

EXPLORING GENDER AND AGE DYNAMICS IN SOCIAL MEDIA MARKETING: A QUESTIONNAIRE-BASED ANALYSIS

MONIKA STÜMPELOVÁ

Slovak University of Agriculture in Nitra, Nitra, Slovakia
xstumpelovam@uniag.sk

The article explores the realm of social media marketing, specifically delving into the perceptions and behaviors of users through a structured questionnaire and subsequent statistical analysis. With a primary aim to understand the dynamics between demographic factors and attitudes towards influencers and social media platforms, the study investigates the correlation between respondents' gender and their trust in influencers as a credible information source. Additionally, it scrutinizes the relationship between respondents' age and their presence on Instagram, a popular social media platform. Through rigorous data collection and analysis, the research endeavors to unveil insights into the evolving landscape of social media marketing, shedding light on how demographic variables shape individuals' engagement and trust in influencer-driven content and platform preferences. This article contributes to the existing body of knowledge by offering empirical evidence and statistical verification of the intricate connections between demographic characteristics and social media behaviors, providing valuable insights for marketers and practitioners seeking to optimize their strategies in the digital sphere.

DOI
[https://doi.org/
10.18690/um.epf.5.2024.52](https://doi.org/10.18690/um.epf.5.2024.52)

ISBN
978-961-286-867-3

Keywords:
social media marketing,
Instagram,
influencers,
social media platform,
strategies

JEL:
M30,
M31,
M37

1 Introduction

We assume, that traditional marketing trends can not reach as many consumers as new marketing trends can. Therefore, we perceive a great potential in the use of new marketing trends for the purpose of reaching a wide audience of consumers and also for increasing the competitiveness of company. New marketing trend in which we perceive biggest potential is digital marketing. There are many advantages of this new form of marketing, such as broad reach of potential customers, it is easily accesible, easily measurable and less expensive than the traditional marketing forms. In the article we want to find out the dependence of gender and age, specifically if there is dependence between the gender of respondents and whether they consider influencers as a reliable source of information and if there is a dependence between the age of respondents and whether they have an Instagram account.

2 Theoretical Background / Literature Review

According to Faruk, Rahman and Hasan (2021) the number of internet users is growing every day. They assume that up to 70% of e-commerce sales will be made using a mobile platform given that individuals spend an average of 6 hours and 42 minutes online each day. The consumer lifestyle and the way businesses interact with their clients have both been significantly impacted by these technological advancements. Under the impact of new technologies, people have adapted to the virtual world. Marketers started to concentrate their marketing efforts on this specific market as consumers started using the internet and spending more time on the social networks. It is quite interesting to compare the views of Kotler, Kartajaya and Setiawan (2017) and Petranova et al. (2011).

According to Kotler, Kartajaya and Setiawan (2017) the traditional marketing should coexist with the digital marketing rather than replace it. They stand for the opinion that, while traditional marketing is important in the early stages of consumer connection, digital marketing is important in the later development and strengthening of relationships with the customers. They believe, that the combination of the traditional and, later, the digital marketing is the best possible option for the company.

On the contrary, according to Petranova et al. (2011) the growth of the digital marketing is the result of expanding the client needs, a variety of offerings, and increasing the competition.

According to Petranova, businesses must present their products and services online, because they feel, that doing so will increase their chances of success and reduce their vulnerability to competition. If the companies are not present on the internet sooner or later they will be defeated by the competition. According to Invelity (2023) there are a lot of advantages of online marketing, namely : broad reach of potential customers, easily accessible, easily measurable, individual approach, low costs. As we previously mentioned numerous opportunities have arisen as a result of the development of the internet. The trend of social media was created. Social media enable interactive marketing communication implementation. As social media platforms like facebook, tik-tok, and Instagram have grown in popularity, a great number of so-called influencers with big followings have emerged. These people promote the products or services for a financial reward, which they then get from businesses or entrepreneurs in exchange for their services (Gučík et al., 2018).

The amount of money received by each influencer varies, depending on their amount of followers, the total number of people who follow them, and how well their so-called reach is used. This refers to in what extent they can persuade a customer to buy the product or service, how reliable an influencer is, and how many people will see their recommendations Karliček et al. (2016). We can claim that the social network is no longer only a communication channel, where users communicate with one another. As a result of the development of the internet, the social networks enable businesses to promote their goods and services very successfully because customers can easily and quickly contact them through their accounts, or so-called profiles, on these networks. It is reasonable to state, that social media is the most efficient and modern communication channel in consideration of these benefits (Rajčák and Rajčáková, 2012).

