76	Q2 ← pishbord
Confirmed	15.28	0.71	Q44 ← kashf ideh	Confirmed	16.34	0.75	Q3 ← pishbord
Confirmed	3.24	0.37	Q45 ← kashf ideh	Confirmed	16.14	0.69	Q4 ← groh bahs
Confirmed	16.49	0.76	Q46 ← ertebatat	Confirmed	14.27	0.77	Q5 ← groh bahs
Confirmed	18.14	0.82	Q47 ← ertebatat	Confirmed	18.23	0.54	Q6 ← groh bahs
Confirmed	17.46	0.79	Q48 ← ertebatat	Confirmed	17.54	0.72	Q7 ← groh bahs
Confirmed	14.70	0.70	Q49 ← ertebatat	Confirmed	18.55	0.76	Q8 ← tablig shafahi
Confirmed	15.99	0.71	Q50 ← vafadari	Confirmed	17.22	0.74	Q9 ← tablig shafahi
Confirmed	14.24	0.65	Q51 ← vafadari	Confirmed	18.86	0.76	Q10 ← tablig shafahi
Confirmed	15.99	0.71	Q50 ← ertebat	Confirmed	17.31	0.82	Q11 ← fardtasirgozar
Confirmed	14.24	0.65	Q51 ← ertebat	Confirmed	18.32	0.79	Q12 ← fardtasirgozar
Confirmed	16.63	0.74	Q52 ← ertebat	Confirmed	17.80	0.81	Q13 ← fardtasirgozar
Confirmed	18.82	0.80	Q53 ← rezayat	Confirmed	17.89	0.83	Q14 ← nazarsanji
Confirmed	17.08	0.75	Q54 ← rezayat	Confirmed	18.55	0.76	Q15 ← nazarsanji
Confirmed	18.52	0.80	Q55 ← rezayat	Confirmed	18.63	0.82	Q16 ← nazarsanji
Confirmed	18.41	0.79	Q56 ← taamol	Confirmed	18.84	0.77	Q17 ← taamol
Confirmed	18.10	0.78	Q57 ← taamol	Confirmed	17.14	0.73	Q18 ← taamol
Confirmed	17.34	0.76	Q58 ← taamol	Confirmed	19.21	0.71	Q19 ← taamol
Confirmed	16.39	0.73	Q59 ← taamol	Confirmed	17.24	0.74	Q20 ← tabligat tejari
Confirmed	14.53	0.67	Q60 ← taamol	Confirmed	17.34	0.44	Q21 ← tabligat tejari
Confirmed	17.09	0.75	Q61 ← taamol	Confirmed	19.67	0.59	Q22 ← tabligat tejari
Confirmed	16.55	0.73	Q62 ← taamol	Confirmed	15.01	0.46	Q23 ← bazaiyabi mohtava
Confirmed	6.69	0.74	Q63 ← berndsazi	Confirmed	19.19	0.88	Q24← bazaiyabi mohtava
Confirmed	17.66	0.77	Q64 ← berndsazi	Confirmed	16.22	0.90	Q25← bazaiyabi mohtava
Confirmed	17.12	0.75	Q65 ← berndsazi	Confirmed	20.76	0.86	Q26 ← hefz mokhatb
Confirmed	17.03	0.75	Q66 ← berndsazi	Confirmed	19.08	0.82	Q27 ← hefz mokhatb
Confirmed	7.97	0.40	Q67 ← berndsazi	Confirmed	18.13	0.79	Q28 ← hefz mokhatb
Confirmed	17.61	0.77	Q68 ← tarjih brand	Confirmed	17.15	0.75	Q29 ← jazb mokhatb

