МРНТИ: 82.13.01
JEL Classification: H83
DOI:https://doi.org/10.52821/2789-4401-2025-4-237-249

OPEN GOVERNMENT DATA AND E-GOV SERVICES: PROSPECTS FOR INCREASING SOCIAL TRUST

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ABSTRACT

Purpose: This study aims to analyze the impact of Open Government Data (OGD) on social trust formation in public administration in Kazakhstan, testing the OGD value creation theory in a highly digitalized environment that has not achieved the expected level of public trust.

Methodology: The research employs quantitative analysis of data from the Kazakhstan Digital Inclusiveness Survey using R software. Correlation and regression analyses were used to evaluate relationships between socio-demographic factors, platform usage, satisfaction, accessibility, and trust levels. Additionally, thematic content analysis of respondents' open-ended answers was applied.

Results: Contrary to expectations, socio-demographic factors minimally impact trust levels in OGD, while service quality and user satisfaction emerge as key determinants. Significant trust disparities were found across digital channels: official websites receive substantially lower ratings (3.448) compared to government social media (8.094) and news sources (9.745). Statistical analysis showed that platform accessibility moderates relationships between certain demographic factors and trust.

Originality: The study identifies a novel "circle of trust" mechanism connecting usage frequency, service satisfaction, and trust levels in a self-reinforcing cycle. This concept offers new perspectives on bridging the gap between formal digital platform implementation and public value creation. The findings indicate that for governments seeking to build public trust, merely creating digital platforms is insufficient; they must ensure data reliability and develop verification mechanisms that foster a comprehensive open data ecosystem.

Keywords: Open government data, digital government, e-gov, social trust, user satisfaction, service quality

Acknowledgments: As part of the project IRN AP19678174 on the topic “Development the theory and methodology for formation development programs of the RK during the transformation the economy into an innovative”.

INTRODUCTION

Relevance. Open government data is becoming an important tool for increasing government transparency and accountability. OGD is the basis for the formation of digital government and has a huge impact on the development of technologies, including artificial intelligence. Research confirms that Open Government Data (OGD) plays an important role in economic development and civic engagement. Open data initiatives enable citizens and organizations to access information, which contributes to greater participation in public life, improved public services, and economic growth (Wirtz et al., 2022) [1]. The relevance of this research is underscored by the growing global emphasis on digital governance transparency and the estimated economic impact of trust deficits—studies indicate that a 10-percentage point increase in trust can elevate a country's economic performance by approximately 1.3-1.5% of GDP.

In developing countries such as Kazakhstan, which have a high level of digitalization of public administration, open data offers significant potential for improving living standards. Kazakhstan has made significant efforts in digitalization of services and data opening, which has allowed it to take a leading position in the region. Thus, according to the UN E-Government Survey rating (*UN E-Government Survey 2024 | Public Institutions*,

n.d.) [2] Kazakhstan has the highest EGDI value (0.9009) in the E-Government Development Index (EDGI) and is in the V3 rating class of the very high EGDI group, according to the Open Government Data Index (OGDI) it ranks second in the region.

The rapid development and adoption of digital technologies in high OGDI and EDGI countries is having a positive impact on their neighbors, spurring regional progress in digital transformation. Governments across Asia are recognizing the key role of digital governance in driving economic and social growth. Following the lead of leaders, they are implementing their own digital initiatives tailored to the unique needs of their societies and local conditions. This overall rapid shift to digital technologies not only improves the efficiency of public services, but also creates a favorable competitive environment that stimulates continuous improvement and innovation. Examples of successful digital transformation in Asia have become a clear model for other regions wishing to use technology to improve the quality of governance and accelerate their own development.

However, many residents still do not fully access high-quality public services, even with the active use of digital technology and the establishment of national open data platforms. Unfortunately, in recent years, there has been a growing trend of restricting access to data in areas particularly sensitive to corruption (https://exclusive.kz/kazahstanskie-vlasti-hotyat-zakryt-neugodnye-dannye), as well as making OGD inaccessible without authorization. This creates unequal conditions for international researchers and violates the "open by default" principle (https://exclusive.kz/chto-skryvaet-otkrytoe-pravitelstvo-kazahstana/). Hence, such a policy undermines citizens' trust in digital services provided by the government.

This study builds on data from the "Kazakhstan Digital Inclusiveness Survey" (KOICA Project No. 2021-07) (Moon et al., 2024) [3], which was conducted in the Almaty metropolitan area to explore citizens' usage, satisfaction, and trust in digital public services. The study specifically focuses on two critical questions: (1) What demographic and behavioral factors correlate with trust in digital government services and information? and (2) How do service quality and accessibility influence citizens' trust in these platforms? This study aims to better understand the key mechanisms of public trust in OGD and digital services. The purpose of the work is to study the factors influencing citizens' trust in the state through the prism of open government data.

The research methodology is based on a quantitative approach using R statistical software. To ensure the reliability of the results, careful data preparation was carried out: eliminating inconsistencies, standardizing variables and integrating data arrays according to modern scientific standards. Content analysis was also used in open-ended questions.

A special feature of the work is an advanced approach to the analysis of trust processes, which allows identifying the perception of digital governance between the different group of population. The study not only identifies the factors influencing public trust, but also reveals citizens' expectations regarding the role of the state in digital transformation, thereby contributing to the development of a discussion on mechanisms for strengthening social interaction in the digital environment.

This paper examines and tests the factors that influence trust in the context of open government data, particularly government information sources. The results show that these factors are not obvious and have not been studied, which opens up a wide field for future research.

