

Estimation of Using of Social Networks for Business Development

Kabasheva I.A., Rudaleva I.A., Bulnina I.S., Zakirov R.G., Arsentyeva L.I.
Kazan Federal University, Kazan, Russia

Abstract—By polling people of various ages and professional groups, we have assessed the possibility to implement social networks as an efficient tool for business development in the modern society. The results showed that consumer attitudes to advertising on social networks for goods and services described as positive, neutral and only 10% of it is irritating. At the same time we have obtained the results of efficient using of social networks, first of all, for polling the consumers, selecting the personnel and promoting goods and services. If the consumers purchase by 1% more goods via social networks, the efficiency of using of social networks for business development will increase by 0.3048%; if the employees use the social networks by 1% to solve the corporate tasks, the efficiency of using social networks for business development will increase by 0.4056%.

I. INTRODUCTION

Nowadays social networks are currently an indispensable part of people's lives. They are not only a means of entertainment and search for information, but an active location for business development and organization. Such social networks as Vkontakte, Facebook, Twitter, Instagram, LiveJournal, LinkedIn became a kind of organizational space for people's communication around the world. For example, the most popular social network in the world – Facebook – unites over 750 million active users.

The research held by “Rose” agency together with “HeadHunter” in spring 2010 showed that the Russian users are the most active: 89% of the Russian users are registered in social networks; 49% spend from 5 to 10 hours a month in social networks, and 23% – 20 hours and more [1].

Most of the socioeconomic research interpret the social network as a model for the organization of social space, and consider it in the context of alternative ierarhizirovannnoy structure. [2]

Social network as the foundation of modern social structure of society is represented in the works of M. Gilfanova and Bykasovoy L. [3]

Taking the point of view of the social network as a master device link modern social space, scientists are actively investigating various aspects of the use of social networks in the daily activities of people and their effectiveness in promoting goods and services on the market .. For example, scientists Kovalenko G. and G. analyze Haertdinova the possibility of using social media as a platform organization of student learning. [4]

Quite a number of modern foreign publications explore issues of capacity and efficiency of the use of social networks in the companies' activities. According to Heinz H. and K. Hu, number of corporate Internet resources reached the level required for quantitative studies. [5] In foreign publications explores questions of influence of Internet communication on

the degree of transparency of companies [6] particular social network subscribers reaction to the announcement of the company, [7] the impact of social networks on the reputation of corporations [8], and others.

So, Petukhov K. explores the possibilities of using social media in the activities of Russian large companies, which, in his opinion, is a form of socially responsible behavior. Measurement of the activity of large businesses and users on social networks has led the author to the following conclusion: the benefits and advantages of social networks adequately to Russian business community are not used. Ability to implement a direct, public and equitable dialogue with customers and employees is perceived more as a threat. [9]

Currently it is obvious that social networks, together with internet-shops, allow the companies to make business more efficiently, by creating communities and groups in social networks. One of the main advantages of using social networks in business is that they are a vast informative base of users, i.e. potential clients. Thus, nowadays the social networks are a means of communicating with clients.

Activation of using social networks in business promotion is due, first of all, to the strive to communicate the advertizing and informative messages to the consumers and partners by the maximally fast and convenient means, thus reducing the promotion costs of the goods and services. [9] The advertizing budgets of the Russian companies allocated for the Internet in 2013 were more than 71 bln rubles. Compared to 2012, the growth was 27%. [10].

However, in spite of the rapid growth of the social networks popularity for the goods and services promotion, they can also generate negative effects. One of such negative effects, revealed by the researchers, is the consumers' perception of advertising as an intrusion. [11,12]. Researchers Truonga Y. and Simmons G. Found that the consumers perceive the Internet advertising as exceedingly obtrusive. [13]

The ambiguous and often contradictory attitude of the participants to the using of social networks for advertising the goods and services is accompanied by critical remarks for its ruining the social values. The consumers think that on-line advertising corrupts their social values. This leads to the negative attitude to on-line advertising [14,15].

At the same time they are not happy about the fact that advertising misleads consumers. The consumers think that advertising does not give the true image of the goods. Delusiveness makes a significant negative effect on the consumers' attitude to advertising [16].

The researchers have found the consumers perceive the advertisement in the web and social media with irritation.

[17,18] However, some previous research [19] did not find any significant correlation between the internet advertising perception and irritation caused by it.

