E-Government System in Albania: Insights from the Citizen Perspective

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Abstract
Exploring citizen impressions of digital platforms and electronic public services is essential as digital governance plays an important role in improving the delivery of public services. This study examines Albanian citizens' perceptions of the e-Government platform, e-Albania, with the aim of understanding the key factors influencing its acceptance and future adoption intentions Using the Technology Acceptance Model (TAM), this study investigates variables such as Perceived Usefulness, Ease of Use, Attitude, and Future Intention to Use. Literature review on digital governance highlights the significance of these factors in shaping citizen engagement with e-government services. Additionally, recent studies emphasize the growing importance of trust and risk factors as citizens depend more an more on online government services This research paper aim to identify how these factors influence citizens' attitudes toward adopting and their future intentions to use e-Albania, and providing insights to improve user experience with this mandatory government platform.
To evaluate these insights, this study employed a structured survey administered to 100 participants in Albania. Results indicate that majority of participants rated the platform favorably; usefulness and ease to use. However, concerns regarding data security risk and overall trustworthiness had a significant impact on participants' intentions for future use.These findings are valuable for practitioners, policymakers, and developers of e-Government platform in Albania. Addressing user concerns around transparency, user support, and streamlining access can improve the platform's effectiveness and trustworthiness. This study provides realistic and valuable insights into the Albanian e-Government landscape, emphasizing the practical need to foster trust and streamline digital public service delivery for better citizen adoption.

Keywords: e -Albania,TAM, trust, risk, public services .

1. Introduction
The prompt development of digital technology has transformed the manner how governments worldwide interact with citizens, shifting traditional public service delivery toward more efficient, transparent, and accessible digital platforms. E-Government initiatives play a crucial role in supporting these developments, providing streamlined access to a wide range of public services, reducing administrative burdens, and enhancing overall governance. In alignment with this global trend, Albania has implemented e-Albania, a comprehensive and mandatory digital platform that facilitates citizen access to public services. Through e-Albania, citizens can complete tasks such as obtaining documents, paying fees, accessing information, and utilizing services provided by various government agencies.However, while the technical issues related to implementation of e-Government platforms is essential, the success of such systems profoundly depends on citizens' attitudes. Understanding how citizens perceive e-Government services—particularly regarding ease of use, trust, and potential risks—is critical for fostering positive attitudes and encouraging future adoption. In Albania, the effectiveness of e-Albania in meeting citizens' needs and expectations relies largely on these user perceptions. Positive perceptions can strengthen trust in digital governance and promote better engagement with digital public services.

Empirical study on e-Government adoption is critical for better understanding the elements that influence public perceptions about e-Government services. Such research can help governments develop effective policies and initiatives to improve user participation. This study evaluate the perceptions of 100 citizens regarding the e-Albania platform, aiming to clarify user experience and attitudes toward this digital service. This research, based in an extended version of Technology Acceptance Model (TAM), examines critical factors including Attitude, Ease of Use, Perceived Usefulness, Trust, Future Intention, and Risk. Through regression analysis, the study provides insights into citizen perceptions of their interactions with e-Albania and the factors influencing their future intentions to adopt digital government platforms and electronic public services.By identifying user perspectives on these variables, this research provides policymakers and developers with useful insights for improving platform usability, optimizing the user experience, thereby leading to broader adoption of e-Government initiatives in Albania.

Literature Review

E-Government has become a key component of modern public administration, significantly enhancing governmental transparency, efficiency, and accessibility. Increasingly, governments are adopting e-Government as a strategy to address growing demands for improved public service delivery and to actively involve citizens in governance, meeting the heightened expectations for responsive and accessible government services [1]. In the current era characterized by digital transformation, digital technologies offer the potential to streamline processes, reduce administrative costs, and provide citizens with more convenient access to essential services [2, 3]. Countries that implement effective e-Government programs are frequently perceived as less bureaucratically corrupt, because these technologies can minimize the time and resources required for service delivery by automating processes and decreasing paperwork [4]. E-Government platforms reduce the administrative burden on government employees, allowing them to focus on complex tasks while routine transactions are managed through digital systems [5]. This efficiency not only benefits government agencies by lowering operational costs but also improves citizen satisfaction by providing immediate and more reliable services. Additionally, by digitizing services and making information readily available online, e-Government platforms contribute to more transparent processes, reducing opportunities for corruption [6]. When government services are seen as reliable and transparent, citizens' trust in public institutions is strengthened, which is essential for legitimizing government actions and policies and encouraging public compliance and support for government initiatives [7, 8].Secure and user-friendly e-Government platforms are critical for building public trust, a vital element for the success of digital transformation initiatives [9]. Furthermore, Shim and Eom [10] found that e-Government initiatives have reduced instances of corruption, especially in high-contact areas where citizens frequently interact with government services. Digital access to public records also enables citizens to monitor government initiatives and projects fostering a culture of accountability.The adoption of e-Government systems presents multiple advantages, including increased efficiency, accessibility, and transparency [11, 12]. However, alongside these benefits, risks related to digital governance as well as level of trust affect the effectiveness of e-Government platforms. Risk in e-Government contexts often relates to security concerns, data privacy, and user confidence, all considered as critical for citizen adoption and sustained usage of e-

