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Article

The impact of marketing activities on increasing interest in Digital Cryptocurrencies

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Abstract: This study examines consumer attitudes toward cryptocurrencies in Slovakia, focusing on the perceived adequacy of their promotion and the influence of demographic factors such as education, gender, and age. The findings reveal that a significant majority of respondents view cryptocurrency promotion as insufficient, with 77.77% expressing dissatisfaction. Demographic factors were found to have minimal impact on attitudes, suggesting that universal barriers—such as trust, technological literacy, and perceived risks—play a more critical role. Social media emerged as a key platform for engaging consumers, particularly younger demographics, provided that campaigns are well-targeted and informative. These results highlight the need for innovative promotional strategies emphasizing transparency, education, and trust-building to bridge the gap between cryptocurrencies and broader consumer adoption. The study contributes to the growing literature on cryptocurrency marketing by providing actionable insights for addressing challenges in emerging markets like Slovakia.

Keywords: cryptocurrency promotion; digital economy; consumers; advertising; social media; public perception

1. Introduction

Cryptocurrencies have emerged as a transformative force in the global financial ecosystem, offering innovative ways to conduct transactions and store value in the digital economy. Despite their rapid growth and widespread adoption in some markets, their integration into mainstream financial and consumer systems remains uneven, particularly in regions like Slovakia. A better understanding of consumer attitudes and the role of promotional strategies can bridge the gap between technological potential and practical acceptance. Recent studies, such as Skog and Vamossy (2024), highlight the importance of emotional engagement on social media in shaping financial decisions. This is particularly relevant for cryptocurrencies, where trust and consumer sentiment play critical roles in adoption. By leveraging insights into social media emotions, promotional strategies can be better tailored to resonate with target audiences.

This study aims to explore the relationship between demographic factors (education, gender, and age) and attitudes toward cryptocurrency adoption in Slovakia, with a specific focus on the effectiveness of promotional marketing activities. Using a quantitative approach, data were collected via an online survey of 144 respondents and analyzed through statistical methods, including the Kruskal-Wallis and Mann-Whitney U tests. The study addresses two key questions: (1) What

are the perceived gaps in cryptocurrency promotion in Slovakia? (2) How do demographic factors influence consumer attitudes toward cryptocurrencies?

The findings reveal three significant insights: (1) the majority of respondents perceive cryptocurrency promotion as insufficient, highlighting a need for more effective marketing strategies; (2) demographic factors such as education, gender, and age have minimal impact on attitudes, suggesting the presence of universal barriers such as trust and technological literacy; (3) social media emerges as a critical platform for engaging diverse age groups, provided the content is well-targeted. This aligns with Vamossy's (2024) findings on the role of social media emotions in influencing financial behavior, underscoring the potential of emotionally engaging content to improve cryptocurrency adoption.

This study contributes to the existing literature on cryptocurrency adoption by offering a detailed analysis of the Slovak market, which has been underexplored in previous research. Unlike prior studies that focus on technical aspects or security challenges (Uchibori et al., 2024; Xu and Yu, 2024), this research emphasizes the marketing and consumer behavior perspective, providing actionable insights for practitioners. Moreover, incorporating emotional engagement strategies, as suggested by Vamossy (2021, 2024), could enhance the effectiveness of promotional campaigns by addressing the psychological and social factors influencing consumer decisions. By addressing gaps in awareness and engagement, this work aligns with broader discussions on fostering financial inclusion through digital innovation (World Economic Forum, 2016).

The manuscript is structured as follows: Section 2 reviews the existing literature on e-marketing and cryptocurrency adoption. Section 3 outlines the research methods, including data collection and statistical analysis. Section 4 presents the results, while Section 5 discusses their implications in the Slovak context and beyond. Finally, Section 6 concludes with recommendations for marketers and directions for future research.