Literature Review. Numerous studies conducted in countries with a high level of digitalization, such as Estonia (a post-Soviet state like Kazakhstan), show the positive impact of open data on improving the quality of public services and living standards. As World Bank experts note, digital technologies offer great opportunities to improve the quality of public services, especially in emerging market countries (Bjerde & Demirgüç-Kunt, 2021) [4]. Research indicates that a 10-percentage point increase in trust can elevate a country's economic performance by approximately 1.3-1.5% of GDP. For instance, if the United Kingdom achieved trust levels comparable to Scandinavian countries, it could potentially add £100 billion annually to its economy(https://www.ft.com/content/97c1044d-141a-42fb-a47a-672ddb9512c4). This could correlate with Kazakhstan's slow economic grow and low social trust in digital government. However, there could be more reasons. First, one of the problem may be the selective openness of data may affect to trust. Although the government publishes some data, much remains inaccessible or is presented in formats that make it difficult to use (ODIN, 2024) [5].

Second, it is probably due to the approach to using e-government. Competitive authoritarian regimes (e.g. Kazakhstan, Russia) use e-government for internal legitimization by simulating transparency and citizen en-

gagement. They attract more domestic users by providing real services and information resources to increase their support. OGD is used to legitimize government initiatives without significantly improving accountability or transparency (Maerz, 2016) [6]. Open government data has been promoted by them as a fix for long-standing political and social problems, but is used rather as a "smokescreen" to improve the international image. OGD alone is not a panacea given the specifics of the media environment and legal system of the country (Žuffová, 2020) [7] and does not work without a link to free media and the judiciary.

However, data opening is not the fundamental purpose of OGD; promoting efficient data utilization and value realization is its goal (Fang et al., 2024) [8]. Value can be both internal and external (in another word merit and worth). Typically, external value (a website with the ability to view and download data) is satisfied, but internal value, such as public utility and validity of data, is more difficult to achieve and it is ignored by the state. For example, in the UK, only 10% of data is truly open and accessible (Wang & Shepherd, 2020) [9] thus bringing value. Data accessibility can also be implicit, with the so-called "latent transparency", which is defined as awareness of the possibility of accessing information, but without actually using the data (Grimmelikhuijsen et al., 2020) [10]. This concept is contrasted with "explicit transparency", which is associated with direct access to specific data. But this is not the only problem: even if a large amount of data is available, it may not be standardized and of little use for processing and, as a result, does not attract public attention and is predominantly aggregated information rather than raw data, which limits the potential for civic participation (Wang & Shepherd, 2020) [9].

For civic participation to become visible and meaningful, it is necessary to earn the trust of society. Incompleteness, low quality, partial availability, inconsistency of metadata, lack of standardization and quality control of metadata are also critical factors (Šlibar & Mu, 2022) [11] that undermine citizens' trust in public administration. According to the trust theory put forward by (Lindstedt & Naurin, 2010) [12], transparency and openness of data without accountability may not strengthen, but even undermine citizens' trust. The trust effect is enhanced by voluntary disclosure beyond mandatory requirements, with a particularly strong impact for disclosure of performance and financial data. Content-based transparency affects trust, which may be useful for research on the perception of open data and its relationship with social trust (Ripamonti, 2024) [13].

Public officials also experience negative effects from poor open data management. User satisfaction with public services increases the public value of OGD and increases the motivation of public officials responsible for open data. Public engagement increases the use and support of government systems (Benmohamed et al., 2024) [14]. In other words, when citizens trust OGD websites, they are more likely to use them (Chen et al., 2023) [15].

So how can we increase the value and, accordingly, trust in OGD? A number of authors propose the concept of ecosystems in which user involvement in joint data generation creates additional value (Hein et al., 2023), (Bonina & Eaton, 2020), (Reggi & Dawes, 2022) [16][17][18]. In most cases, the state is the only data provider and is the developer of systems offering public services. But the state does not always take into account the needs of all citizens and may not make timely changes to public service platforms, which creates situations of digital inequality (Larsson, 2021) [19]. To solve such problems, third-party developers and organizations are invited to use OGD to create similar or other services for their target audience. The number of such applications shows how much the state provides high-quality data and public engagement(According to data.egov.kz/app/list there are only 19 such applications, while Singapore has more than 100). For open data ecosystems to be successful, it is important to take into account the specifics and needs of the local context, and an approach with user involvement from the very beginning allows platforms to adapt to specific contexts and improves interaction within the ecosystem. Building a sustainable OGD ecosystem requires communication and feedback between all participants, and it's not just developers. NGOs, media, and independent investigators also contribute significantly to the value of OGD.

Many studies focus on the theoretical aspects of open data and its potential to improve public administration (Charalabidis et al., 2018) [20], but this study is focused on identifying the reasons why these data do not impact social trust and transaprency as expected. The widely unexplored relationship between OGD and the digital economy becomes of increasing interest (Wirtz et al., 2022) [1].

Theoretical framework. The theoretical framework is built on value creation theory in OGD. Publishing government data on the OGD portal is not sufficient to create public value because OGD itself has little value.

For OGD to have an effective impact, users must activate its value (Benmohamed et al., 2024) [14]. Given the available data and results, the research question is *how the multiple data platforms (Open Data Portal, Open Budgets Portal) impact citizen trust in government?*

We propose that socio-demographic factors (age, education, income, language proficiency) influence initial platform engagement, while user satisfaction and perceived accessibility moderate the relationship between usage and trust development. This model acknowledges that OGD value creation occurs within specific political, institutional, and social contexts that shape citizens' perceptions and expectations.

METHODOLOGY AND STUDY DESIGN

Our study employs a mixed-methods approach combining quantitative analysis of secondary data with thematic content analysis of open-ended responses to provide a more comprehensive understanding of trust mechanisms in OGD.

Data Source and Collection. The data were obtained from the Harvard Dataverse repository (Moon et al., 2024) [3]. The dataset comprises a questionnaire with structured questions and raw Excel files containing respondents' answers divided into groups from the Almaty metropolitan area. While using secondary data has limitations, this approach provided access to a substantial dataset focused specifically on digital service usage in Kazakhstan.