Gučík (2018) claims that thanks to these profiles, businesses are able to connect with the customers, capture their attention, and persuade them in the favor of the company. Social networks have a crucial role in influencing the consumer behavior, individuals modify their content in response to experience, opinions, and also based on the agreed cooperation with various entrepreneurs. The goal of every

entrepreneur is to agree with the so-called influencer on the best possible business terms, on the mutually beneficial level of cooperation. An ideal scenario for this kind of collaboration is when a business owner gives a product to an influencer, who then promotes it, but the influencer firstly uses the product to ensure, that it is genuinely good before he presents it to his followers. The goal of a company using social media marketing is, of course, to increase the company's profit. By doing this, the given influencer will establish the credibility and, as a result, his followers will believe his personal recommendations. This will ultimately ensure a high demand for the product or service that the influencer promotes (Walters, 2015).

3 Methodology

In the article we want to find out if there is any dependence between the gender of respondents and whether they consider influencers as a reliable source of information and if there is a dependence between the age of respondents and whether they have an Instagram account. Article is a partial output from the questionnaire which contained 26 questions. In the article we looked at 4 of them. In the questionnaire, we used several types of questions, we used closed questions, that could then be evaluated statistically, scaling questions, specifically numerical assessment scales, as well as interval scales and we also used Likert scales. In the first question we asked respondents about their gender, respondents could choose from two options: Male or Female. In the second question we asked respondents about their age and gave possibility to choose from options: Less than 18 y., 18-25 y., 26-35 y., 36-45 y., 46-55y., More than 56 y.. Another question in which we examined was if respondents consider influencers as a reliable source of information, we asked our respondents to indicate how much they consider influencers to be a credible source of information, with 1 being a very credible source and 5 being a very unreliable source of information. And for our fourth question, if the respondents have an Instagram account, we gave our respondents 2 options from which they could choose: Yes or No. Questionnaire survey was created via Google forms and was send to our respondents. The survey filled out 575 respondents in total. The questionnaire was anonymous and was conducted from 10.10.2023 to 10.1.2024.

The conceptual framework is based on the following publications that have been studied, where the impact of age and gender has also been examined.

In the research paper, Hudders, L., & De Jans, S. (2022) examine how gender affects how successful social media marketing strategies are. It provides insights into how marketers may more effectively target gender-specific audiences by analysing a variety of criteria, including content preferences, platform usage habits, and purchasing behaviour.

Sun, J., Leunf, X.Y., and Bai, B. (2021) demonstrate how an influencer's attitude influences a follower's attitude and behavioural intentions on the choice to purchase a product. The current study also reveals a mediating influence played by followers' attitudes on social media posts. Moreover, female followers are impacted more directly by their influencer attitude, while male followers are affected more indirectly through their attitude toward the social media posts.

Instagram co-founder Kevin Systrom revealed in December 2018 that 500 million people visit the platform each month. Over 90% of Instagram users are under the age of 35, according to user demographics. Business Insider states that Instagram is largely made up of urban, youthful demographics with a significant skew toward women. In particular, 32% of users are men and 68% of users are women. In light of its widespread use, businesses have discovered that Instagram offers a new marketing niche Cooper, B. (2018).

From the articles and studies cited above, our hypotheses are as follows.

- HA0: There is no group difference between the gender of respondents and whether they consider influencers as a reliable source of information.
- HA1: There is a group difference between the gender of respondents and whether they consider influencers as a reliable source of information.
- H0: There is no group difference between the age of respondents and whether they have an Instagram account.
- H1: There is a group difference between the age of respondents and whether they have an Instagram account.

In order to statistically evaluate the survey, through the XLSTAT software we used the following statistical methods. We calculated the Correlation matrix, to describe the correlation between selected variables as well. The normality of the data was tested using the Shapiro-Wilk test and displayed in a table. As the Sig. Value of

Shapiro-Wilk tests were below 0.05, the data significantly deviated from a normal distribution. Based on the findings, that it is a non-normal distribution, we used in our next steps non-parametric tests.