Government services [9]. Risk Perception and Trust play a critical role in user attitude toward e-Government services [13, 14]. Higher perceived risks often correlate with lower levels of trust in the government's ability to manage information securely and fairly [15]. This perception can be particularly critical in developing countries where technology infrastructure and regulatory frameworks tend to be less established. According to AlAwadhi and Morris [16], citizens with lower trust in e-Government are influenced by perceived risks, emphasizing the need to build trust through strategies aimed at mitigating these risks. Digital platforms are vulnerable to unauthorized data access, that can compromise sensitive citizen information. Research shows that a secure infrastructure is foundational for promoting public confidence in digital government services [17]. Citizens often hesitate to adopt e-Government services due to concerns about data security and potential misuse of personal information [18]. Moreover, privacy concerns are a crucial factor influencing citizens' willingness to use e-Government services, as well as Akman et al. [19]. Suggest that implementing robust privacy measures is essential for building trust. Technical issues and poor user experience can discourage citizens from using these services, especially when alternative, traditional methods are available [20]. To address this, e-Government systems must ensure not only security and privacy but also consistency and efficiency in electronic public service delivery.

2.1. Research Hypoyhesis

This study adopts the Technology Acceptance Model (TAM) as the theoretical framework to explore citizen adoption of e-government services and websites, specifically within a Balkan country context. To enhance TAM's predictive power, researchers recommend broadening the model by including additional variables that capture other relevant factors [21]. By extending TAM in this way, the study aims to provide a more comprehensive understanding of the factors influencing citizen engagement with e-government platforms. Based on the literature review and the assumptions of the original TAM model, Trust and Risk variables are considered, leading to the following proposed hypotheses.

H1: There is a direct and positive relationship between perceived ease of use (PU) and attitude (ATU) toward using e-government services.

H2: There is a direct and positive relationship between perceived usefulness (PU) and perceived ease of use (PEU) of e-government services.

H3: There is a direct and positive relationship between perceived usefulness (PEU) and attitude (ATU) toward using e-government services.

H4: There is a direct and positive relationship between attitude toward use (ATU) and future intentions (FIU) to use e-government services.

H5: There is a direct and positive relationship between Trust (TR) and Future intention (FIU) to use e-government services.

H6: There is a direct and positive relationship between Risk perceived (RP) and future intention (FIU) to use e-government services.

2.2. Research Model

Based on the foundational TAM and insights from recent literature, this study integrates *Trust* (TR) and *Risk* perceived by users (RP) as additional variables to enrich the understanding of user behavior toward e-government services. This leads to the the following theoretical research model.

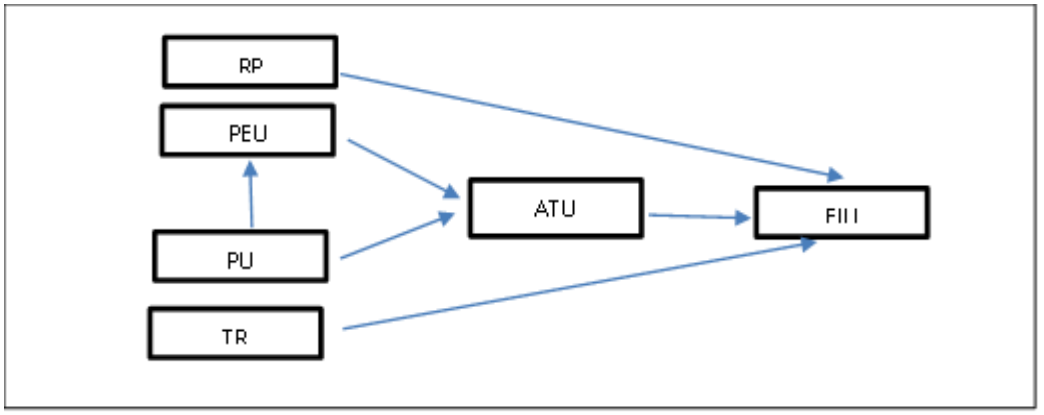

Fig.1 The theoretical research model
Source :Author, 2024.