Result	t statisctis	Path coefficient	The path that fits the hypotheses	result	t statistics	Path coefficient	The path that fits the hypotheses
Confirmed	19.03	0.81	Q69 ← tarjih brand	Confirmed	18.18	0.79	Q30 ← jazb mokhatb
Confirmed	17.13	0.75	Q70 ← tarjih brand	Confirmed	16.86	0.75	Q31 ← jazb mokhatb
Confirmed	17.71	0.77	Q71 ← tarjih brand	Confirmed	16.96	0.75	Q32 ← jazb mokhatb
Confirmed	19.58	0.83	Q72 ← agahi brand	Confirmed	19.48	0.82	Q33 ← jazb mokhatb
Confirmed	17.78	0.77	Q73 ← agahi brand	Confirmed	18.14	0.79	Q34 ← hozor
Confirmed	16.46	0.73	Q74 ← agahi brand	Confirmed	15.50	0.70	Q35 ← hozor
Confirmed	15.32	0.69	Q75 ← agahi mahsol	Confirmed	16.07	0.72	Q36 ← hozor
Confirmed	15.96	0.71	Q76 ← agahi mahsol	Confirmed	18.49	0.80	Q37 ← afzayesh agahi
Confirmed	16.05	0.72	Q77 ← agahi mahsol	Confirmed	19.17	0.76	Q38 ← afzayesh agahi
Confirmed	18.81	0.80	Q78 ← frosh	Confirmed	18.03	0.78	Q39 ← afzayesh agahi
Confirmed	15.77	0.71	Q79 ← frosh	Confirmed	16.85	0.75	Q40 ← daryaft bazkhord
Confirmed	17.61	0.77	Q80 ← frosh	Confirmed	17.52	0.77	Q41 ← daryaft bazkhord
Confirmed	17.19	0.76	Q81 ← frosh	Confirmed	18.31	0.79	Q42 ← daryaft bazkhord
Confirmed	16.71	0.76	Q82 ← sood	Confirmed	17.33	0.75	Q43 ← kashf ideh
Confirmed	15.95	0.73	Q83 ← sood	Confirmed	15.28	0.71	Q44 ← kashf ideh
Confirmed	16.63	0.74	Q84 ← kahesh hazine	Confirmed	3.24	0.37	Q45 ← kashf ideh
Confirmed	17.39	0.76	Q85 ← kahesh hazine	Confirmed	16.49	0.76	Q46 ← aimfrosh
Confirmed	18.34	0.79	Q86 ← kahesh hazine	Confirmed	18.14	0.82	Q47 ← aimfrosh

Source: research findings

It is worth noting that the quantitative part of the questionnaire has 92 items, considering that Cronbach's alpha for all the items related to the research variables, except items 87 to 93 respectively, is higher than 0.7, it can be said that the research tool of it has an acceptable convergent validity. All items except these 7 items are significant at 0.95 confidence level. The significance of the items is that the significance number is higher than ±1.96; Therefore, according to the obtained values, it can be said that the validity of the convergence of the measurement tool is confirmed. In general, these 7 items were excluded from the analysis.

Conceptual model fit: In this part, the analyzes related to the fitting of the conceptual model in the LISREL software are reviewed. In this analysis, the assumptions of distance between endogenous and exogenous variables, linear relationships between variables and independence of residuals have been respected. Based on this conceptual model, structural analysis was done based on indicators, the results of which can be seen in Fig . 3 and 4.
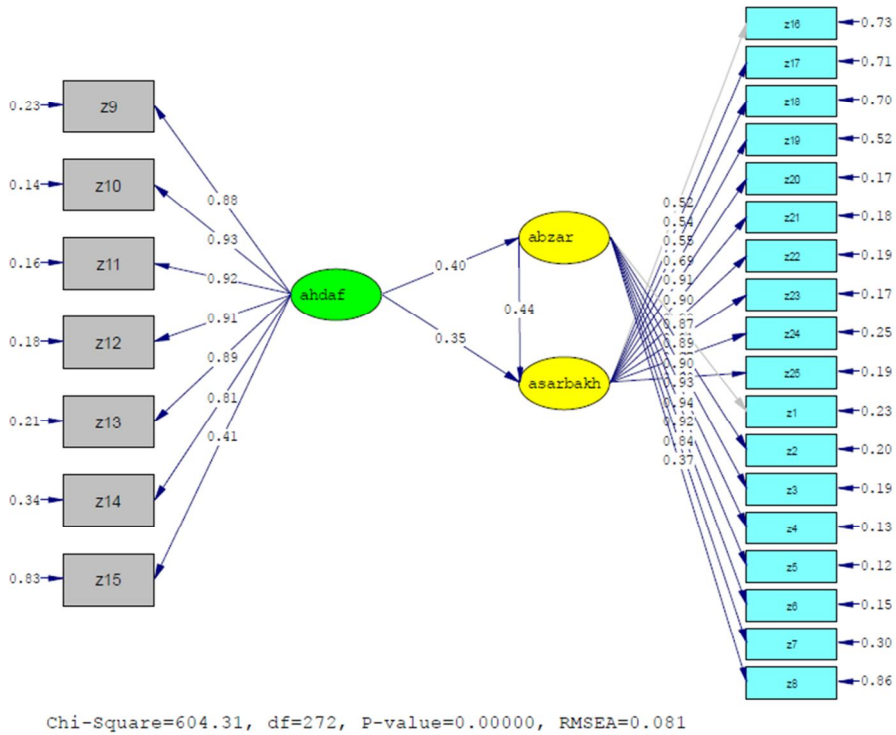
Chi-Square=604.31, df=272, P-value=0.00000, RMSEA=0.081

