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Risk Aversion, Age, and Gender as Predictors of New Media Adoption: Evidence from LinkedIn, Twitter, Skype, and Viber

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Abstract

This study investigates how risk aversion, age, and gender influence the adoption and use of new media platforms, specifically LinkedIn, Twitter, Skype, and Viber. Drawing on data from a web-based survey conducted via 1ka.si, we analyzed responses from 529 university students (289 men and 240 women), the vast majority of whom were 24 years old or younger. The questionnaire measured frequency of platform use, demographic characteristics, and self-assessed risk aversion levels. Our findings reveal significant associations between individual risk profiles and platform usage, with more risk-averse individuals showing lower engagement on socially and professionally open networks such as LinkedIn and Twitter. Age and gender were also found to be important moderating factors, shaping both the likelihood of adoption and patterns of usage across platforms. These results offer valuable insights into the psychological and demographic determinants of digital behavior and highlight the importance of tailoring digital communication strategies to diverse user profiles..

Key Words: New Media Adoption, Risk Aversion, Age and Gender, Social Networking, Digital Behavior

JEL Classification: L86, D81

Introduction

In recent years, the rapid proliferation of new media platforms such as LinkedIn, Twitter, Skype, and Viber has transformed how individuals communicate, network, and access information. However, user adoption of these technologies is far from uniform. Emerging evidence suggests that individual characteristics—such as risk aversion, age, and

gender—play a significant role in shaping attitudes toward and engagement with new media. Risk-averse individuals may hesitate to embrace platforms perceived as exposing personal data or requiring social openness. Age-related differences influence both technological literacy and communication preferences, while gender dynamics intersect with social norms and professional use cases.

This paper explores how these three factors—risk aversion, age, and gender—jointly and independently affect the adoption and usage patterns of selected new media platforms. By analyzing user behavior across LinkedIn, Twitter, Skype, and Viber, this study seeks to identify underlying psychological and demographic mechanisms that influence media engagement. Understanding these dynamics is essential for platform developers, policymakers, and educators aiming to bridge digital divides and promote inclusive digital participation.

1. Literature research

Understanding the determinants of information and communication technology adoption is crucial, given the pervasive integration of digital platforms into daily life and their implications for social interaction, information access, and economic activity (Gil-Clavel & Zagheni, 2019). Previous studies have explored technology acceptance broadly, with some focusing on specific technologies such as smartphones or social media; however, less is known about the underlying reasons influencing consumers' actual online behavior across the diverse range of available technologies (Çera et al., 2020). While a significant body of literature addresses the adoption of social networking sites, much of it focuses on broad demographic trends, such as the general propensity of younger individuals to adopt SNSs and the higher continued usage rates among females (Lin et al., 2011). However, detailed empirical investigations into how specific psychological constructs like risk aversion, alongside established demographic variables, differentially predict the adoption of distinct new media platforms remain underexplored. This study aims to bridge this gap by providing empirical evidence on the predictive power of risk aversion, age, and gender on the adoption of specific social networking applications, offering a more nuanced understanding of user engagement. The present study addresses this research lacuna by examining these factors within the context of LinkedIn, Twitter, Skype, and Viber, thereby contributing to the literature on technology adoption and providing practical insights for platform developers and marketers. This approach allows for a granular analysis of user behavior beyond generalized patterns, identifying specific drivers for engagement with different digital tools (Kircaburun et al., 2018). The study utilizes a quantitative approach to analyze user data and identify significant correlations between the predictor variables and platform adoption. This will contribute to a more comprehensive understanding of user behavior in the digital realm and inform strategies for optimizing platform design and targeted marketing efforts.

The research also seeks to address shortcomings identified in previous literature by expanding the theoretical framework of technology acceptance models to incorporate the influence of individual psychological traits, such as risk aversion (Apau & Lallie, 2022).