2. Methodology

This study employs a self-administered, structured questionnaire based on an extended Technology Acceptance Model (TAM) to evaluate factors influencing citizen adoption of the e-Government platform in Albania. In addition to the core TAM variables—Perceived Ease of Use, Perceived Usefulness, Attitude, and Future Intention to Use—the model was extended with additional variables, including Risk perception and Trust related to e-Government platform. Risk Perception specifically assessed users' concerns about security and privacy, while Trust measured confidence in the platform's reliability and security. The responses provided insights into how these dimensions influence attitudes and future intentions toward the e-Government platform.This research used survey questionnaires to collect information on attitude towards e-government adoption from 100 citizens who had used e-Albania platform. The questionnaire comprised a series of Likert-scale questions, where participants rated their responses from 1 (strongly disagree) to 5 (strongly agree). Participation in the study was entirely voluntary, and participants were informed of the research objectives and confidentiality measures.A quantitative data analysis approach was employed to summarize the survey responses. To test the hypotheses related to the research model, multiple linear regressions, as the most commonly used methods in empirical studies for estimating path coefficients [21]. Were conducted.Through this analysis, this paper provides a comprehensive view of citizens' attitudes and future intentions toward using e-Government in Albania and identifies key factors that may either facilitate or hinder the adoption of the e-Government platform among citizens.

2.1 Instrument Reliability

In this study, Cronbach's alpha was used to assess the reliability of the scales, with a minimum acceptable threshold of 0.7, as recommended by Nunnally [22]. All variables exceeded this threshold, indicating strong internal consistency.

Additionally, the item-to-total correlation was examined, representing the correlation of each item with the total of the remaining items within the same scale. Each item surpassed the minimum threshold of 0.3 [23].

The questionnaire measured six primary variables:

Variables	Nr of items	Cronbach alpha
1. Perceived Ease of Use (PEU)	5	0.864
2. Perceived Usefulness (PU)	3	0.875
3. Attitude Toward Use (ATU)	3	0.853
4. Trust in e-Government Platform (TR)	4	0.791
5. Future Intention to Use (FIU)	3	0.872
6. Risk Perception (RP)	3	0.756

Table 1.Construct reliability
Source:Author,2024

Results and Discussions

Almost half the respondents (54%) were female. The highest percentage of respondents (64.3 %) was in the range of 18-30 years old, while university degree holders represented a higher percentage of respondents (69.7%). Around 94 % of respondents use the internet daily while more than 68% of respondents have used the e-government platform more than twice in the past 3 weeks.

The table 2 presents the results of hypothesis testing, indicating that all proposed hypotheses were accepted. As expected, all TAM factors, considering as well Trust and Risk, emerged as significant predictors of usage intentions. Together, these factors explain 51.2% of the variance in the intention to use e-government services ($R^2 = 0.512$), demonstrating the model's effectiveness in predicting user adoption and future intentions to use e-government platforms.

Hypotheses	Beta coeff	Results
H1: PU -> ATU	0.347**	Accepted
H2: PU -> PEU	0.292***	Accepted
H3: PEU -> ATU	0.262***	Accepted
H4: ATU -> FIU	0.424***	Accepted
H5: TR -> FIU	0.243**	Accepted
H6: RP -> FIU	0.285*	Accepted

Table 2. Hypotheses testing results
Source : Author, 2024

Statistical *Significance*
****Correlation is significant at <0.001*
*** Correlation is significant at <0.01*
** Correlation is significant at <0.05*

H1: There is a direct and positive relationship between perceived ease of use (PU) and attitude (ATU) toward using e-government services.
Hypothesis 1 projected a positive and direct relationship between perceived ease of use (PEU) and attitude (ATU) toward using e-government services. The significant and positive beta value (β=0.347, $p<0.01$) confirms the H1, indicating that as users find e-government platforms easier to use, their attitudes toward adoption improve. This finding is consistent with Davis [24]. And Stănescu & Romașcanu findings [25], that ease of use is a primary determinant of technology acceptance, as users are more likely to adopt technologies that require minimal effort. Additional studies support this relationship, with research by Venkatesh and Davis [26] suggesting that ease of use enhances users' intrinsic motivation, leading to favorable attitudes.