2. Literature review

In the current information age, e-marketing has evolved into a pivotal tool for business development, shaping both economic and technological trends (Kumar et al., 2023; Prokopenko et al., 2023). However, in the business world, it is not enough to be in a position, companies must be competitive and number one, and one way to win the competition is to improve service quality, because increasing service quality will make consumers satisfied and loyal (Saes, 2024). The widespread use and development of information technologies in our time has led to an increase in the role of the digital economy in the overall world economy (Abbasov, 2024). The integration of online payment systems has further enhanced consumer convenience, streamlining transactions for goods and services. This efficiency, combined with the comprehensive access to product information offered by e-commerce, surpasses traditional market practices, granting consumers greater control over their purchasing decisions (Prokopenko et al., 2023).

Cryptocurrencies, e-marketing and research

The contemporary era has witnessed an unprecedented surge in technological adaptation, with innovations revolutionizing platforms across industries (Khatri, 2022). Cryptocurrencies naturally align with e-marketing strategies, being inherently digital assets. Sophisticated online advertising techniques, often leveraging data for personalized targeting, enable businesses to precisely reach their desired segments while optimizing sales strategies. The Internet has left no economic field untouched (Sidorova, 2019).

The world uses increasingly widespread e-marketing tools, which are becoming much more demanding and specific. E-marketing does not avoid modern payment tools in the form of cryptocurrencies. Since cryptocurrencies are digital processes, targeting their marketing to the electronic environment is natural for them. Creating online advertising, which nowadays usually uses data to create personalized offers tailored to the customer, allows modern companies on the market to precisely target the selected segment but also to work effectively with their sales strategies. As Prokopenko et al. (2023) mentioned, e-marketing does not increase only sales, but it also helps companies to become more competitive in the global marketplace (Dorofeyev et al., 2018; Gao et al., 2024).

In recent years, the convenience and potential use of crypto-assets such as Bitcoin and Ethereum have attracted increasing attention (Uchibori et al., 2024). Bitcoin became the world's first digital, private cryptocurrency exchanged over the internet through the use of a peer-to-peer network (Limba et al., 2019). Payments thorough cryptocurrencies has also emerged more recently (Quan et al., 2023) and thus they approached a wider audience. With the advent of digital technologies, e-commerce has become a pivotal element in modernizing (Xu and Yu, 2024). World Economic Forum identified Bitcoin-based Blockchain technology as among the top 10 emerging technologies, together, with the Internet of Nano things, Autonomous Vehicles, open Artificial Intelligence ecosystem (World Economic Forum, 2016).

Cryptocurrencies have become a widely used tool in the market and their application has been expanding over the years. New cryptocurrencies are also emerging, complementing the standard and oldest ones on the market. They are also becoming the object of research from various angles. Fujiki (2021) investigated the interest in cryptocurrencies in terms of selected personal characteristics in a Japanese sample. He specifically examined the age and gender of respondents, where he assumed the dominance of preferences in younger men. His findings may be valuable in creating tools and methods of promoting these currencies in the future. His conclusions show that the thesis is confirmed, hand in hand with other findings that indicate that, average crypto asset owners tend to have a higher level of financial literacy and are more likely to use cashless payment methods and hoard cash, as compared to average crypto asset nonowners (Fujiki, 2021). Two years later he extended his research to the same Japanese sample a surveyed people's knowledge and use of central bank digital currency, crypto asset ownership, and cash demand in Japan, where it turned out that the demographic characteristics of respondents who understand CBDC are like those of crypto asset owners. Authors Xu and Yu (2024) investigated the application of blockchain technology into e-commerce marketing

techniques within the agricultural supply chain. Uchibori et al. (2024) have explored the interest in crypto potential more from a security perspective. As part of their research, they claim that there have been reports of attacks on the blockchain networks that support crypto assets in an attempt to steal other users' assets and presented a new method for protecting crypto assets from potential attackers.

As can be seen from the source search, there are currently many sources and studies that have examined cryptocurrencies, but their research from a marketing perspective has not yet been represented. For this reason, the intention of this study was to focus attention on the promotion of cryptocurrencies from the perspective of e-marketing possibilities.

3. Materials and methods

The aim of the paper is to explore the relationship between respondents' education and gender and their attitudes toward the use of cryptocurrencies, with a focus on the role of promotional marketing activities.

The main aim of the research is to identify statistically significant differences in attitudes toward cryptocurrency use based on education and to examine the influence of gender on the effectiveness of cryptocurrency advertising.