Sampling Framework and Representation. The sample (n=258) includes respondents from the Almaty metropolitan area with 100% internet access penetration. We acknowledge the significant urban bias in this sample, limiting generalizability to rural areas where digital access and usage patterns likely differ substantially. To partially address this limitation, we conducted a post-hoc analysis comparing our sample demographics with national statistics to identify potential representation gaps.

Data Structure and Measurement. The questionnaire employs various measurement methods:

- Nominal scales (converted to dummy variables for analysis)
- Interval and ordinal scales
- Ranking and multiple-choice formats
- Filter and open-ended questions

To enhance measurement validity, we conducted reliability analysis for multi-item scales and assessed construct validity through correlation analysis with related variables. Trust was operationalized as a multidimensional construct including both cognitive and affective components.

Data Preparation and Transformation. Before analysis, we:

1. Combined data into a single CSV file for integrated analysis
2. Transformed nominal responses into dummy variables using standard statistical practices
3. Conducted data cleaning to address inconsistencies and standardize variable formats
4. Performed missing data analysis using Little's MCAR test to determine if data were missing completely at random
5. Employed multiple imputation techniques for handling missing values where appropriate

Analysis Focus and Strategy. Our analysis centered on four questionnaire blocks:

- "Electronic government" (Q27-Q31)
- "Trust in information sources" (Q32-Q34)
- "Electronic health" (Q19-Q22)
- "Electronic education" (Q23-Q26)

This focus allowed us to examine both general trust in government information and specific trust in e-service domains.

Quantitative Analysis Methods. We employed comprehensive statistical analysis using R:

- Descriptive statistics to characterize sample and response patterns
- Correlation analysis to identify relationships between variables
- Hierarchical regression analysis to test hypothesized relationships
- Moderation analysis using interaction terms to assess contextual effects
- Diagnostic tests for multicollinearity, heteroskedasticity, and normality assumptions
- Bootstrapping procedures to strengthen statistical inferences from the limited sample

To address potential endogeneity concerns (e.g., pre-existing trust influencing usage patterns), we tested alternative model specifications and implemented appropriate statistical controls.

Qualitative Analysis Component. While open-ended responses about trust/distrust reasons were not used in the primary quantitative analysis, we conducted a supplementary thematic content analysis to identify recurring patterns. Keywords such as "I do not trust" were analyzed within their contextual usage, providing triangulation for quantitative findings. This mixed-methods approach strengthens the validity of our conclusions by examining trust mechanisms through multiple analytical lenses.

Analytical Framework. Our analytical framework tests three primary hypotheses with sub-components:

H1: Socio-demographic factors influence trust in OGD platforms

- H1a: Age positively associates with trust
- H1b: Education level positively associates with trust
- H1c: Income level positively associates with trust

H2: Platform characteristics moderate trust relationships

- H2a: Platform accessibility moderates the relationship between socio-demographic factors and trust
- H2b: Platform brand strength moderates this relationship

H3: Usage patterns and satisfaction influence trust development

- H3a: Usage frequency positively correlates with trust
- H3b: Service satisfaction moderates the usage-trust relationship

This framework allows us to examine both direct effects and contextual influences on trust formation in Kazakhstan's e-government environment. By testing these relationships systematically, we can identify leverage points for enhancing citizen trust in digital government services.

This comprehensive methodology, despite acknowledged limitations, enables us to conduct a nuanced analysis of the complex relationship between open government data, electronic service delivery, and citizen trust in the context of Kazakhstan's digital transformation.

Socio-demographic indicators were selected as independent variables. Trust was selected as a dependent variable and user satisfaction, usage frequency, accessibility (for e-health and e-learning), platform brand was selected as moderate variables (see Figure 1).

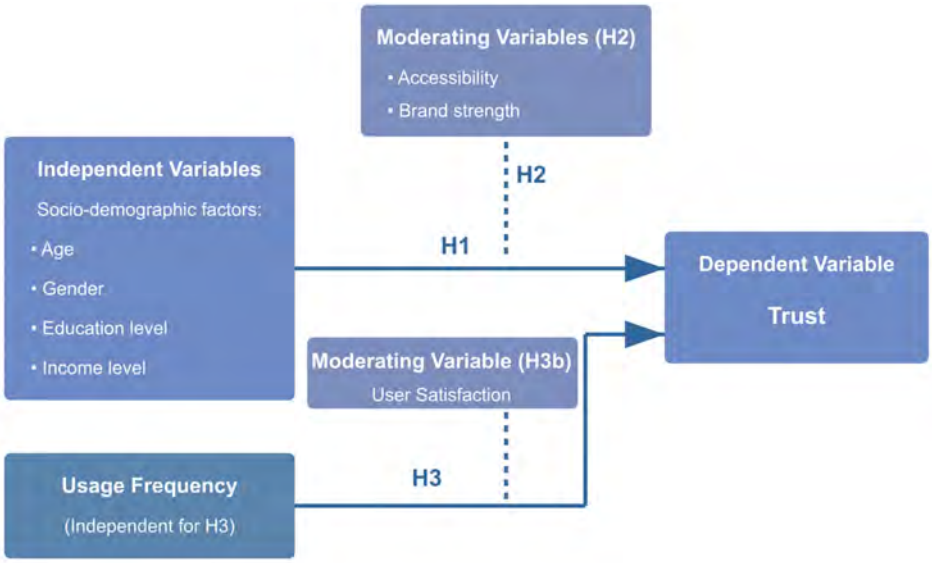

Figure 1 - Research model.
Note: compiled by authors.

This methodology allowed us to conduct a comprehensive analysis of citizens' attitudes towards open government data and electronic government services in the context of the Almaty agglomeration.