H2: There is a direct and positive relationship between perceived usefulness (PU) and perceived ease of use (PEU) of e-government services.
Hypothesis 2 examined the relationship between perceived usefulness (PU) and perceived ease of use (PEU) of e-government services, confirming a positive and significant effect (β=0.292, $p<0.001$). This finding is consistent with the Technology Acceptance Model (TAM) proposed by Davis et al. [27], as well as by Pavlou and Stănescu & Romașcanu finding [28] [29] which suggest that perceived usefulness positively influences ease of use perceptions as users recognize the benefits and value of the platform.More over Agarwal and Prasad [28] also found that as users recognize the benefits of a system, they are more likely to find it easier to use. This finding is crucial for developers and policymakers, as it suggests that enhancing the perceived usefulness of e-government services can positively impact ease-of-use perceptions.

H3: There is a direct and positive relationship between perceived usefulness (PEU) and attitude (ATU) toward using e-government services.
The relationship between perceived usefulness (PU) and attitude (ATU) toward using e-government services (H3) was supported, with a positive and significant beta value (β=0.262, $p<0.001$). This finding is line with previous TAM research that testsand validates the consistent relationships between perceived ease of use and attitude [31, 32], who found that perceived usefulness strongly influences attitudes in technology acceptance studies. Users who perceive e-government services as useful are more likely to develop a favorable attitude toward them, an insight that resonates with research by Bhattacherjee [33] who emphasized that perceived utility drives positive attitudes, especially in online and public services.

H4: There is a direct and positive relationship between attitude toward use (ATU) and future intentions (FIU) to use e-government services.

According to H4 there is a direct relationship between attitude (ATU) and future intentions (FIU) to use e-government services, with a significant positive effect (β=0.424, $p<0.001$). This finding aligns with the Theory of Planned Behavior [34] which posits that a positive attitude toward a behavior strongly influences intentions to perform that behavior. This finding is also in line with earlier TAM researches [24, 29]. Numerous studies on e-government adoption, such as those by Carter and Bélanger [36] confirm that users' attitudes significantly impact their intentions, reinforcing that a favorable attitude is a primary determinant of continued use intentions [34, 35].

H5:There is a direct and positive relationship between Trust (TR) and Future intention (FIU) to use e-government services.

The role of trust in shaping future intentions was examined in Hypothesis 5, where trust (TR) showed a positive and significant relationship with future intentions (FIU) (β=0.243, $p<0.01$). Trust has been identified as a key enabler of technology adoption, particularly in e-government, where security and reliability concerns are high. This result aligns with other findings [36, 37], where is emphasized that trust as essential for e-government acceptance, as it mitigates users' concerns about data privacy and security, especially when sensitive personal information is involved [39].

H6: There is a direct and positive relationship between Risk perceived (RP) and future intention (FIU) to use e-government services.

Finally, Hypothesis 6 explored the effect of perceived risk (RP) on future intentions (FIU) to use e-government services. The significant positive correlation (β=0.285, $p<0.05$) suggests that while perceived risk is present, it can indirectly reinforce users' intention to use e-government services, potentially as users view these services as safer than alternatives despite certain perceived risks. Safety is an ongoing and continuous process that demands full commitment, active involvement and requires consistent effort to minimize risks at every opportunity [42]. This finding complements previous work by Featherman and Pavlou [40] who suggested that managing risk perception is essential in encouraging technology adoption. All the six research hypotheses have been supported by the empirical test. The results indicated that the research model explained around 51.2% of the variance in citizen intention to use e-Albania plarform ($R2 = 0.512$).

3. Conlusions

E-government acts as a tool to foster democracy by encouraging active public participation in national affairs and ensuring effective public control, a goal pursued by governments globally [41]. This study based on TAM model explores the dimensions affecting the citizen attitude and their future intentions toward e government platform use. The validation of all six hypotheses suggests a significant model where ease of use, usefulness,as well as trust, and risk perceptions collectively influence users' attitudes and future intentions toward e-government services use. Risk is seen as challenge in the implementation of e-Government services. Addressing the risk is essential to improve public trust and encourage future adoption. As previous studies reveal, effective management of these risks through secure infrastructure, data privacy policies, and reliable

services can enhance the perception of safety and foster greater acceptance and adoption of e-Government initiatives.
These findings provide valuable implications for e-government service providers, indicating the importance of enhancing ease of use and usefulness, building trust, and addressing perceived risks to foster positive user attitudes and encourage continued use.