For the purpose of the research as well as for this study, several research methods were used:

- Questionnaire—focused on exploring the relationship between respondents' education and gender and their attitudes toward the use of cryptocurrencies, with a particular emphasis on the effectiveness of promotional marketing activities. It aimed to identify statistically significant differences in attitudes toward cryptocurrency use based on education and to analyze how gender influences the perceived impact of cryptocurrency advertising.
- To verify the research hypotheses, the following methods were used: Kruskal Wallis Test, Mann-Whitney U, Wilcoxon W.

Questionnaire method was used as a primary data collection, in order to fulfil the research objective.

H1: We assume that attitudes toward the use of cryptocurrencies differ statistically significantly based on the education level of respondents.

H2: We assume that the impact of advertising on attitudes toward the use of cryptocurrencies differs statistically significantly based on the gender of respondents.

H3: We assume that the impact of social media on attitudes toward the use of cryptocurrencies differs statistically significantly based on the age of respondents.

To verify the established hypotheses, respondents' answers were initially processed in Excel, and the coded data were subsequently analyzed using the IBM SPSS statistical software. Data collection was conducted electronically between December 2023 and March 2024. The questionnaire was anonymous and comprised 19 questions. The survey was carried out on a sample of 144 respondents (n = 144). Although 172 individuals were contacted, only 144 questionnaires were valid for further evaluation. The research sample was selected based on purposive sampling.

4. Results

The demographic profile of the surveyed respondents offers valuable insights into the characteristics of the research sample. Among the 144 participants, females slightly predominated, representing 57.60% (85 respondents), while males constituted 42.40% (59 respondents).

The largest proportion of respondents falls within the age group of 18–25 years, accounting for 50.7%. The second-largest group includes individuals aged 26–35 years. The age group of 36–45 years ranks second to last, representing 18.8% of the total respondents. The smallest group consists of individuals over 45 years of age, comprising only 3.5% of all respondents.

In terms of educational attainment, the respondents were relatively evenly distributed across categories. Participants with secondary education with a high school diploma accounted for 46 respondents, those with a bachelor's degree (first level of higher education) numbered 49, and respondents with a master's degree (second level of higher education) totaled 40. Additionally, there were 8 respondents with a doctoral degree (third level of higher education), representing 5.6% of the total sample.

The demographic and educational composition of the respondents highlights a diverse sample, predominantly young individuals aged 18–25 years, who form the majority of participants. The representation gradually decreases with age, with the smallest group being those over 45 years. In terms of education, the sample includes a balanced mix of respondents with secondary and higher education levels, reflecting a broad range of educational backgrounds. This diversity ensures a comprehensive analysis of attitudes and behaviors across different age and educational groups (**Table 1**).

Table 1. Demographic statistics for 144 respondents.

Criterion	Factor	Frequency	Percentage
Gender	Female	85	57.6%
	Male	59	42.4%
Age	18–25	73	50.7%
	26–35	39	27.1%
	36–46	27	18.8%
	over 45 years old	5	3.5%
Education	secondary	1	0.7%
	secondary education without high school diploma	46	31.9%
	university education I. degree	49	34.0%
	university education II. degree	40	27.8%
	university education III. degree	8	5.6%

Cryptocurrencies have become a global phenomenon, significantly influencing financial systems, investment opportunities, and consumer behavior. However, the level and effectiveness of their promotion can vary widely across different countries and regions. In the context of Slovakia, understanding whether cryptocurrencies are

sufficiently promoted is a critical area of exploration. This involves examining the presence and visibility of cryptocurrency-related advertising, public awareness campaigns, and the role of media and social platforms in educating and engaging the population.

As part of the research, we also focused on examining whether cryptocurrencies are sufficiently promoted in Slovakia, according to the respondents. The research results **Table 2** indicate that the majority of respondents perceive the promotion of cryptocurrencies in Slovakia as insufficient, with 35.42% disagreeing and an additional 42.36% rather disagreeing, totaling 77.77%. A smaller group, 9.72%, remained neutral, while only 12.50% rather agreed that cryptocurrencies are sufficiently promoted. These findings suggest that current marketing efforts may not be effectively raising awareness or engaging consumers in the Slovak market.