FINDINGS

Data analysis revealed high internet access penetration among respondents (n=258, 100%), primarily via home connections and mobile devices. However, engagement with e-government services showed limited depth, with 83% of respondents (n=214) declining to provide satisfaction ratings despite participating in other survey sections. Similarly, e-health services exhibited low engagement patterns, with over 80% of respondents abstaining from detailed satisfaction assessments, indicating potential barriers to digital service utilization.

Our analysis of the survey data revealed several key patterns regarding trust in Open Government Data (OGD) and digital government services in Kazakhstan showed in table 1 below:

Table 1 - Summary table of hypothesis testing results

Hypothesis	Description	Results	Statistical Indicators	Conclusion
H1: Socio-demographic factors	Influence of age, gender, education, income, and language on trust levels	- All coefficients non-significant ($p > 0.05$)- Gender showed the strongest effect ($t = -1.529$)	- $R^2 = 0.123$- Adjusted $R^2 = -0.06$- F-statistic = 0.65- p-value = 0.81	No statistically significant influence of demographic characteristics on trust levels.
H2: Platform accessibility and brand	Influence of e-health, e-education, and e-government service satisfaction on trust	- Only e-health satisfaction at level 4 showed significant influence ($t = 3.500$, $p < 0.01$)	- $R^2 = 0.64$- Adjusted $R^2 = 0.389$- F-statistic = 2.53- p-value = 0.055	Partial effect of satisfaction, predominantly in the e-Health domain, on trust.
H2a: Moderation by platform accessibility	Influence of accessibility as a moderator of the relationship between demographic factors and trust	- Significant effects observed for:- Age × accessibility ($t = 1.919$, $p < 0.1$)- Higher education × accessibility ($t = -2.398$, $p < 0.05$)	- $R^2 = 0.21$- Adjusted $R^2 = 0.074$- F-statistic = 0.74- p-value = 0.77	Evidence of moderation exists only for specific groups based on education level and age.
H2b: Moderation by brand strength	Influence of e-gov brand as a moderator	- No significant effects- All p-values > 0.05	- $R^2 = 0.3$- Adjusted $R^2 = -0.4$- F-statistic = 0.4254- p-value = 0.9686	No evidence of moderating effect of brand strength.
H3: Usage frequency and service satisfaction	Influence of usage frequency on trust and moderation by satisfaction	- Weak relationship between usage frequency and trust- No significant moderation effects	- $R^2 = 0.0032$- Adjusted $R^2 = -0.03671$- F-statistic = 0.0793- p-value = 0.971	No significant influence of usage frequency and service satisfaction on trust.

Interpretation of Hypothesis Testing Results

Overall, the results do not support the hypothesis that socio-demographic factors significantly affect the level of trust in the OGD platform (H1). This contradicts common assumptions in digital divide literature, which often links demographic characteristics with technological adoption and trust.

In the main effects model of satisfaction (H2), only a partial effect was found related to e-health, indicating heterogeneity in the influence of service quality across different e-government sectors. The moderation effects of satisfaction with accessibility (H2a) were only noticeable for certain groups by education level and age, suggesting complex interactions between personal characteristics and platform features.

Moderation by brand strength (H2b) and the effect of frequency of use together with satisfaction with the service (H3) did not find statistical support, which challenges assumptions that brand recognition and simple exposure can generate trust in the e-government context.

Correlation Relationships and the "Circle of Trust"

The analysis revealed additional significant correlations, presented in Table 2:

Table 2 - Summary of correlations

Correlation Pair	Coefficient (r)	P-value	Strength of Relationship	Interpretation
Trust and usage frequency	0.32	0.003	Moderate	Higher frequency of use is associated with higher levels of trust
Trust and satisfaction	0.45	<0.001	Moderately strong	Higher satisfaction with services is associated with significantly higher trust levels
Usage frequency and satisfaction	0.38	<0.001	Moderate	More frequent use is associated with higher satisfaction levels
Note: All correlations are statistically significant ($p < 0.05$), indicating these relationships are not due to random chance and can inform evidence-based policy decisions.				

These correlations suggest a "trust circle" mechanism: increased usage frequency correlates with greater satisfaction, which in turn associates with higher trust levels, potentially encouraging continued usage. The strongest relationship (r=.45) between satisfaction and trust emphasizes service quality's primacy in trust formation, rather than usage patterns alone.

Trust in Various Information Channels

In terms of information dissemination channels, there is a significant gap between trust in official government websites (3.448) and other digital channels. Notably, news sources demonstrate the highest level of trust (9.745), which is more than twice as high as trust in official government portals.

The high standard deviation (SD = 11.62) for government websites indicates significant variability in trust ratings for this channel. This may indicate:

1. Heterogeneity in user experience
2. Significant differences in the perception of official digital resources by different population groups
3. Possible influence of political and cultural factors on trust formation

The high level of trust in government social media (8.094) compared to official websites indicates the potential effectiveness of informal communication channels in building trust between the government and citizens. This phenomenon can be explained by the more interactive nature of social media and their ability to provide two-way communication, which aligns with theoretical understandings of trust formation through transparent interaction.

Theoretical implications

The results indicate that traditional socio-demographic factors exert minimal influence on trust in OGD platforms, contradicting assumptions in digital divide literature. Instead, service quality and user satisfaction emerge as central determinants of trust formation.

The value creation theory of OGD was partially confirmed; however, these findings suggest that the level of trust in government platforms in this sample is determined by complex factors. The high variability in trust levels may indicate the existence of more significant factors influencing trust, such as political factors (Žuffová, 2020) [7], which may be particularly relevant in the Kazakhstani context with its particular political structure.

The significant gap between trust levels in various government information channels requires further investigation and may reflect deeper institutional factors shaping citizens' perceptions of government digital initiatives.