References

[1] Bannister, F., &. Connolly and R., "Trust and transformational government: A proposed framework for research.," *Government Information Quarterly,* vol. 28(2), pp. 137-147, 2011.

[2] Eraso and M., "A primer on e-government: Sectors, stages, opportunities, and challenges of online governance.," *Congressional Research Service, The Library of Congress.,* 2015.

[3] Heeks and R., Implementing and managing eGovernment: An international text. Sage, 2006.

[4] Heeks, R., &. Bailur and S., "Analyzing e-Government research: Perspectives, philosophies, theories, methods, and practice," *Government Information Quarterly,* vol. 24(2), pp. 243-265, 2007.

[5] Gil-Garcia, J. R., &. Pardo and T. A., "E-Government success factors: Mapping practical tools to theoretical foundations," *Government Information Quarterly,* vol. 22(2), pp. 187-216, 2005.

[6] Shim, D. C., &. Eom and T. H., "E-Government and anti-corruption: Empirical analysis of international data," *International Journal of Public Administration,* vol. 31(3), pp. 298-316, 2008.

[7] Alomari, M., Woods, P., &. Sandhu and K., "Predictors for e-Government adoption in Jordan: Deployment of an empirical evaluation based on a citizen-centric approach.," *Information Technology & People,* vol. 25(2), pp. 207-234, 2012.

[8] Carter, L., &. Bélanger and F., "The utilization of e-government services: Citizen trust, innovation and acceptance factors," *Information Systems Journal,* vol. 15(1), pp. 5-25, 2005.

[9] Bélanger, F., &. Carter and L., "Trust and risk in e-Government adoption," *The Journal of Strategic Information Systems,* vol. 17(2), pp. 165-176, 2008.

[10] Shim, D. C., &. Eom and T. H., "E-Government and anti-corruption: Empirical analysis of international data.," *International Journal of Public Administration,* vol. 31(3), pp. 298-316, 2008.

[11] Hsu, C.-L., &. Lin and J. C.-C., "Acceptance of blog usage: The roles of technology acceptance, social influence, and knowledge sharing motivation.," *Information & Management,* vol. 45(1), pp. 65-74, 2008.

[12] Jaeger, P. T., &. Thompson and K. M., "E-government around the world: Lessons, challenges, and future directions.," *Government Information Quarterly,* vol. 20(4), pp. 389-394, 2003.

[13] Wu, I.-L., &. Chen and J.-L., " An extension of Trust and TAM model with TPB in the initial adoption of online tax: An empirical study.," *International Journal of Human-Computer Studies,* vol. 62(6), pp. 784-808, 2005.

[14] Palanisamy and R., "Assessing a model for the strategic implementation of information systems in public sector organizations.," *International Journal of Information Management,* vol. 24(6), pp. 517-528, 2004.

[15] Carter, L., &. Weerakkody and V., "E-Government adoption: A cultural comparison.," *Information Systems Frontiers,* vol. 10(4), pp. 473-482, 2008.

[16] AlAwadhi, S., &. Morris and A., "The use of the UTAUT model in the adoption of e-Government services in Kuwait.," *In Proceedings of the 41st Annual Hawaii International Conference on System Sciences. IEEE.,* 2008.

[17] Rana, N. P., Dwivedi, Y. K., &. Williams and M. D., "E-government adoption research: An analysis of the integration of research models and a research agenda.," *International Journal of Social and Organizational Dynamics in IT,* vol. 3(1), pp. 1-22, 2013.

[18] Al-Hujran, O., Al-Debei, M. M., Chatfield, A., &. Migdadi and M., "The imperative of influencing citizen attitude toward e-Government adoption and use.," *Computers in Human Behavior,* vol. 53, pp. 189-203, 2015.

[19] Akman, I., Yazici, A., Mishra, A., &. Arifoglu and A., "E-Government: A global view and an empirical evaluation of some attributes of citizens.," *Government Information Quarterly,* vol. 22(2), pp. 239-257, 2005.