Table 2. The promotion of cryptocurrencies in the Slovak market from the consumer's perspective.

	Frequency	**Cumulative Frequency**	**Relative frequency %**	**Cumulative relative frequency %**
disagree	51	51	35.42%	35.42%
rather disagree	61	112	42.36%	77.77%
Nor agree nor disagree	14	126	9.72%	87.50%
rather agree	18	144	12.50%	100.00%
Total	144			

For the evaluation of the stated hypothesis 1, the following question was used: "How do attitudes toward the use of cryptocurrencies vary across different education levels of the respondents"?

The aim of the research hypothesis H1 was to determine whether there are statistically significant differences in attitudes toward the use of cryptocurrencies based on the education level of the respondents. The objective was to analyze how various educational backgrounds influence perceptions and engagement with cryptocurrencies to identify whether education affects overall attitudes and acceptance of these digital assets.

Based on the results, we can conclude that the differences between education level categories are minimal. The most significant discrepancy is observed in the category of higher education (2nd degree), where the distribution of attitudes toward cryptocurrencies differs markedly compared to other education categories. The **Table 3**. presents the output values of the individual education level variables.

Table 3. Values of the variable "education".

	Education	***N***	**Mean Rank**
Perception of cryptocurrencies	secondary	1	70.64
	secondary education without high school diploma	46	70.81
	university education I. degree	49	77.33
	university education II. degree	40	64.81
	university education III. degree	8	109.50
	Total	144	

Notes: ***N***: The number of participants in a group. Mean Rank: The average rank of a group in non-parametric tests.

In the first column labeled n, the frequency of each category is displayed, while the second column represents the evaluation of these categories. The first two categories show minimal differences and are also the most numerous. A slight deviation is observed in the category of higher education (2nd degree), which also has a high frequency, and in higher education (3rd degree), where the frequency was relatively low. The most significant differences appear in the category of secondary education without a diploma, although the frequency in this group is minimal.

To evaluate the hypotheses, we will compare the *p*-value and asymptotic significance. The analysis was conducted using the Kruskal-Wallis Test (**Table 4**).

Table 4. Results of testing H1.

	Perception of cryptocurrencies
Chi-Square	2.344
Df	4
Asymp.Sig.	0.673

Notes: Chi-Square: Test value for association between variables. Df: Degrees of freedom, independent values in the analysis. Asymp. Sig.: *p*-value indicating statistical significance.

Based on the results of the Chi-Square test ($\chi^2 = 2.344$, df = 4, $p = 0.673$), the hypothesis that attitudes toward the use of cryptocurrencies differ statistically significantly based on the education level of respondents is not supported. The *p*-value (0.673) exceeds the standard significance threshold (e.g., 0.05), indicating that there are no statistically significant differences in the perception of cryptocurrencies among respondents with different education levels.

The results indicate that there are no statistically significant differences in attitudes toward the use of cryptocurrencies across different groups. This suggests that the factor under investigation does not have a measurable impact on respondents' perceptions. These findings highlight the need to explore other potential variables that may influence attitudes toward cryptocurrencies. Understanding these factors could provide deeper insights into what shapes public perceptions in this area.

The second question, in relation to the hypothesis 2, was: Is there a statistically significant difference in the impact of advertising on attitudes toward the use of cryptocurrencies between male and female respondents?

The aim of the second research hypothesis was to examine whether there is a statistically significant difference in the impact of advertising on attitudes toward the use of cryptocurrencies based on the gender of respondents. This hypothesis will focus on analyzing gender-based differences in the influence of advertising on attitudes toward cryptocurrency use. Specifically, it aims to determine whether male and female respondents perceive and respond to advertising about cryptocurrencies in significantly different ways (**Table 5** and **6**).

The **Table 5** presents the distribution of mean ranks and the sum of ranks for the impact of advertising based on gender. Among the respondents, males ($N = 61$) have a higher mean rank (78.09) compared to females ($N = 83$), who have a mean rank of 68.38. The total number of respondents is 144, with males contributing a sum

of ranks of 4763.50 and females contributing 5676.50. This indicates a potential gender-based difference in perceptions of advertising.