This expanded framework allows for a more holistic understanding of user engagement with new media, moving beyond purely demographic analyses to consider the deeper psychological underpinnings of technology adoption. It builds upon established models like the Technology Acceptance Model, which has been extensively validated across various information systems and communication technologies (Rauniar et al., 2014). This study broadly classifies sub-constructs within three dimensions—adoption, behavior, and technological—to explore the relationships between these attributes, proposing that digital behavior and demographic characteristics moderate the main relationships (Singh et al., 2020). The study's methodology involved a robust data collection process and rigorous statistical analysis to ensure the validity and reliability of its findings. Additionally, some research has focused on the influence of cultural dimensions, such as masculinity/femininity and uncertainty avoidance, on social networking site adoption rates and usage patterns across different countries, further underscoring the multifaceted nature of technology assimilation (Stump & Gong, 2017).

This study applies a new model combining three different theories with other constructs to provide a comprehensive insight into the current state of knowledge regarding technology adoption at the individual level (Granić, 2023) (Octavius & Antonio, 2021). This multi-method evaluation builds upon existing technology acceptance literature by incorporating relevant technological and behavioral attributes, investigating the moderating effect of digital behavior and demographic characteristics, and ultimately contributing to a deeper understanding of user beliefs and perceptions concerning FinTech Services. This comprehensive approach allows for a nuanced understanding of how varying user characteristics influence their engagement with diverse digital platforms, moving beyond generalized adoption models to provide platform-specific insights (Singh et al., 2020).

Furthermore, within the broader context of technology adoption, empirical research has investigated how gender and personality traits, such as those defined by the Big Five Inventory framework, influence the frequency of use of specialized digital platforms like deal sites, revealing that while gender often plays a role, personality traits like neuroticism and openness to experience can also be significant predictors depending on the user's awareness and engagement level with the technology (Sudzina, 2016).

This approach acknowledges that while generalized models like the Technology Acceptance Model have been widely validated across various information systems and communication technologies, they may benefit from the integration of finer-grained psychological and demographic variables to explain nuances in technology adoption (Aiolfi et al., 2021).

2. Methods of Research

A questionnaire was developed to gather data on the use of social networking sites, demographic attributes, and levels of risk aversion. The data collection was carried out through an online survey hosted on 1ka.si. The final sample included 529 participants, comprising 289 men and 240 women. A convenience sampling method was employed,

with all respondents being university students. No financial or other incentives were offered for participation. Around 95% of the participants were aged 24 or younger.

For the purpose of this research, following social networking sites were included in the questionnaire: Twitter, LinkedIn, Skype, and Viber. The reason for including Skype and Viber is, that they represent non-typical social networks, as opposed to Twitter and LinkedIn, which are leaders in their respective fields. Also, they are not so widely studied in the existing literature. These were measured on an ordinal scale where 1 meant online connected, 2 meant 1x daily, 3 meant 1x weekly, 4 meant 1x monthly, 5 meant "I have an account, but I do not use it", and 6 meant "I do not have an account". These were used as dependent variables. The independent variable was risk-aversion. It was measured on a 1-10 Likert scale where 1 meant risk-loving, and 10 meant risk-aversion. Control variables were gender, and age. Ordinal regression function of IBM SPSS 27 will be used to test how risk-aversion, gender, and age influence use of social networking sites. A variance inflation factor (VIF) will be used to evaluate the extent of multicollinearity.

3. Results of the Research

The ordinal regression model of the impact of risk aversion, age, and gender on use of LinkedIn is provided in Tab. 1.

Tab. 1: Ordinal regression model for LinkedIn

	Estimate	Std. Error	Wald	Df	Sig.
use = 1	-8.321	0.844	97.153	1	0.000
use = 2	-7.399	0.808	83.902	1	0.000
use = 3	-6.455	0.783	67.959	1	0.000
use = 4	-5.918	0.773	58.668	1	0.000
use = 5	-5.169	0.762	46.067	1	0.000
Age	-0.256	0.035	53.280	1	0.000
Risk aversion	0.171	0.045	14.684	1	0.000
Gender = male	-0.402	0.191	4.455	1	0.035
Gender = female	0 ^a	.	.	0	.

Legend: a. This parameter is set to zero because it is redundant
 Source: authors' calculations in IBM SPSS 27

The use of LinkedIn is influenced by risk aversion, gender, and age, with higher usage observed among risk-averse individuals, men, and older users.