[20] Bélanger, F., &. Carter and L., "Digitizing government interactions with constituents: An historical review of e-Government research in information systems.," *Journal of the Association for Information Systems,* vol. 13(5), pp. 363-394, 2012.

[21] Paul, L., &. John and I., " Why do people use information technology? A critical review of the technology acceptance model," *Information & Management,* vol. 40(3), p. 191–204, 2003.

[22] Hair, J. F., Anderson, R. E., Tatham, R. L., &. Black and W. C., "Multivariate data analysis (6th ed.)," *Pearson Education,* 2006.

[23] Nunnally and J. C., Psychometric theory (2nd ed.). McGraw-Hill, 1978.

[24] Norusis and M. J., SPSS for Windows: Professional Statistics (4th ed.). SPSS Inc..

[25] Davis and F. D., " Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS Quarterly,* vol. 13(3), pp. 319-340, 1989.

[26] Stănescu, D. A. Romașcanu and M.C., "The role of uses and gratification theory and technology acceptance model in the adoption and usage of wearable technology," *Smart Cities International Conference (SCIC) Proceedings 11,* p. 47–55, 2024.

[27] Venkatesh, V., &. Davis and F. D., "A theoretical extension of the technology acceptance model: Four longitudinal field studies.," *Management Science,* vol. 46(2), pp. 186-204, 2000.

[28] Davis, F. D., Bagozzi, R. P., &. Warshaw and P. R., "User acceptance of computer technology: A comparison of two theoretical models.," *Management Science,* vol. 35(8), pp. 982-1003, 1989.

[29] Pavlou and P. A., "Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model," *International Journal of Electronic Commerce,* vol. 7(3), pp. 101-134, 2003.

[30] Chang, M. K., Cheung, W., &. Lai and V. S., "Literature derived reference models for the adoption of online shopping.," *Information & Management,* vol. 42(4), pp. 543-559, 2005.

[31] Agarwal, R., &. Prasad and J., " Are individual differences germane to the acceptance of new information technologies?," *Decision Sciences,* vol. 30(2), pp. 361-391, 1999.

[32] Venkatesh, V., &. Davis and F. D., "A theoretical extension of the technology acceptance model: Four longitudinal field studies.," *Management Science,* vol. 46(2), pp. 186-204, 2000.

[33] Chang, M. K., Cheung, W., &. Lai and V. S., " Literature derived reference models for the adoption of online shopping.," *Information & Management,* vol. 42(4), pp. 543-559, 2005.

[34] Bhattacherjee and A., "Understanding information systems continuance: An expectation-confirmation model.," *MIS Quarterly,* pp. 351-370, 2001.

[35] Ajzen and I., "The theory of planned behavior. Organizational Behavior and Human Decision Processes," vol. 50(2), pp. 179-211, 1991.

[36] Carter, L., &. Bélanger and F., "The utilization of e-government services: Citizen trust, innovation and acceptance factors.," *Information Systems Journal,* vol. 15(1), pp. 5-25, 2005.

[37] Venkatesh, V., Morris, M. G., Davis, G. B., &. Davis and F. D., "User acceptance of information technology: Toward a unified view.," *MIS Quarterly,* vol. 27(3), pp. 425-478, 2003.

[38] West and D. M., "E-Government and the transformation of service delivery and citizen attitudes.," *Public Administration Review,* vol. 64(1), pp. 15-27, 2004.

[39] Bélanger, F., &. Carter and L., "Trust and risk in e-Government adoption," *The Journal of Strategic Information Systems,* vol. 17(2), pp. 165-176, 2008.

[40] Mayer, R. C., Davis, J. H., &. Schoorman and F. D., " An integrative model of organizational trust.," *Academy of Management Review,* vol. 20(3), pp. 709-734, 1995.

[41] Gefen, D., Karahanna, E., &. Straub and D. W., "Trust and TAM in online shopping: An integrated model.," *MIS Quarterly,* vol. 27(1), pp. 51-90, 2003.

[42] Boce and G., "Analysis of the human factor as an internal threat to the security of an organization.," vol. 69–76, 2023.

[43] Featherman, M. S., &. Pavlou and P. A., "Predicting e-services adoption: A perceived risk facets perspective.," *International Journal of Human-Computer Studies,* vol. 59(4), pp. 451-474, 2003.

[44] Borisenko.A., "E-democracy: Slacktivism vs civic activism," vol. 1, p. 15–20, 2017.