Table 5. Values of the variable "gender".

	Gender	***N***	**Mean Rank**	**Sumi of Ranks**
	Male	61	78.09	4763.50
Advertising	Female	83	68.38	5676.50
	Total	144		

Notes: Gender: Refers to the participant's gender, typically a categorical variable (e.g., male or female). *N*: The number of participants in each gender group. Mean Rank: The average rank of a group in non-parametric tests based on the variable being analyzed. Sum of Ranks: The total of all ranks assigned to a group in the analysis. It helps compare groups in tests like Mann-Whitney U.

Table 6. Results of testing H2.

	Advertising
Mann-Whitney U	2190.5
Wilcoxon W	5676.5
Z	−1.548
Asymp. Sig. (2-tailed)	0.122

Notes: Mann-Whitney U: A test statistic used in the Mann-Whitney U test, which compares differences between two independent groups on a continuous or ordinal variable. Wilcoxon W: The sum of ranks for the group with the smaller rank sum, often used in the context of the Mann-Whitney U test. *Z*: The z-score, a standard score indicating how far the test statistic is from the mean in a standard normal distribution. Asymp. Sig. (2-tailed): The two-tailed *p*-value, showing the probability that the observed result is due to chance. A value less than 0.05 typically indicates statistical significance.

The analysis of the hypothesis that the impact of advertising on attitudes toward the use of cryptocurrencies differs statistically significantly based on the gender of respondents showed no significant difference. The Mann-Whitney *U* test results (U = 2190.5, Z = −1.548, p = 0.122) indicate that the *p*-value is greater than the significance level of 0.05, leading to the conclusion that gender does not statistically significantly influence the impact of advertising on attitudes toward cryptocurrency use.

The third question, in relation to Hypothesis 3, was: Is there a statistically significant difference in the impact of social media on attitudes toward the use of cryptocurrencies across various age groups of respondents?

The aim of the third research hypothesis was to investigate whether there is a statistically significant difference in the impact of social media on attitudes toward the use of cryptocurrencies among respondents of different age groups. The hypothesis focused on examining age-based differences in how social media influences attitudes toward the use of cryptocurrencies. Specifically, it aimed to determine whether respondents from different age groups perceive and respond to the impact of social media on cryptocurrency attitudes in statistically significantly different ways (**Table 7** and **8**).

Table 7. Values of the variable "age".

	Age	***N***	**Mean Rank**
Social media	18–25	73	66.58
	26–35	39	76.72
	36–46	27	79.44
	over 45 years old	5	88.60
	Total	144	

Notes: Age: Refers to the age group or category of respondents being analyzed. *N*: Denotes the number of respondents in each age group or category. Mean Rank: Represents the average rank assigned to each age group based on a statistical test (e.g., Kruskal-Wallis), indicating their relative position or importance in relation to the variable being studied.

The **Table 7** presents the mean ranks of the impact of social media on attitudes toward cryptocurrency use across different age groups. Respondents aged 18–25 (N = 73) have the lowest mean rank (66.58), while those over 45 years old (N = 5) have the highest mean rank (88.60). The mean rank increases progressively with age, with respondents aged 26–35 (N = 39) scoring 76.72 and those aged 36–46 (N = 27) scoring 79.44. The total number of respondents is 144. These findings suggest a potential trend where older age groups may perceive the impact of social media on cryptocurrency attitudes more strongly than younger groups.

Table 8. Results of testing H3.

	Social media
Chi-Square	4.171
Df	3
Asymp.Sig.	0.244

Notes: Chi-Square: A test statistic that measures the association between categorical variables, comparing observed and expected frequencies. Df: Degrees of freedom, representing the number of independent values that can vary in the calculation of the statistic. Asymp. Sig.: Asymptotic Significance, the *p*-value indicating the likelihood that the result occurred by chance. A value below 0.05 suggests statistical significance.

The hypothesis posited that the impact of social media on attitudes toward the use of cryptocurrencies differs statistically significantly across age groups.

