

Factors Influencing Public Participation in E-petitions in Kazakhstan

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April 17, 2026

Acknowledgements

We are deeply grateful to our supervisor, Professor Serik Orazgaliyev, for his continuous support, guidance, and feedback, which greatly contributed to the completion of this thesis.

We would like to acknowledge that our group utilized artificial intelligence (AI) tools to assist in the revision and editing of this PAE project. All intellectual content and arguments presented remain the original work of the group members.

1. Abstract

E-petitions is the new practice of Kazakhstan to increase the civic engagement in the democracy and enhancing transparency in the agenda setting for the government. As e-governance tools are relatively new in the country, it is important to promote them to increase public participation in digital democracy. Thus, it is valuable to determine the main factors that influence civic engagement in e-petitioning. This study will integrate both quantitative and qualitative methods: while the survey seeks to identify general patterns, interviews offer more in-depth information on personal motives and obstacles. Therefore, by integrating statistical analysis with individual viewpoints, this mixed-methods approach enables a thorough knowledge of participation dynamics. The research findings are significant in filling the literature gap examining the specific factors influencing public participation in Kazakhstan's e-petition system. This study is valuable in identifying main driving factors for people to engage in e-governance and sign petitions. Also, this research is useful in incorporating study results in governmental strategies for improving e-governance platforms and procedures, as well as increasing the involvement rate in digital democracy. The intended audience is government agencies, interest groups, and civil society. The results of the study can help involved government officials to obtain valuable information, and civil society to raise their awareness of this problem.

2. Introduction

E-petitions are the digital way of engaging the public in democratic governance. On October 2, 2023, the President of Kazakhstan signed the “On Public Control” law, which allowed citizens to submit a petition on a specific platform. In April of 2024, the special website called “epetition.kz” was launched to serve as the platform for running e-petitions in Kazakhstan. To be able to get access to the epetition.kz platform and its features, the citizen has to register to the website using their digital signature through egov.kz, which is the main digital platform for public services in the country. Citizens can sign an unlimited number of petitions but it is unattainable to sign one petition several times.

The citizen-driven petitions placed on the platform can be addressed to different levels of government: national, regional, district and city level. Each level has a specific number of signatures to be officially considered. Petitions submitted to the national government must collect at least 50,000 signatures. At the regional level, petitions addressed to local representative bodies (maslikhats of regions, major cities, or the capital) require signatures of 2% of the population, while those addressed to local executive bodies (akimats of regions, major cities, or the capital) require only 1%. At the district and city level, representative bodies require either 5,000 signatures (if the population exceeds 50,000) or 10% of the population, whereas local executive bodies require 2,500 signatures (if the population exceeds 50,000) or 5% of the population. Once the petition reaches the required threshold, it is sent to the appropriate body for mandatory consideration. However, if the petition does not receive enough signatures within six months, it is returned to the applicant without further consideration by the authorized body.

Before being published on the platform, petitions must meet legal and procedural requirements. Initially, petitions should not fall into 16 restricted categories, which prohibit violation of human rights, undermining the constitutional order, affecting national security, interfering with judicial processes, or concerning issues such as the status of the state language or appointment of high-level officials (Zakon Pravo, n.d.). It also should not duplicate an existing petition on the same issue. Next, a petition must gain initial support from at least 50 citizens within 10 working days online or 20 days in written form to be further published on the platform. The authorized body reviews the petition within 20 working days, and if it does not meet the criteria, it can be rejected with a justified explanation.

Although the requirements for the petition consideration are quite feasible, there are only a few petitions that reached the threshold. As of October 31 2025, the number of the petitions on the platform since April 2024 is equal to 114. Meanwhile, only six petitions reached the required signature thresholds: four at the national level (50,000 signs) and two at the regional level (12,221 signs), resulting in an overall success rate of approximately 5%. By April 1, there were 16 more petitions published with none passing the threshold. To be more precise, petitions that have passed the threshold are about the prohibition of open and hidden LGBT propaganda, cancellation of fee for scrappage and primary registration, returning time zone back to UTC+6, banning gambling for government officials, and ownership issues of water resources company in Shymkent (Epetition.kz, 2024). These issues fall under the broader domain of public policy,

encompassing governance, economic regulation, infrastructure, and media oversight. While there are many others that concern issues within this domain, they fail at reaching the needed amount of signs to be reviewed by the government. This indicates a disparity in the level of public engagement and the likelihood that some issues will be brought to broader attention.