Modern research also demonstrate, in general, positive attitude of the social networks users to advertising goods and services. [20]

Thus, in spite of the contradictory attitude of the internet advertising consumers, it positively influences the entrepreneurship sector of economy. Internet advertising provides information about a product, leads to reduction of prices, and promotes healthy competition between the business subjects.

Interpreting the involvement of individuals in the social network as the need for informal social interaction, we analyzed the impact of the use of social networks in business development, in particular promoting the goods and services on the market, recruitment and, in general, the form identifying the views of consumers. We have attempted to assess the perception of the value of Internet advertising and its use in everyday life of Russians.

II. METHOD

We have polled people of various ages and professional groups about the usability of social networks for business development. The questionnaire contained 20 questions. 3 questions will determine the sex, age and social status of the respondent. Also in the questionnaire were questions about the availability of the account in social networks, and the frequency of visits to social networks. A separate list of questions concerning the assessment of the role of social networks in the various aspects of the respondent's life:

- The presence of the profile in social networks;
- Preference of those or other social networks for communication;
- Preference for one or another social business networks;
- Attitude to advertising on social networks;
- To enhance the experience of banners in social networks;
- Experience of buying goods in social networks;
- The level of confidence in buying goods through social networks;
- The use of social networking in their professional activities;
- The presence of the employer's profile in social networks;
- Assessment of the shortcomings of social networking;
- Evaluation of the social networks in the selection of personnel;
- Evaluation of the social networks to identify consumers' opinion about a particular product / service;
- Evaluation of the role of social networks in business development.

III. RESULTS

The poll included 101 people aged from 21 to 55. There were 67 female and 34 male respondents. The majority of

respondents were younger than 25 years old, 26 people were from 26 to 35 years old, 15 people were 36-45 years old, and 9 respondents older than 46 years old. People of various professions answered the poll questions: accountants, economists, drivers, programmers, sales managers, bank employees, analysts, marketologists, journalists.

At the moment of the poll, the majority of respondents were registered in the social networks, and only 7 people did not have an account in any of the social networks.

As the purpose of using the social networks, a part of respondents chose the answer “for communication” (68%) and only 5% - for one’s business promotion. 95% of respondents chose the social network Vkontakte, as the most popular for communication, but for business promotion this site was chosen only by 45%, while Instagram, Twitter, Facebook, LiveJournal – by 31%, 9%, 14% and 1% accordingly. This is in spite of the fact that 91% of respondents admitted that the information about the new products comes faster via the social networks.

As for using the social networks for business promotion, the majority (48.5%) of respondents marked the efficiency of this tool, while 23% consider using them only for the companies, which already have their market share.

The attitude to goods and services advertising in social networks can be described as positive-neutral: about 19% consider the social networks to be the best space for promoting goods and services and treat it most positively; 45.5% treat it positively if it is limited, and only 10% are irritated by it.

As for the future application of the social networks for organization development, the respondents are quite unanimous – about 70% answered positively.

One of the shadow sides of the Internet is distribution of spam, fraudulent letters and malicious software. 96% of the answers marked this fact among the drawbacks of social networks.

The basis for indicators interpretation was the verbal-numerical Harrington scale (table 1).

TABLE 1
VERBAL NUMERICAL SCALE HARRINGTON

The numerical value	The value used in the analysis	Description of gradations
0,8 - 1,0	0,9	Very high
0,6 - 0,8	0,72	High
0,3 - 0,6	0,505	Central
0 - 0,3	0,285	Low

The regression analysis allowed to build the regression model, where the dependent variable Y was the answers to the questions: “Do you think that social networks can be used for business promotion?”

The factors were the answers to the questions: how often do you use social networks in everyday life? (X₁); have you ever purchased food, clothes or other goods via social networks? (X₄); do you use social networks to solve corporate (organizational) tasks? (X₆); what do you think of the

possibility to use social networks for discovering the consumers' opinion on a product or service? (X_9).

Table 2
OLS Model. We Used 101 Observations

Variables	Coefficient	Standard Error	t-statistics	P-value	
const	-,0923131	0,08091	-1,1409	0,25	
X_1	-0,185305	0,09054	-2,0465	0,04	**
X_4	0,30477	0,08182	3,7247	0,00	***
X_6	0,405627	0,10165	3,9904	0,00	***
X_9	0,745835	0,08202	9,0922	<0,0	***

- R-squared – 0,5294
- F (4, 96) – 26,9972
- standard deviation of the dependent variable – 0,2099
- SEM model – 0,147
- Corrected R-squared – 0,5098
- P-value (F) – 5,13e-15.