DISCUSSION

Transparency in governmental activities theoretically creates extensive trust networks and "bridging social capital" that unites diverse societal groups (Frolova, 2016) [21]. However, our survey results reveal a significant institutional trust deficit in Kazakhstan that requires deeper examination within the country's specific political and historical context. The low popularity of government information resources indicates weak trust in official information sources and e-government services, despite Kazakhstan's high EGDI and OGDI rankings.

A central paradox emerges from our findings: citizens tend to trust government sources over third-party sources, yet exhibit low engagement with official platforms. This contradictory pattern suggests that citizens

recognize the authority of government information but remain skeptical about implementation quality and accessibility. This creates a unique responsibility for government to provide not only verified information but to deliver it through channels and interfaces that resonate with citizen preferences.

The significantly higher trust in government social media (8.094) compared to official websites (3.448) points to a critical insight: citizens prefer informal, interactive communication channels over traditional one-way information dissemination. This preference pattern may reflect broader societal expectations about transparency and engagement that have evolved in the digital age but clash with traditional bureaucratic communication approaches still prevalent in post-Soviet governance structures.

Barriers to Trust in Digital Government

Our analysis identifies several interconnected barriers to trust:

1. Information Security Concerns

Respondents consistently emphasized security concerns, confirming the foundational role of perceived security in trust formation. Implementing the Government Zero Trust Architecture (GovZTA) principle—which follows a "never trust, always verify" approach to cybersecurity—could address these concerns. This architecture's dual components (policy decision point and policy enforcement point) could create a security framework that balances protection with accessibility (UN E-Government Survey 2024).

2. Information Reliability and Verification

The lack of publicly available verification methods undermines trust in government data. When the state provides only processed information rather than raw data, it creates suspicion about potential distortion. Publishing open government data in raw, machine-readable formats would enable stakeholders to independently verify information, following successful models implemented in Singapore and Canada.

3. Data Quality Issues

The incomplete data and missing metadata on platforms like data.egov.kz create significant usability barriers. These quality issues hamper navigation, integration with alternative solutions, and search engine indexing. High-quality data is particularly crucial for building artificial intelligence infrastructure and automated decision support systems that could enhance proactive service delivery.

4. Political Context and Simulated Openness

Perhaps most significantly, Kazakhstan exhibits what (Knox & Janenova, 2019) [22] term "half-open government"—implementing openness only to the point where it might threaten political control. This paradox of simulated openness may explain why digital government initiatives have not translated into increased social trust despite technical advancement. The government may create open data portals primarily to enhance international image while restricting access to politically sensitive information.

Theoretical Application. Our study challenges the assumption that usage frequency builds trust, showing instead that service quality is the determining factor. We identified a "circle of trust" mechanism linking usage, satisfaction, and trust in a reinforcing cycle. Additionally, we demonstrate that in Kazakhstan, the relationship between openness and trust is mediated by political and institutional factors not captured in Western-centric models.

Practical Application. The practical significance of the results is reflected in the recommendations for various stakeholder groups. For government agencies, the study highlights the need to prioritize improving the quality of electronic services, regularly monitoring user satisfaction, and developing programs to improve the digital literacy of the population. These measures help improve user experience and, as a result, build trust in e-government. Developers of electronic services are advised to pay special attention to the simplicity and accessibility of interfaces, as well as to ensure the relevance and quality of data by implementing effective feedback mechanisms.

Finally, the results of the study have important implications for open data policy. It is necessary to review approaches to data publication, ensuring their completeness and reliability, as well as to develop verification mechanisms and specialized tools for working with data. These steps contribute not only to the improvement of existing services, but also to the formation of a holistic open data ecosystem, which, in turn, has a positive effect on user trust.

Future research. The questionnaire used in the dataset requires adaptation to the study of the issue of open government data and government information sources. It is also necessary to simplify the structure of

questions, which should be in the form of numerically measurable indicators. Expanding the geography of respondents, increasing their number can improve the study. In addition, conducting in-depth interviews with officials working in service and data provider organizations can shed light on the theory of public value creation of OGD. The study can also benefit from conducting a survey among key OGD stakeholders such as NGOs, journalists, opinion leaders.

Possible further improvements to the model include adding mediating variables such as perceived usefulness, perceived ease of use, and perceived security. Security was mentioned more frequently in the respondents' open-ended responses.

A longitudinal study would track changes in trust and use of OGD over time and assess the effectiveness of policies and initiatives.

Learning how businesses and developers use OGD could help develop more effective strategies for stimulating open data-based innovation. Conducting a comparative analysis with countries with a similar level of EGDI, OGDI can help in identifying those very other factors left outside the field of analysis in this study.

CONCLUSION

The study reveals a significant institutional trust deficit in Kazakhstan's digital government services despite the country's high EGDI and OGDI rankings. Our research explains why extensive digital initiatives have not translated into increased social trust or improved public service utilization. We demonstrate that OGD platforms serving merely symbolic functions cannot generate transparency, trust, or meaningful public value. This value deficit directly impedes potential economic growth, explaining the paradox of delayed improvements in citizens' well-being despite advanced digitization levels.

Our identification of the "circle of trust" mechanism linking usage, satisfaction, and trust challenges conventional assumptions about demographic influences on digital governance engagement. This finding has significant theoretical implications for understanding trust formation in Kazakhstan's specific political and institutional context and suggests that effective OGD strategies must prioritize user experience, data quality, and multi-channel engagement rather than focusing on technical implementation metrics or demographic targeting.

Further development of e-government in Kazakhstan requires a comprehensive approach that addresses both technical and institutional barriers simultaneously. This includes improving data quality, enhancing service usability, and ensuring real rather than symbolic transparency of government processes. Only through this integrated approach can Kazakhstan transform its existing digital infrastructure into an effective tool for strengthening state-society trust and realizing the economic and social potential of digital governance.