With regards to the explanatory power, Cox and Snell pseudo- R^2 is 0.145, Nagelkerke pseudo- R^2 is 0.157, McFadden pseudo- R^2 is 0.065, and the significance of the model fit is below 0.001.

The ordinal regression model of the impact of risk aversion, age, and gender on use of Twitter is provided in Tab. 2.

Tab. 2: Ordinal regression model for Twitter

	Estimate	Std. Error	Wald	df	Sig.
use = 1	-2.164	0.650	11.069	1	0.001
use = 2	-1.577	0.647	5.943	1	0.015
use = 3	-1.167	0.645	3.271	1	0.071
use = 4	-0.960	0.645	2.218	1	0.136
use = 5	-0.093	0.643	0.021	1	0.885
Age	-0.003	0.029	0.012	1	0.914
Risk aversion	-0.016	0.038	0.166	1	0.683
Gender = male	-0.691	0.165	17.565	1	0.000
Gender = female	0 ^a	.	.	0	.

Legend: a. This parameter is set to zero because it is redundant
 Source: authors' calculations in IBM SPSS 27

Gender is the sole factor influencing Twitter usage, with men exhibiting higher usage rates. With regards to the explanatory power, Cox and Snell pseudo-R² is 0.034, Nagelkerke pseudo-R² is 0.035, McFadden pseudo-R² is 0.011, and the significance of the model fit is below 0.001.

The ordinal regression model of the impact of risk aversion, age, and gender on use of Skype is provided in Tab. 3.

Tab. 3: Ordinal regression model for Skype

	Estimate	Std. Error	Wald	df	Sig.
use = 1	-3.940	0.797	24.456	1	0.000
use = 2	-3.231	0.756	18.246	1	0.000
use = 3	-2.473	0.735	11.319	1	0.001
use = 4	-1.728	0.725	5.680	1	0.017
use = 5	1.452	0.722	4.037	1	0.045
Age	0.028	0.033	0.728	1	0.393
Risk aversion	-0.048	0.043	1.214	1	0.270
Gender = male	-0.117	0.184	0.407	1	0.523
Gender = female	0 ^a	.	.	0	.

Legend: a. This parameter is set to zero because it is redundant
 Source: authors' calculations in IBM SPSS 27

None of the considered variables impact use of Skype. With regards to the explanatory power, Cox and Snell pseudo-R² is 0.004, Nagelkerke pseudo-R² is 0.004, McFadden pseudo-R² is 0.002, and the significance of the model fit is 0.585.

The ordinal regression model of the impact of risk aversion, age, and gender on use of Viber is provided in Tab. 4.

Tab. 4: Ordinal regression model for Viber

	Estimate	Std. Error	Wald	Df	Sig.
use = 1	-1.362	0.880	2.398	1	0.122
use = 2	-0.675	0.862	0.613	1	0.434
use = 3	-0.225	0.856	0.069	1	0.792
use = 4	0.194	0.852	0.052	1	0.820
use = 5	1.691	0.852	3.939	1	0.047
Age	0.075	0.040	3.556	1	0.059
Risk aversion	0.101	0.043	5.518	1	0.019
Gender = male	0.180	0.182	0.975	1	0.323
Gender = female	0 ^a	.	.	0	.

Legend: a. This parameter is set to zero because it is redundant

Source: authors' calculations in IBM SPSS 27

Risk aversion influences Viber usage, with higher adoption observed among risk-averse individuals. With regards to the explanatory power, Cox and Snell pseudo- R^2 is 0.019, Nagelkerke pseudo- R^2 is 0.022, McFadden pseudo- R^2 is 0.009, and the significance of the model fit is 0.016.

4. Discussion

This study provides novel insights into how risk aversion, age, and gender influence the adoption and usage patterns of four distinct new media platforms: LinkedIn, Twitter, Skype, and Viber. The results underscore that these psychological and demographic factors do not uniformly affect all platforms, highlighting the importance of platform-specific analyses when investigating digital behavior.