We calculated the value of Cronbach's alpha, in order to find out if the data obtained from the questionnaire is statistically significant and reliable. We used the Chi-Square Test of Independence to test our stated hypothesis. This test determines whether there is a statistically significant relationship between two or more categorical variables and examines relationships between those variables. To calculate the intensity of dependence we used the Cramer's V coefficient. We calculated the Adjusted Standardized Residuals in order to demonstrate, where exactly the statistical significances are located.

4 Results

In our first stated hypothesis, we put our focus on the connection between two questions from the questionnaire survey. First question was the classification question about the gender of our respondents and the second question was question, where we asked our respondents to state how much they consider influencers to be a credible source of information, with 1 being a very credible source and 5 being a very unreliable source of information. We assume, that there is a dependency between the gender of our respondents and how they perceive influencers, whether they consider them as a reliable source of information or not. Based on the percentage evaluation of the responses of men and women separately, we can say that women are more inclined to buy products based on the influencer's recommendation than men (Tab. 1).

Table 1: Observed frequencies: Statistical differences in the perception of influencers based on gender.

Observed frequencies (I have already purchased a product or service in the past only based on an influencer's recommendation./ Gender):			
	Male	Female	Total
Completely agree	6	60	66
Agree	8	47	55
Neither agree nor disagree	8	46	54
Disagree	15	40	55
Completely disagree	90	255	345
Total	127	448	575

Source: Own processing

We continued with testing our first hypothesis and we used a statistical method chi-square (X²) test to verify the correctness of the first hypothesis. In the table below, the computed p-value is 0,007 and lower than the significance level alpha=0,05, we should reject the null hypothesis H₀, and accept the alternative hypothesis H_a. Therefore, we can say, that there is a dependence between the gender of respondents and whether they consider influencers as a reliable source of information. The risk to reject the null hypothesis H₀ while it is true is lower than 0,72%. Our assumed hypothesis no. 1 was therefore correct (Tab. 2).

Table 2: Chi-square test: Statistical differences in the perception of influencers based on gender.

Test of independence between the rows and the columns (I have already purchased a product or service in the past only based on an influencer's recommendation./ Gender):	
Chi-square (Observed value)	14,022
Chi-square (Critical value)	9,488
DF	4
p-value	0,007
alpha	0,05

Source: Own processing

In our second stated hypothesis, we focused on the connection between two questions from the questionnaire survey. First question was the classification question about the age of our respondents and the second question was question, where we asked our respondents to state if they have an Instagram account. In our second hypothesis, we assume, that there is a dependency between the respondent's age and whether the respondent has an Instagram account. Based on the percentage evaluation of the responses, we can say that with increasing age, less respondents have an account on Instagram, in other words, the older the respondent, the greater the probability, that they do not have an account on Instagram (Tab. 3).

Table 3: Observed frequencies: Statistical differences in the perception/use of Instagram based on age.

Observed frequencies (Please indicate whether you have an Instagram account./ Age):							
	Less than 18 years	18-25 years	26-35 years	36-45 years	46-55 years	More than 56 years	Total
Yes, I have	4	82	127	108	64	43	428
No, I do not have	0	4	29	48	31	35	147
Total	4	86	156	156	95	78	575

Source: Own processing

We continued with testing our second hypothesis and we used a statistical method chi-square (X²) test to verify the correctness of the second hypothesis. In the table below, we can see, that the computed p-value is $< 0,0001$ and lower than the significance level $\alpha=0,05$, we should reject the null hypothesis H₀, and accept the alternative hypothesis H_a. Therefore, we can say, that there is a dependence between the age of respondents and whether they have an Instagram account. The risk to reject the null hypothesis H₀ while it is true is lower than 0,01%. Our assumed hypothesis no. 2 was therefore correct.

We calculated the intensity of this dependence through Cramer's V coefficient, whose value is 0,280128 and therefore exists very strong dependence between the age of the respondent and whether respondent has an Instagram account (Tab. 4).

Table 4: Chi-square test: Statistical differences in the perception/use of Instagram based on age.

Test of independence between the rows and the columns (Please indicate whether you have an Instagram account. / Age):	
Chi-square (Observed value)	45,121
Chi-square (Critical value)	11,070
DF	5
p-value	$< 0,0001$
alpha	0,05

Source: Own processing

Our next step was calculating the Residuals (Adjusted). Values displayed in bold are significant at the level $\alpha=0,05$ and we can see, that statistical dependencies are not found in every age category. They are found only between answers yes I have an Instagram account and no I do not have an Instagram account of respondents aged 18 to 25 years, 26 to 35 years and 56 years and more. There can be several reasons for this (Tab. 6).