REFERENCES

1. Wirtz B. W., Weyerer J. C., Becker M., Müller W. M. Open government data: A systematic literature review of empirical research // Electronic Markets. – 2022. – Т. 32, № 4. – С. 2381–2404. – DOI: 10.1007/s12525-022-00582-8.

2. UN E-Government Survey 2024 | Public Institutions [source]. – URL: https://publicadministration.desa.un.org/publications/un-e-government-survey-2024-0 (accessed: 03.05.2025).

3. Moon K., Shin B., Park J., Levinskaya V. Kazakhstan Digital Inclusiveness Survey Data (KOICA Project No. 2021-07) [source] // Harvard Dataverse. – 2024. – DOI: 10.7910/DVN/TCQ4E9.

4. Bjerde A., Demirgüç-Kunt A. Digitalization and data can vastly improve public service delivery for citizens [source] // World Bank Blogs. – 2021. – URL: https://blogs.worldbank.org/en/europeandcentralasia/digitalization-and-data-can-vastly-improve-public-service-delivery-citizens (accessed: 03.05.2025).

5. ODIN. Kazakhstan Open Data Inventory Profile [source]. – 2024. – URL: https://odin.opendatawatch.com/Report/countryProfileUpdated/KAZ?year=2024 (accessed: 03.05.2025).

6. Maerz S. F. The electronic face of authoritarianism: E-government as a tool for gaining legitimacy in competitive and non-competitive regimes // Government Information Quarterly. – 2016. – Т. 33, № 4. – С. 727–735. – DOI: 10.1016/j.giq.2016.08.008.

7. Žuffová M. Do FOI laws and open government data deliver as anti-corruption policies? Evidence from a cross-country study // Government Information Quarterly. – 2020. – Т. 37, № 3. – 101480. – DOI: 10.1016/j.giq.2020.101480.

8. Fang J., Zhao L., Li S. Exploring open government data ecosystems across data, information, and business // Government Information Quarterly. – 2024. – Т. 41, № 2. – 101934. – DOI: 10.1016/j.giq.2024.101934.

9. Wang V., Shepherd D. Exploring the extent of openness of open government data – A critique of open government datasets in the UK // Government Information Quarterly. – 2020. – Т. 37, № 1. – 101405. – DOI: 10.1016/j.giq.2019.101405.

10. Grimmelikhuijsen S. G., Piotrowski S. J., Van Ryzin G. G. Latent transparency and trust in government: Unexpected findings from two survey experiments // Government Information Quarterly. – 2020. – Т. 37, № 4. – 101497. – DOI: 10.1016/j.giq.2020.101497.

11. Šlibar B., Mu E. OGD metadata country portal publishing guidelines compliance: A multi-case study search for completeness and consistency // Government Information Quarterly. – 2022. – Т. 39, № 4. – 101756. – DOI: 10.1016/j.giq.2022.101756.

12. Lindstedt C., Naurin D. Transparency is not Enough: Making Transparency Effective in Reducing Corruption // International Political Science Review. – 2010. – Т. 31, № 3. – С. 301–322. – DOI: 10.1177/0192512110377602.

13. Ripamonti J. P. Does being informed about government transparency boost trust? Exploring an overlooked mechanism // Government Information Quarterly. – 2024. – Т. 41, № 3. – 101960. – DOI: 10.1016/j.giq.2024.101960.

14. Benmohamed N., Shen J., Vlahu-Gjorgievska E. Public value creation through the use of open government data in Australian public sector: A quantitative study from employees' perspective // Government Information Quarterly. – 2024. – Т. 41, № 2. – 101930. – DOI: 10.1016/j.giq.2024.101930.

15. Chen M., Cao Y., Liang Y. Determinants of open government data usage: Integrating trust theory and social cognitive theory // Government Information Quarterly. – 2023. – Т. 40, № 4. – 101857. – DOI: 10.1016/j.giq.2023.101857.

16. Hein A., Engert M., Ryu S., Schaffer N., Hermes S., Krcmar H. Building open government data platform ecosystems: A dynamic development approach that engages users from the start // Government Information Quarterly. – 2023. – Т. 40, № 4. – 101878. – DOI: 10.1016/j.giq.2023.101878.

17. Bonina C., Eaton B. Cultivating open government data platform ecosystems through governance: Lessons from Buenos Aires, Mexico City and Montevideo // Government Information Quarterly. – 2020. – Т. 37, № 3. – 101479. – DOI: 10.1016/j.giq.2020.101479.

18. Reggi L., Dawes S. S. Creating Open Government Data ecosystems: Network relations among governments, user communities, NGOs and the media // Government Information Quarterly. – 2022. – Т. 39, № 2. – 101675. – DOI: 10.1016/j.giq.2022.101675.

19. Larsson K. K. Digitization or equality: When government automation covers some, but not all citizens // Government Information Quarterly. – 2021. – Т. 38, № 1. – 101547. – DOI: 10.1016/j.giq.2020.101547.

20. Charalabidis Y., Zuiderwijk A., Alexopoulos C., Janssen M., Lampoltshammer T., Ferro E. Open Government Data: Areas and Directions for Research // The World of Open Data: Concepts, Methods, Tools and Experiences. – Springer International Publishing, 2018. – С. 173–194. – DOI: 10.1007/978-3-319-90850-2_9.

21. Фролова Е. А. Прозрачность и подотчетность власти как неотъемлемый элемент эффективного института социальной ответственности // Journal of Economic Regulation. – 2016. – № 3. – DOI: 10.17835/2078-5429.2016.7.3.020-033.

22. Knox C., Janenova S. The e-government paradox in post-Soviet countries // International Journal of Public Sector Management. – 2019. – Т. 32, № 6. – С. 600–615. – DOI: 10.1108/IJPSM-08-2018-0173.