As one can see from the table 1, the factor of social networks for consumers' polling makes the largest effect on using social networks for organization development.

The multicollinearity test showed all values exceeding 1, which proves the absence of multicollinearity.

Checking the model for heteroscedasticity. Nil hypothesis: no heteroscedasticity.

Test statistics: LM = 16.3716
p-value = P(chi-square (9) > 16.3716) = 0.0595158

The constructed model is moderately qualitative, as the determination coefficient is 0.5294. This proves that the factors, taken into account in the model, by 53% explain the efficiency of using the social networks in organization development, while 47% is the share of non-accounted factors.

By Fisher's criteria, the model is significant, as $F_{obs} > F_{crit}$. (26.99 > 3.51) at the significance level of 99%. In the constructed model, the P-value is 5.13e-15, which testifies to the quality of the model, as the error probability is only 1%.

The credibility value is determined by comparing the standardized error and the regression coefficient: the standardized error is 0.147, which is less than the regression coefficient (R-square=0.5294). Thus, the model is a quality one by this criterion.

The critical value of the Student's t-criterion is 2.62 at the significance level of 99%. In all cases, except factor X_1 , the regression equation coefficients are significant.

On the assumption of the above, the regression equation will take the following form:

$$Y_x = 0.3048X_4 + 0.4056 X_6 + 0.7458 X_9 + \varepsilon$$

On the basis of the regression equation, the following conclusions can be made:

- if the consumers purchase by 1% more goods via social networks, the efficiency of using social networks for business development will increase by 0.3048%;
- if the employees use the social networks by 1% to solve the corporate tasks, the efficiency of using social networks for business development will increase by 0.4056%;
- if the degree of using social networks for consumers' polling will increase by 1%, this will allow to increase the efficiency of using the social networks for business development by 0.7458%.

We verify the degree of influence of the identified significant factors on a productive feature by calculating elasticity coefficients:

$$E_i = \varepsilon_i \frac{\bar{x}_i}{\bar{y}} \quad (1)$$

where E_i – the average elasticity coefficient factor X_i ;
 ε_i – regression coefficient.

The coefficients of elasticity:

- $E_{X_4} = 0,207$ – if buyers are 1% more to buy goods through social networks, the effectiveness of the use of social networks for business development will increase by 0,207%;
- $E_{X_6} = 0,231$ – if workers will increase the utilization of social networking in solving corporate problems by 1%, it will increase the efficiency of the use of social networks for business development at 0,231%;
- $E_{X_9} = 0,808$ - if the degree of use of social networks to poll consumers will grow by 1%, this will increase the efficiency of the use of social networks for business development at 0,808%.

We can rank the significant degree of influence on the factors of the regression model (table 3).

TABLE 3
RANKING FACTORS REGRESSION MODEL

Factors	The degree of influence
The use of social networks for consumer survey (X_9)	0,808
The use of social networks in solving corporate problems (X_6)	0,231
Shopping through social networks (X_4)	0,207

The greatest influence on the use of social networks in the development of the organization providing social networking usage factor for a consumer survey.

IV. CONCLUSION

We can conclude that the results of the research have confirmed the hypothesis that social networks can be considered an efficient tool for business development in the modern society.

Undoubtedly, this direction can be considered promising; the advantages of business organization via social networks

are: possibility to enter new markets, low costs of on-line shops compared to the traditional ones, giving a consumer the opportunity to purchase conveniently at any time with maximal information about the goods.

Although many respondents rarely purchase goods via the social networks or use them to solve organizational tasks, they think that the social networks can be used for business promotion and that the great opportunities to use the social networks for this purpose will be seen in the future.

Limitations of this study

The findings in this study should be viewed in light of four key limitations. First, this study was based on a small sample, which may limit the generalizability of the research findings. Second, the instrument for assessing the use of social networks was developed from earlier study and discussed with experts, although not an international commonly used scale. Third, we used a cross-sectional survey, which may limit our ability to identify causal relationships between the use of social networks and the development of the organization. Fourth, the questionnaires were self-administered and thus could have been affected by respondents' prevailing emotions.

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