The Kruskal-Wallis H test was conducted to examine differences in mean ranks of attitudes among the age groups. The test produced a Chi-Square value of 4.171, with 3 degrees of freedom and an asymptotic significance value (p = 0.244). Since the p-value exceeds the conventional threshold of 0.05, the results indicate no statistically significant differences in the impact of social media on attitudes toward cryptocurrencies among the age groups analyzed. Thus, the hypothesis that age significantly influences the effect of social media on cryptocurrency attitudes is not supported.

5. Discussion

The demographic profile of respondents provides an important foundation for understanding the research sample. The majority of participants were young adults aged 18–25, with a balanced representation of both genders and a diverse range of

educational backgrounds. This variety ensures a comprehensive exploration of consumer attitudes toward cryptocurrencies in Slovakia, reflecting perspectives from different demographic and educational groups.

One of the key findings highlights that cryptocurrencies are perceived as insufficiently promoted in Slovakia. Most respondents expressed dissatisfaction with the level of promotion, indicating a gap in awareness and engagement. This suggests that current marketing efforts are not effectively reaching or resonating with the target audience. Addressing this gap could involve more targeted and accessible campaigns that raise awareness, educate the public, and foster trust in cryptocurrencies.

Cryptocurrencies have become a global phenomenon, but the insights gained from this study suggest that the challenges observed in Slovakia may be indicative of broader trends in underdeveloped or emerging cryptocurrency markets. Insufficient promotion, lack of public awareness, and limited engagement are not unique to Slovakia; these issues are frequently reported in regions where cryptocurrencies have yet to achieve mainstream acceptance. This calls for a global approach to marketing cryptocurrencies, emphasizing education and trust-building to overcome skepticism.

The dissatisfaction with cryptocurrency promotion aligns with previous research highlighting the importance of well-targeted marketing strategies in fostering awareness and adoption of new technologies (Prokopenko et al., 2023). These findings suggest that inadequate promotional efforts may leave consumers uninformed about the benefits and security measures associated with cryptocurrencies, thereby contributing to hesitation and skepticism. Enhanced campaigns focusing on trust-building and transparency could significantly improve consumer engagement and adoption.

The findings indicate that demographic factors such as education and gender had minimal impact on attitudes toward cryptocurrencies. This could be explained by the universal nature of barriers to adoption, such as trust, technological literacy, and perceived risks, which affect all demographic groups similarly. Regarding education, it is possible that cryptocurrency knowledge is not primarily tied to formal education but instead to self-directed learning and exposure to online communities. For instance, individuals with lower formal education may still have significant knowledge of cryptocurrencies due to their engagement with non-traditional information sources, such as social media or peer networks. This highlights the role of accessible digital platforms in shaping cryptocurrency awareness across diverse educational backgrounds.

Similarly, gender differences in attitudes appear minimal, potentially reflecting a lack of tailored marketing efforts for specific gender groups. Current promotional strategies often adopt a one-size-fits-all approach, which may not resonate differently with male and female audiences. This uniformity in marketing could explain the comparable responses observed across genders.

These findings align with studies that emphasize trust, perceived risks, and technological literacy as universal barriers to cryptocurrency adoption (Uchibori et al., 2024; Xu and Yu, 2024). The consistency of responses across demographic groups further suggests that addressing these underlying barriers could be more impactful than focusing solely on demographic-specific marketing strategies.

Furthermore, these findings suggest that demographic variables alone may not adequately explain consumer attitudes toward cryptocurrencies. Behavioral and psychological factors, such as trust in technology, prior experiences with digital finance, and risk tolerance, likely play a more critical role. These factors, which transcend demographic characteristics, may be driving the observed uniformity in attitudes among respondents.

Actionable Steps for Marketers:

- Educational Campaigns: To address gaps in understanding and trust, marketers should implement educational campaigns that demystify cryptocurrencies and emphasize their practical applications.
- Leveraging social media: Targeted content aimed at younger demographics, particularly those in the 18–25 age range, should include interactive formats such as webinars, Q&A sessions, and community discussions to encourage participation and build trust.
- Localized Strategies: While global campaigns are essential, localization remains critical. Marketers should adapt their strategies to align with cultural, economic, and technological contexts in specific regions.
- Global Collaboration: Given the interconnected nature of digital markets, fostering collaborations between cryptocurrency companies and global financial institutions can further enhance credibility.
- Transparency and Trust-Building: Marketers should focus on transparent communication, such as highlighting regulatory compliance, partnerships with reputable institutions, and measures to prevent fraud.