5 Discussion

Based on the percentage evaluation of the responses of men and women separately to our first stated hypotheses, we can say that women are more inclined to buy products based on the influencer's recommendation than men, therefore we can say, that women trust influencers more than men, this may also be caused, due to the

fact that men have different interests and hobbies and do not spend as much time following influencers as women do.

Based on evaluation of the responses to our second stated hypotheses, we can say, that with increasing age, less respondents have an account on Instagram, in other words, the older the respondent, the greater the probability, that they do not have an account on Instagram, We assume that young people have more free time to devote on social networks and have an Instagram account is also trendy and cool for them. When respondents are older, at their most productive age, they usually have more obligations, children, work etc., so we assume, that they do not have as much free time as they used to have, so this might be the reason why the percentage of respondents, who do not have an Instagram account is higher. We assume, that respondents aged 56 and older are not so skilled with the new technologies, maybe they do not even know Instagram platform, so we assume, that this could be the reason why the percentage of respondents, who do not have an Instagram account is even higher. Therefore, we assume, that business marketing via the social network Instagram may be beneficial, but it also relies on which age group the company focuses on.

6 Conclusions

For our first stated hypothesis, we rejected the null hypothesis and accepted the alternative hypothesis. Therefore, we can say, that there is a dependence between the gender of respondents and whether they consider influencers as a reliable source of information. Our assumed hypothesis no. 1 was therefore correct. We calculated the Adjusted Standardized Residuals and we found out, that the statistical significances were located in both male and female answers completely agree, and completely disagree. Based on the percentage evaluation of the responses of men and women separately, we can say that women are more inclined to buy products based on the influencer's recommendation than men, therefore we can say, that women trust influencers more than men, this may also be caused, due to the fact that men have different interests and hobbies and do not spend as much time following influencers as women do.

In our second stated hypothesis, we rejected the null hypothesis and accepted the alternative hypothesis. Therefore, we can say, that there is a dependence between the age of respondents and whether they have an Instagram account. Our assumed hypothesis no. 2 was therefore correct. We calculated the intensity of this dependence through Cramer's V coefficient, whose value was 0,280128 and therefore there exists very strong dependence between the age of the respondent and whether respondent has an Instagram account. We found out, that with increasing age, less respondents have an account on Instagram. Therefore, we assume, that digital marketing via the social network Instagram may be beneficial, but it also relies on which age group the company focuses on.

Based on finding, that women trust influencers more than men, we would like to offer some recommendations. Businesses should focus consider targeting their advertising strategy towards influencer marketing, which tends to focus more on women than men. This means seeking out influencers who have a larger following or influence among women specifically. When creating content on social media or other platforms, businesses should consider content that would resonate with the female target audience. This might include topics relevant to women such as fashion, beauty, family, health, and wellness.

When choosing influencers to collaborate with, businesses should consider not only their popularity and reach but also their ability to appeal to the female target audience. This could involve selecting influencers who predominantly have female followers or who are known for their appeal to women. These implications should help businesses better utilize influencer marketing to achieve their business objectives through more targeted engagement with the female target audience.

Considering the finding that fewer respondents have an Instagram account as age increases, it's crucial for companies to adopt a targeted marketing approach. They should carefully define their target demographic based on age groups.

If the target audience comprises older individuals, it may not be advisable to invest in Instagram marketing due to lower participation rates among this demographic. Companies should conduct thorough market research to identify the age groups most likely to engage with their products or services. By segmenting their audience based on age demographics, they can tailor their marketing strategies accordingly. For

instance, if the target demographic consists mainly of younger individuals, investing in Instagram marketing would be recommended due to its popularity among this age group. Regardless of the chosen marketing channel, companies should continuously monitor the effectiveness of their strategies and be prepared to adapt based on evolving consumer behaviors and preferences. This may involve conducting regular surveys or analyzing engagement metrics to ensure that marketing efforts resonate with the target audience effectively.

We consider as limitation the unbalanced sample of respondents, a larger representation of women than men. However, we want to minimize this limitation by continuing in our research as we want to examine another attributes, for instance income, economic status or the residence of respondents.

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