Fig 3. Estimation of the structural model of the research with standard coefficients

Fig. 3 shows the fit of the conceptual model in which the standard coefficients are listed. As can be seen, all these coefficients are between 0 and 1, which indicates the standardity of the conceptual model.
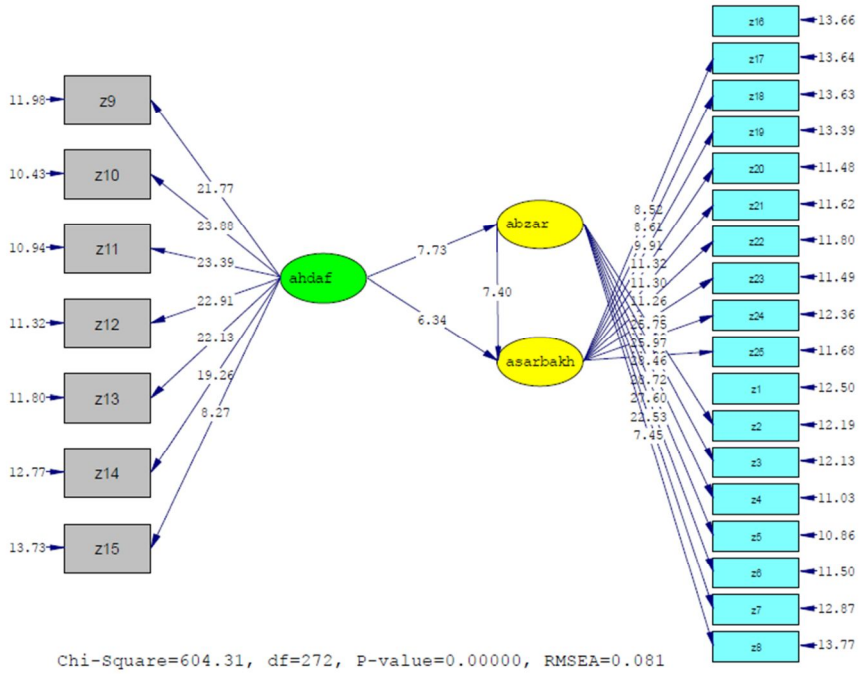
Chi-Square=604.31, df=272, P-value=0.00000, RMSEA=0.081

Fig 4. Estimation of the structural model of the research with significant numbers

Figure 4 shows the fitting of the conceptual model in which significant coefficients are mentioned. As can be seen, all these coefficients are greater than 1.96, which indicates the significance of the conceptual model.

After fitting the model, the validity indicators of the model are summarized in Table 5:

Table 5. Fit indices of the conceptual model

value	limit	Index
2.221	Less than 3	$\dfrac{\chi^{\Upsilon}}{df}$
0.930	Higher than 0.9	GFI1
0.08	Between 0 and 1	RMSEA2
0.96	Higher than 0.9	CFI3

Source: research findings

1. Goodness of Fit Index (GFI)
2. Root Mean Square Error of Approximation (*RMSEA*)
3. Comparative Fit Index (CFI)

According to Table 5, all the values obtained for the chi-square indices on the degree of freedom of GFI, RMSEA, and CFI are within the defined range; Therefore, the validity of the model is confirmed. According to Figures 3 and 4, the results of the evaluation of the structural model of the research are reported in Table 6:

Table 6. The results of the evaluation of the fit of the structural model of the research

	Result	T-statistics (significant number)	Path coefficient	The path that fits the hypotheses
1	Confirmed	7.40	0.44	Forms and tools of activity in social networks → Effectiveness of communication in social networks
2	Confirmed	7.73	0.35	Objectives of marketing communication in social networks → Effectiveness of communication in social networks
3	Confirmed	6.34	0.40	Objectives of marketing communication in social networks → form and tools of activity in social networks
4	Confirmed	25.75	0.87	Sales promotion → form and tools of activity in social networks
5	Confirmed	25.86	0.89	Discussion groups → form and tools of activity in social networks
6	Confirmed	29.66	0.90	Word of mouth advertising → form and tools of activity in social networks
7	Confirmed	28.46	0.93	Influential people → Forms and tools of activity in social networks
8	Confirmed	28.72	0.94	Survey → form and tools of activity in social networks
9	Confirmed	27.60	0.92	Interaction → form and tools of activity in social networks
10	Confirmed	22.53	0.84	Commercial advertising → form and tools of activity in social networks
11	Confirmed	37.45	0.37	Content marketing → form and tools of activity in social networks
12	Confirmed	21.77	0.88	Maintaining the audience → the goals of marketing communication in social networks

	Result	T-statistics (significant number)	Path coefficient	The path that fits the hypotheses
13	Confirmed	23.88	0.93	Attracting audience → goals of marketing communication in social networks
14	Confirmed	23.39	0.92	Presence in social network → Objectives of marketing communication in social networks
15	Confirmed	22.91	0.91	Increasing awareness → the goals of marketing communication in social networks
16	Confirmed	22.13	0.89	Receiving feedback → Objectives of marketing communication in social networks
17	Confirmed	19.26	0.81	Discovery of new ideas → goals of marketing communication in social networks
18	Confirmed	8.27	0.41	Sales - goal → goals of marketing communication in social networks
19	Confirmed	8.52	0.52	Related → The effectiveness of marketing communication in social networks
20	Confirmed	8.61	0.54	Customer satisfaction → Effectiveness of marketing communication in social networks
21	Confirmed	9.91	0.55	Customer interaction → Effectiveness of marketing communication in social networks
22	Confirmed	11.32	0.69	Branding → Effectiveness of marketing communication in social networks
23	Confirmed	11.26	0.91	Brand preference → Effectiveness of marketing communication in social networks
24	Confirmed	11.99	0.90	Brand awareness → Effectiveness of marketing communication in social networks
25	Confirmed	25.75	0.87	Product awareness → Effectiveness of marketing communication in social networks
26	Confirmed	25.97	0.89	Sales → Effectiveness of marketing communication in social networks
27	Confirmed	17.26	0.90	Profit → Effectiveness of marketing communications in social networks
28	Confirmed	28.46	0.93	Cost reduction → Effectiveness of marketing communication in social networks

Source: research findings

As can be seen in Table 6, the t statistic should be greater than 1.96 and the path coefficients are higher than 0.3. The above tables have a factor loading

greater than 0.3 and a significant number greater than 1.96. This means that all path coefficients are significant at the 95% confidence level. Therefore, in fact, all the above factors are effective in the measurement of structures.

6. Discussion and conclusion

In the current research, the effectiveness of social network marketing communications is investigated with a political economy approach and a systemic model is presented. In the qualitative part of the research, the analysis of the interview data was carried out in the Max Kyuda software and 3 main themes, 7 sub-themes and 30 codes (concepts) were identified for the effectiveness of marketing communications in social networks and it was concluded that social networks have an interactive nature so that networks have made a big change in the field of internet business and have become a place for companies to advertise. Therefore, knowing the opportunities and challenges of using social networks in business and marketing matters seems essential. Among the opportunities, we can mention the interaction and building a two-way relationship with the customer that business owners can get feedback from customers through social networks. Social networks have created new business models that sell some businesses online.