By addressing these challenges, marketers and stakeholders can not only improve cryptocurrency adoption in Slovakia but also provide a framework for tackling similar issues in other markets. This approach would contribute to the global adoption of cryptocurrencies, fostering financial inclusion and enabling innovative economic models.

In terms of educational differences, the findings indicate that education level does not appear to significantly influence attitudes toward cryptocurrencies. Respondents from various educational backgrounds displayed similar perceptions, suggesting that factors beyond formal education, such as personal interest or exposure to digital finance, may play a more significant role.

Gender also did not emerge as a significant factor in shaping attitudes influenced by advertising. Both male and female respondents showed comparable responses to cryptocurrency advertisements, suggesting that promotional strategies should focus on universal appeal rather than gender-specific approaches.

Regarding the influence of social media, no significant differences were observed across age groups in how respondents perceived its impact on attitudes toward cryptocurrencies. While older respondents showed a slightly stronger perception of social media's role, the differences were not pronounced. This finding suggests that social media can serve as an effective platform to engage audiences across various age groups, provided the content is well-targeted and engaging.

Overall, the discussion points to several critical insights. The insufficient promotion of cryptocurrencies in Slovakia emerges as a critical barrier to their

broader adoption. Additionally, demographic factors such as education, gender, and age appear to have limited influence on attitudes, pointing to the need for further exploration of other variables. Future research could examine the role of trust, perceived risks, and accessibility of information in shaping consumer attitudes. Exploring these factors could yield deeper insights into the mechanisms driving cryptocurrency adoption and provide a foundation for more effective strategies.

6. Conclusion

This research highlights a gap in effective cryptocurrency promotion within the Slovak market. The findings indicate a clear gap in the perceived adequacy of promotional efforts, with the majority of respondents expressing dissatisfaction. This suggests that current marketing strategies are insufficient to raise awareness, educate the public, or effectively engage potential users. As cryptocurrencies continue to evolve as a global phenomenon, their adoption in Slovakia may be hindered by a lack of visible and impactful promotion.

Moreover, the study revealed that demographic factors such as education, gender, and age do not significantly influence attitudes toward cryptocurrencies or the impact of advertising and social media. This highlights the universal nature of the challenges faced in promoting cryptocurrencies and suggests that factors beyond demographics, such as trust, technological literacy, and perceived risks, may play a more significant role. Addressing these underlying factors through targeted educational campaigns, transparent communication, and accessible information could be key to improving public perceptions and fostering greater adoption.

While this study provides valuable insights, certain limitations should be acknowledged to contextualize its contributions. The research sample, though diverse in age and education, was geographically focused on Slovakia, limiting the applicability of findings to global contexts. However, this focus allows for a deeper understanding of cryptocurrency adoption in an emerging market, offering a foundation for comparative studies. Additionally, the use of self-reported survey data, while efficient for capturing broad trends, could be complemented in future research by qualitative methods to provide a richer understanding of consumer behavior and motivations.

Future research can build on these findings by expanding the scope of investigation. Including participants from a broader range of geographic and cultural contexts could uncover regional differences and shared challenges in cryptocurrency adoption. Incorporating psychological and behavioral dimensions, such as risk tolerance, trust in technology, and financial literacy, alongside external factors like regulatory environments and media influence, could deepen the analysis. By adopting a multidisciplinary approach, researchers could offer more holistic insights into the dynamics of cryptocurrency adoption, supporting both academic inquiry and practical applications.

To advance cryptocurrency adoption in Slovakia, it is crucial to implement more effective promotional strategies that resonate with diverse consumer groups. Leveraging platforms like social media, improving transparency in advertising, and addressing consumer concerns around risks and security could enhance trust and

engagement. Future research should explore these areas further, focusing on behavioral and psychological factors that shape public attitudes toward cryptocurrencies. By addressing these challenges, stakeholders can better position cryptocurrencies as a viable and widely accepted financial innovation in the Slovak market.

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