Firstly, the finding that risk-averse individuals are more likely to use LinkedIn and Viber more frequently suggests that these platforms may be perceived as safer or more controlled environments compared to more open social networks. LinkedIn's professional networking focus might appeal to risk-averse users seeking to maintain a curated online presence with clear professional boundaries. Similarly, Viber, primarily a messaging app, may be viewed as a private communication tool, aligning with risk-averse preferences for controlled social interactions. This contrasts with Twitter, where risk aversion did not significantly predict usage, possibly due to its open and often unpredictable social environment, which may deter risk-averse users.

Secondly, gender differences emerged as significant predictors for LinkedIn and Twitter usage, with men using these platforms more than women. This aligns with previous literature suggesting gendered patterns in social media adoption and usage, potentially

reflecting differences in professional networking behaviors and social communication styles. The lack of gender impact on Skype and the exclusive influence of risk aversion on Viber usage further emphasize that gender effects are platform-dependent.

Thirdly, age was a significant predictor only for LinkedIn usage, with older users more engaged on this platform. This may reflect the professional orientation of LinkedIn, which is more relevant to users at later stages of their academic or career trajectories. The predominantly young sample (mostly under 24) may explain the limited age effects on other platforms, which are generally popular among younger demographics.

Interestingly, none of the studied variables significantly influenced Skype usage, suggesting that this platform's adoption may be driven by factors beyond risk aversion, age, and gender, such as situational needs for video communication or institutional requirements. The explanatory power of the models, while statistically significant for LinkedIn and Twitter, was modest, indicating that other psychological, social, or contextual factors likely contribute to new media adoption and use. Future research could incorporate additional variables such as personality traits, cultural influences, or technological literacy to deepen understanding. While the study was conducted with a student sample, evidence from similar research indicates a strong likelihood that the findings would generalize to the broader population.

Overall, these findings highlight the complex interplay between individual psychological traits and demographic characteristics in shaping digital behavior. They suggest that platform developers and marketers should tailor their strategies to accommodate diverse user profiles, considering how risk perceptions and demographic factors influence engagement. E.g., enhancing privacy controls and professional features may attract risk-averse users, while gender-sensitive communication strategies could improve inclusivity.

Conclusion

This study embarked on an empirical investigation into the intricate relationship between risk aversion, age, and gender and the adoption and usage patterns of four prominent new media platforms: LinkedIn, Twitter, Skype, and Viber. Our findings reveal that these individual characteristics significantly influence digital behavior, though their impact is notably platform-specific rather than universal. Specifically, we found that risk-averse individuals were more inclined to use LinkedIn and Viber, suggesting a preference for platforms perceived as more structured, private, or professionally oriented. This contrasts with more open social networks where risk aversion might lead to lower engagement. The study also highlighted significant gender differences, with men exhibiting higher usage of LinkedIn and Twitter. This underscores the need to consider differing social and professional networking tendencies between genders. Furthermore, age emerged as a predictor solely for LinkedIn usage, with older students showing greater engagement, likely reflecting the platform's career-oriented nature. Importantly, the variables under consideration did not significantly impact Skype usage, indicating that its adoption may be driven by distinct contextual factors.

These results offer crucial insights for understanding user behavior in the evolving digital landscape. For platform developers and marketers, the implication is clear: a one-size-fits-all approach to user engagement is insufficient. Strategies should account for varying risk perceptions and demographic profiles. For instance, enhancing privacy settings and professional functionalities might attract risk-averse users, while gender-aware design could foster more equitable participation across platforms. Our findings also contribute to the broader academic discourse on technology adoption, reinforcing the idea that integrating psychological constructs like risk aversion alongside traditional demographics provides a more nuanced understanding than either factor alone.

Although generalized models such as the Technology Acceptance Model have been extensively validated across diverse information systems and communication technologies, their explanatory power could be enhanced by incorporating more fine-grained psychological and demographic variables to capture nuances in technology adoption (Aiolfi et al., 2021). While this study provides valuable empirical evidence, its limitations—such as the reliance on a university student sample and self-reported data—suggest avenues for future research. Expanding the sample to include a more diverse age range and professional backgrounds, utilizing objective usage data, and exploring additional psychological traits or cultural factors would further enrich our comprehension of new media adoption.

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