Even though passing the threshold of minimum signatures does not guarantee the resolution of the issue, engaging in e-petitions is important in terms of stating community concerns to the government. However, the majority of petitions fail in passing the threshold level, even if the problem is acute in the society. It is also inaccurate to state that certain petitions on specific social issues get the recognition, as the overall engagement in e-participation makes it unclear on what social problems get the most attention. Moreover, low participation rate in e-petitioning might be due to other reasons, such as the accessibility of the platform, unawareness of potential impact of petitions, or unawareness of possibility of e-petitioning. These awareness problems have been critical in countries like India and Germany, which hindered public e-participation (Alathur et al., 2012; Jungherr & Jürgens, 2010). This might be an issue in Kazakhstan too.

There are plenty of factors that might hinder public participation in e-governance, especially in e-petitions. Considering facilitating factors, it might be self-expression, high civil responsibility, or relating to acute problems in the society. While hindering factors might be their unawareness of e-governance possibilities, ignorance of certain social issues in the society, or unwillingness to engage in digital democracy. Addressing and thoroughly considering those factors might improve the e-governance in the country by facilitating public participation. But, initially, it is important to figure out the reasons that promote or hinder public engagement in e-petitioning in Kazakhstan. This leads to our research question, which is: *What are the key factors influencing public participation in e-petitions in Kazakhstan?*

In order to capture both quantitative trends and qualitative nuances, this study uses a mixed-methods approach to examine the major determinants influencing public participation in internet petitions in Kazakhstan. A nationwide survey of 300 respondents will identify patterns in public awareness, trust in government, and demographic influences, while semi-structured interviews with diverse participants explore personal motivations for engagement.

Identifying the factors influencing public participation in electronic petitions can provide valuable information to government agencies, civil society and advocacy groups. This research is especially important because it can increase civic engagement in e-governance. By understanding what motivates people to sign e-petitions, civil society organizations and NGOs can develop more effective strategies to mobilize participation. Kazakhstan's experience in the field of electronic petitions is relatively new and the results of this study will contribute to improving e-petitioning procedures, making it a great tool for democratic practice.

The relevance of this study is that it will help to bridge the gap in the existing literature on participation in the political life of Kazakhstan via the Internet. This study might be a very valuable resource for the development of electronic petition systems in Kazakhstan. As the

government develops its e-government systems, this study may help address current issues related to e-petition systems that are currently being developed.

3. Literature Review

The emergence of digital democracy has transformed how citizens interact with the state, broadening opportunities for political expression and participation. Dahlberg's (2011) typology of digital democracy offers two particularly relevant perspectives for this study: the *deliberative* model, which emphasizes reasoned dialogue and collective decision-making, and the *liberal-individualist* model, which highlights the role of individual expression through digital means. E-petitions combine both principles, they allow citizens to voice personal opinions while collectively influencing political agendas. In Kazakhstan, this dual function is especially significant, as *Epetition.kz* represents one of the few institutionalized mechanisms that allows citizens to communicate their concerns directly to government authorities.

Likewise, Habermas's (1992) concept of the *public sphere* adds a normative dimension to understanding this process: the public sphere ideally functions as an open space for inclusive, rational debate that informs policy decisions. Yet, in practice, Habermas warned that commercialization and political control often erode genuine deliberation. In Kazakhstan's semi-authoritarian context, this erosion is evident: although e-petitions nominally promote deliberation, the public discourse remains bounded by state narratives and administrative filtering.

Building on Habermas, DeLuca and Peebles (2002) introduced the idea of the *public screen*, where political participation increasingly occurs through mediated, visual, and performative acts rather than rational debate. This theory captures the reality of e-petitioning in Kazakhstan, meaning that the success of a petition depends less on deliberative quality and more on its visibility and emotional resonance across social media. Petitions that become viral on social media or align with dominant moral values such as banning gambling or adjusting the national time zone tend to gain attention, while politically sensitive petitions remain invisible. Thus, Kazakhstan's e-petition experience reflects a hybrid democratic model: citizens employ digital tools for visibility and self-expression, while the state selectively filters which petitions enter the policymaking agenda. This makes e-petitions an instrument of "symbolic participation," balancing between civic engagement and state management of dissent.