REFERENCES

1. Wirtz, B. W., Weyerer, J. C., Becker, M., & Müller, W. M. (2022). Open government data: A systematic literature review of empirical research. Electronic Markets, 32(4), 2381–2404. https://doi.org/10.1007/s12525-022-00582-8

2. UN E-Government Survey 2024 | Public Institutions. (n.d.). Retrieved May 3, 2025, from URL: https://publicadministration.desa.un.org/publications/un-e-government-survey-2024-0

3. Moon, K., Shin, B., Park, J., & Levinskaya, V. (2024). Kazakhstan Digital Inclusiveness Survey Data (KOICA Project No. 2021-07) [Dataset]. Harvard Dataverse. https://doi.org/10.7910/DVN/TCQ4E9

4. Bjerde, A., & Demirgüç-Kunt, A. (2021). Digitalization and data can vastly improve public service delivery for citizens. Retrieved May 3, 2025, from URL: https://blogs.worldbank.org/en/europeandcentralasia/digitalization-and-data-can-vastly-improve-public-service-delivery-citizens

5. ODIN. (2024). Kazakhstan Open Data Inventory Profile. Open Data Inventory. Retrieved May 3, 2025, from URL: https://odin.opendatawatch.com/Report/countryProfileUpdated/KAZ?year=2024

6. Maerz, S. F. (2016). The electronic face of authoritarianism: E-government as a tool for gaining legitimacy in competitive and non-competitive regimes. Government Information Quarterly, 33(4), 727–735. https://doi.org/10.1016/j.giq.2016.08.008

7. Žuffová, M. (2020). Do FOI laws and open government data deliver as anti-corruption policies? Evidence from a cross-country study. Government Information Quarterly, 37(3), 101480. https://doi.org/10.1016/j.giq.2020.101480

8. Fang, J., Zhao, L., & Li, S. (2024). Exploring open government data ecosystems across data, information, and business. Government Information Quarterly, 41(2), 101934. https://doi.org/10.1016/j.giq.2024.101934

9. Wang, V., & Shepherd, D. (2020). Exploring the extent of openness of open government data – A critique of open government datasets in the UK. Government Information Quarterly, 37(1), 101405. https://doi.org/10.1016/j.giq.2019.101405

10. Grimmelikhuijsen, S. G., Piotrowski, S. J., & Van Ryzin, G. G. (2020). Latent transparency and trust in government: Unexpected findings from two survey experiments. Government Information Quarterly, 37(4), 101497. https://doi.org/10.1016/j.giq.2020.101497

11. Šlibar, B., & Mu, E. (2022). OGD metadata country portal publishing guidelines compliance: A multi-case study search for completeness and consistency. Government Information Quarterly, 39(4), 101756. https://doi.org/10.1016/j.giq.2022.101756

12. Lindstedt, C., & Naurin, D. (2010). Transparency is not Enough: Making Transparency Effective in Reducing Corruption. International Political Science Review, 31(3), 301–322. https://doi.org/10.1177/0192512110377602

13. Ripamonti, J. P. (2024). Does being informed about government transparency boost trust? Exploring an overlooked mechanism. Government Information Quarterly, 41(3), 101960. https://doi.org/10.1016/j.giq.2024.101960

14. Benmohamed, N., Shen, J., & Vlahu-Gjorgievska, E. (2024). Public value creation through the use of open government data in Australian public sector: A quantitative study from employees' perspective. Government Information Quarterly, 41(2), 101930. https://doi.org/10.1016/j.giq.2024.101930

15. Chen, M., Cao, Y., & Liang, Y. (2023). Determinants of open government data usage: Integrating trust theory and social cognitive theory. Government Information Quarterly, 40(4), 101857. https://doi.org/10.1016/j.giq.2023.101857

16. Hein, A., Engert, M., Ryu, S., Schaffer, N., Hermes, S., & Krcmar, H. (2023). Building open government data platform ecosystems: A dynamic development approach that engages users from the start. Government Information Quarterly, 40(4), 101878. https://doi.org/10.1016/j.giq.2023.101878

17. Bonina, C., & Eaton, B. (2020). Cultivating open government data platform ecosystems through governance: Lessons from Buenos Aires, Mexico City and Montevideo. Government Information Quarterly, 37(3), 101479. https://doi.org/10.1016/j.giq.2020.101479

18. Reggi, L., & Dawes, S. S. (2022). Creating Open Government Data ecosystems: Network relations among governments, user communities, NGOs and the media. Government Information Quarterly, 39(2), 101675. https://doi.org/10.1016/j.giq.2022.101675

19. Larsson, K. K. (2021). Digitization or equality: When government automation covers some, but not all citizens. Government Information Quarterly, 38(1), 101547. https://doi.org/10.1016/j.giq.2020.101547

20. Charalabidis, Y., Zuiderwijk, A., Alexopoulos, C., Janssen, M., Lampoltshammer, T., & Ferro, E. (2018). Open Government Data: Areas and Directions for Research. In Y. Charalabidis, A. Zuiderwijk, C.