In the quantitative part of the research, three questions were answered, which are discussed below:

Answer to the first question: To find the influencing factors on the goals of marketing communication in social networks, the confirmatory factor analysis approach has been used. According to figures 3 and 4, the goals of marketing communication in social networks is a 10-factor structure, whose factors have a factor loading greater than 0.3 and a significant number greater than 1.96 according to the above tables. Therefore, in fact, the above 7 factors are effective in measuring this structure, and the highest effect is related to the audience attraction structure. In this area, it should be kept in mind that the adoption of open economic policies in domestic politics and of course the favorable approach of economic diplomacy can have a favorable

performance both in the domestic and foreign fields in this field.

Answer to the second question: To find the influencing factors on the effectiveness of marketing communication in social networks, the confirmatory factor analysis approach has been used. According to figures 3 and 4, the goals of marketing communication in social networks is a 7-factor structure, whose factors, according to the above table, have a factor load greater than 0.3 and a significant number greater than 1.96. Therefore, in fact, the above 10 factors are effective in measuring this structure, and the highest effect related to the structure is cost reduction. In this regard, for companies that are not active in the field of social networks or have little activity, it is evident that negligence in this field can defect them in the world of competition, both in terms of price and in terms of correct and sufficient use of social media pages as a sustainable competitive advantage. The second rank of influence is related to brand preference variables, followed by brand awareness. In this regard, paying attention to government support for knowledge-based companies active in social networks as an effective economic policy can be considered. In addition, the implementation of targeted privatization policies will solve many problems in this area.

Answer to the third question: In order to find the influencing factors on the tools and forms of marketing communication activity in social networks, the confirmatory factor analysis approach has been used. According to figures 3 and 4, the goals of marketing communication in social networks is an 8-factor structure, whose factors, according to the above table, have a factor loading greater than 0.3 and a significant number greater than 1.96. Therefore, in fact, the above 8 factors are effective in measuring this structure, and the highest effects are related to the survey structures, influential people. This research advises companies and owners to make more use of survey tool content on their social pages and to use influential people such as famous influencers on Instagram and famous and famous people active in social networks on their pages or advertising on their pages.

Practical results of using the presented model in the retail industry

As you know, two-way communication between consumers and companies in social networks increases market growth, brand loyalty and company value, and companies and institutions despite spending time and money in this field in recent years, especially in the field of marketing communication in social networks does not achieve the desired and effective results. The total model presented in this research helps companies in using social networks and allocating their costs to it in such a way as to achieve more effectiveness, in more detail, some cases can lead to an increase in effectiveness. The results and frequencies mentioned in the tables related to the qualitative part of the research and based on the fit of the confirmatory factor analysis model in the axis of the effectiveness of marketing communications in social networks are one of the highest frequencies and effects related to the structure of cost reduction, so it is recommended to companies, if you are not active in the field of social networks or have little activity, take steps to strengthen your activity so that in the world of competition, both in terms of price and in terms of the correct use of social network pages, as a competitive advantage overtake over your competitors. Perhaps in the coming years, due to the fundamental impact of social network management in reducing recovery costs, social network management will be a separate department in many companies. Also, based on the fit of the confirmatory factor analysis model in the tools and forms of marketing communication activity. One of the highest effects is related to survey structures and influential people and content marketing. This research advises companies and their owners to use more survey content on their social media pages and not to neglect influential people such as famous influencers on Instagram and famous people active in social networks on their pages or advertising on their pages. Companies are striving for effective exploitation in this area by using content production teams of social networks in their structure.

In order to complete and expand the current research, it is suggested to carry out the following researches:

1. In future researches, the design of the marketing communication effectiveness model should be investigated in other social networks besides Instagram.
2. The models obtained in the research conducted in different social networks should be compared.
3. Research that provides a model to measure the effectiveness of marketing communications in social networks is very necessary.
4. Other data analysis methods should be used in future researches.
5. In future research, social media marketing should be analyzed separately in the field of internal and external policy performance, focusing on political economy.

In the end, it should be mentioned that there were three limitations for the present study:

- In the qualitative method, the information of a few experts is usually used, which can influence the findings of this method; The present research is not an exception to this rule. Perhaps using different methods of qualitative sampling and obtaining information from more experts can provide better information.
- In the quantitative part, only a few retail companies have been investigated. Therefore, generalizing the results to the entire retail industry should be done with caution.
- In this research, only Instagram has been focused. Most likely, conducting research on other media and social networks can have different findings.

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Conflicts of interest

The authors declare no conflict of interest.

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