Therefore, understanding the factors that influence citizens' participation in e-petitions becomes essential for both theoretical and practical reasons. Theoretically, it allows us to assess whether digital democracy and public sphere ideals can take root in semi-authoritarian environments such as Kazakhstan. Practically, identifying these factors helps policymakers and platform designers understand what motivates or discourages citizens from engaging with *Epetition.kz*. As public participation remains a crucial measure of democratic legitimacy and governmental responsiveness, exploring these determinants provides valuable insights into how Kazakhstan's digital governance can evolve from symbolic inclusion toward genuine citizen empowerment.

3.1. Motivations, Barriers, and Success Factors

Motivations

Understanding what drives citizens to engage with e-petitions is essential for analyzing participation patterns and explaining variation in engagement levels. Magesan and Migrow (2022) distinguish between two key types of motivation shaping online political participation: *instrumental* motivations, the belief that participation can directly influence policy outcomes, and *expressive* motivations, associated with self-expression and signaling political identity or values. Instrumental motives tend to dominate when petitions address substantive policy reforms, while expressive motives prevail in protest-oriented petitions that allow individuals to display dissatisfaction with government actions or inaction (Magesan & Migrow, 2022).

It is observed by Rosenberger et al. (2016) that online petitions are strongly *protest-oriented*, providing a channel for civic frustration and discontent with policy issues. Additionally, Ulo et al. (2019) reports that personal relevance and altruism are key drivers for signing petitions, as individuals are more likely to engage when they perceive a direct moral or emotional connection to the issue. This is particularly relevant in contexts where citizens have limited confidence in government responsiveness. Here, the motivation to participate is often sustained not by expectations of direct policy change but by the symbolic value of expressing one's stance publicly (Ulo et al., 2019). The same idea was presented by Alathur et al. (2012), as they conceptualized e-petitions as a *formalized channel* through which citizens can voice their concerns, enabling participation in democratic processes even if their capacity to enforce change remains limited. This idea is then reinforced by Solner (2022), describing the “soft” impact of petitions with their persuasive and discursive power to shape public debate and legitimize certain issues on the political agenda. From this perspective, e-petitions function as both an expressive and communicative mechanism, contributing to the broader culture of participation.

Wright (2015) extends this argument by emphasizing that success for petitioners often lies not in immediate policy change but in *awareness-raising* and *community building*. By fostering solidarity among like-minded citizens, petitions can strengthen civic identity and indirectly influence future mobilization. Similarly, Waheduzzaman and Khandaker (2022) suggest that e-participation can be particularly impactful in contexts characterized by corruption or low transparency, where citizens use petitions to demand accountability and signal collective concern.

Barriers

Despite these motivational drivers, several structural and perceptual barriers constrain participation. Setyoko et al. (2023) and Ulo et al. (2019) identify inadequate government responsiveness as one of the most significant obstacles to sustained engagement in e-democracy. When citizens perceive that their concerns are ignored, confidence in digital participation platforms declines, producing disillusionment and withdrawal. Wright (2015) further highlights

that the tone, speed, and content of official responses significantly affect public perception of legitimacy. Transparent communication and timely feedback are therefore essential for maintaining trust in e-participation systems.

Solner (2022) notes that poor responsiveness by government institutions discourages citizens from initiating or signing petitions. A lack of comprehensive information about petition procedures also creates uncertainty and limits access, particularly among digitally inexperienced users. These findings underscore the importance of proactive engagement from public officials, ensuring not only technical accessibility but also transparency and meaningful interaction with petitioners.

An additional perspective is offered by Olejnik (2024) through signaling theory, which posits that the number of signatures on a petition serves as a signal of public support that should compel policymakers to act. In theory, a petition with a large signature count communicates the salience of an issue, incentivizing political response to avoid electoral or reputational costs. However, empirical evidence challenges this assumption: Olejnik (2024) finds that petitions with 10,000–99,999 signatures can be equally (or even more) effective than those exceeding 100,000, indicating that volume of support alone is not a reliable predictor of policy impact.

This discrepancy between public mobilization and government action undermines the foundational idea of petitions as instruments of accountability. When citizens observe that even large-scale petitions fail to yield results, participation is likely to decline. In Kazakhstan's context, where public trust in governmental responsiveness is already fragile, the perceived ineffectiveness of petitions may become a major deterrent to engagement. Without consistent evidence of responsiveness, citizens may view e-petitioning as a symbolic exercise rather than a genuine avenue for influence.