Alexopoulos, M. Janssen, T. Lampoltshammer, & E. Ferro (Eds.), The World of Open Data: Concepts, Methods, Tools and Experiences (pp. 173–194). Springer International Publishing. https://doi.org/10.1007/978-3-319-90850-2_9

21. Frolova E.A. (2016). Prozrachnost' i podotchetnost' vlasti kak neot"emlemyj element effektivnogo instituta social'noj otvetstvennosti. Journal of Economic Regulation, 3 (2016), https://doi.org/10.17835/2078-5429.2016.7.3.020-033 (In Russian)

22. Knox, C., & Janenova, S. (2019). The e-government paradox in post-Soviet countries. International Journal of Public Sector Management, 32(6), 600–615. https://doi.org/10.1108/IJPSM-08-2018-0173

АШЫҚ МЕМЛЕКЕТТІК ДЕРЕКТЕР ЖӘНЕ ЭЛЕКТРОНДЫҚ ҮКІМЕТ ҚЫЗМЕТТЕРІ: ӘЛЕУМЕТТІК СЕНІМДІ АРТТЫРУ ПЕРСПЕКТИВАЛАРЫ

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АҢДАТПА

Мақсаты: Зерттеу Қазақстандағы ашық мемлекеттік деректердің (АМД) мемлекеттік басқаруға деген әлеуметтік сенімді қалыптастыруға әсерін талдауға, жоғары цифрландырылған, бірақ қоғамдық сенімнің күтілген деңгейіне жетпеген ортада АМД құндылық құру теориясын тексеруге бағытталған.

Әдістемесі: Жұмыс R бағдарламалық жасақтамасын қолдана отырып, Қазақстандық цифрлық инклюзивтілік сауалнамасының деректерін сандық талдауға негізделген. Әлеуметтік-демографиялық факторлар, платформаны пайдалану, қанағаттану, қолжетімділік пен сенім деңгейі арасындағы байланысты бағалау үшін корреляциялық және регрессиялық талдау қолданылды. Сонымен қатар, респонденттердің ашық жауаптарының тақырыптық контент-талдауы жүргізілді.

Нәтижелері: Күткенге қарамастан, әлеуметтік-демографиялық факторлар АМД-ге деген сенім деңгейіне минималды әсер етеді, ал қызмет сапасы мен пайдаланушылардың қанағаттануы негізгі факторлар болып табылады. Цифрлық арналар арасында сенімнің айтарлықтай айырмашылықтары анықталды: ресми веб-сайттар (3.448) мемлекеттік әлеуметтік желілер (8.094) және жаңалықтар көздеріне (9.745) қарағанда едәуір төмен бағаланады. Статистикалық талдау платформаның қолжетімділігі белгілі бір демографиялық факторлар мен сенім арасындағы қарым-қатынасты реттейтінін көрсетті.

Жаңалығы: Зерттеу пайдалану жиілігін, қызметтерге қанағаттануды және сенім деңгейлерін өздігінен күшейтетін циклде байланыстыратын жаңа "сенім шеңбері" механизмін анықтайды. Бұл тұжырымдама цифрлық платформаларды формальды енгізу мен қоғамдық құндылық құру арасындағы алшақтықты жою туралы жаңа көзқарастарды ұсынады. Нәтижелер қоғамдық сенімді арттыруға ұмтылатын үкіметтер үшін цифрлық платформаларды құру жеткіліксіз екенін; олар деректердің сенімділігін қамтамасыз етіп, ашық деректердің жан-жақты экожүйесін қалыптастыратын верификация механизмдерін дамытуы керек екенін көрсетеді.

Түйінді сөздер: Ашық мемлекеттік деректер, цифрлық үкімет, электрондық үкімет, әлеуметтік сенім, пайдаланушы қанағаттанушылығы, қызмет сапасы

Алғыс: Мақала AP19678174 «Экономиканы инновациялықға айналдыру жағдайында Қазақстан Республикасының мемлекеттік даму бағдарламаларын басқару жүйесін қалыптастырудың теориясы мен әдістемесін әзірлеу» ғылыми жобасы аясында дайындалған.

ОТКРЫТЫЕ ГОСУДАРСТВЕННЫЕ ДАННЫЕ И УСЛУГИ ЭЛЕКТРОННОГО ПРАВИТЕЛЬСТВА: ПЕРСПЕКТИВЫ ПОВЫШЕНИЯ СОЦИАЛЬНОГО ДОВЕРИЯ

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АННОТАЦИЯ

Цель: Исследование направлено на анализ влияния открытых государственных данных (ОГД) на формирование социального доверия к государственному управлению в Казахстане, проверяя теорию создания ценности ОГД в контексте высокоцифровизированной, но не достигшей ожидаемого уровня общественного доверия среды.

Методология: Работа основана на количественном анализе данных Казахстанского опроса по цифровой инклюзивности с применением программного обеспечения R. Использовались корреляционный и регрессионный анализ для оценки взаимосвязей между социально-демографическими факторами, использованием платформ, удовлетворенностью, доступностью и уровнем доверия. Дополнительно применялся тематический контент-анализ открытых ответов респондентов.

Результаты: Вопреки ожиданиям, социально-демографические факторы минимально влияют на уровень доверия к ОГД, в то время как качество услуг и удовлетворенность пользователей являются ключевыми детерминантами. Выявлены значительные различия в доверии к разным цифровым каналам: официальные веб-сайты получают существенно более низкие оценки (3.448) по сравнению с государственными социальными сетями (8.094) и новостными источниками (9.745). Статистический анализ показал, что доступность платформы модерирует взаимосвязи между определенными демографическими факторами и доверием.

Новизна: Исследование выявило механизм "круга доверия", связывающий частоту использования, удовлетворенность услугами и уровень доверия в самоусиливающемся цикле. Эта концепция предлагает новую перспективу для преодоления разрыва между формальным внедрением цифровых платформ и созданием общественной ценности. Результаты указывают, что для правительств, стремящихся повысить общественное доверие, недостаточно простого создания цифровых платформ; необходимо обеспечивать надежность данных и развивать механизмы верификации, формирующие целостную экосистему открытых данных.

Ключевые слова: Открытые государственные данные, цифровое правительство, электронное правительство, социальное доверие, удовлетворенность пользователей, качество услуг

Благодарность: Статья подготовлена в рамках научного проекта AP19678174 «Разработка теории и методологии формирования системы управления государственными программами развития Республики Казахстан в условиях трансформации экономики в инновационную».

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