Success Factors

To begin with, the success of e-petitions, often measured by their ability to accumulate signatures or attract attention, is strongly influenced by framing and persuasion strategies. Setyoko et al. (2023) argue that *linguistic framing* plays a central role: emotional appeals and moral arguments can amplify engagement by resonating with citizens' ethical values or collective identities. Emotional language conveying urgency, solidarity, or shared responsibility helps transform individual awareness into collective action.

Adding to this argument, Elnoshokaty et al. (2016) explore how *cognitive and moral framing* can shape petition outcomes. While moral appeals may enhance issue salience, they can also create fatigue if perceived as overly moralizing or burdensome. Thus, the effectiveness of moral framing depends on balance and authenticity. Wijaya et al. (2019) similarly find that emotionally charged content fosters empathy and connection, particularly in petitions on environmental or social issues, where emotional resonance drives participation. Koenig and McLaughlin (2017) further show that emotional responses such as anger and anxiety can shape engagement differently: while anger may provoke hostility without action, anxiety often triggers empathy and a desire to contribute constructively. These dynamics suggest that emotional

engagement can motivate participation when it creates urgency and collective concern rather than polarization.

Beyond framing, contextual factors also determine success. Olejnik (2024) uses the *economic theory of political information* to argue that *issue salience*, the degree to which a petition aligns with the ruling party's ideological priorities, shapes policymakers' responses. Petitions compatible with government narratives are more likely to be acknowledged, while those on politically sensitive or low-salience topics may be ignored. Consequently, even high public support may not result in action if a petition conflicts with dominant policy agendas.

3.2. Media and E-Petition Mobilization

Media attention plays a decisive role in e-petition mobilization. According to Harrison et al. (2021), petitions gain momentum when amplified through traditional and social media, as coverage signals public salience and pressures officials to respond. This effect is visible in Kazakhstan, where state-controlled television rarely covers petitions, but social media especially Telegram, TikTok, and Instagram serves as an alternative public sphere for circulation and debate.

The *agenda-setting* and *reverse agenda-setting* mechanisms (Harrison et al., 2021) are relevant here. To be more precise, the attention of a traditional media and political actors can be gained through discussions that arise in social media in reaction to e-petitions, thus making a petition more visible and resulting in action. Conversely, mainstream media can also shape which petitions gain prominence by selectively amplifying certain issues over others. Nevertheless, the process can be unequal in Kazakhstan, as it has consultative authoritarian characteristics, i.e., there is a risk that certain socially important issues will remain marginalized, even after they draw attention and are disseminated through social media sites.

Dini, Sæbo, and Wahid (2018) found that integrating social media with official participation platforms enhances engagement by connecting with citizens' everyday digital practices. Kazakhstan's *Epetition.kz* lacks such integration, as petitions exist on a standalone platform, while theoretically enhancing cross-platform interaction could increase outreach among digital users.

Nonetheless, as Ruess et al. (2023) and Panagiotopoulos et al. (2011) observe, digital activism often results in *clicktivism*, a superficial engagement limited to liking or sharing content. In Kazakhstan, where political caution and data privacy concerns persist, users may share petitions without signing them, producing a gap between symbolic support and measurable participation. Despite this limitation, social media still amplifies civic awareness and informal pressure on decision-makers, gradually expanding the boundaries of permissible discourse.

3.3. Challenges in Achieving Policy Change

Although e-petitions offer a platform for public expression, their actual influence on policy remains limited. Rosenberger et al. (2020) and Setyoko et al. (2023) highlight that political will and institutional receptivity are the primary determinants of success. In Kazakhstan,

petitions rarely translate into concrete policy changes because decisions remain centralized and filtered through bureaucratic gatekeepers. Therefore, Olejnik's (2024) *signaling theory* posits that large numbers of signatures should signal public importance to policymakers. However, empirical evidence, including Kazakhstan's own experience, shows that even petitions surpassing the threshold often receive only formal acknowledgment. This discrepancy between public support and government response undermines trust and discourages future participation.

Matthews (2020) argues that policymakers often view petitions as "expressions of opinion" rather than actionable policy inputs. This perspective appears in Kazakhstan as well, where authorities may cite petitions for legitimacy without committing to change. The result is a cycle of symbolic responsiveness: the state acknowledges public sentiment without altering policy direction.

Moreover, structural inequalities further constrain inclusiveness. Bochel and Bochel (2020) found that e-participation tends to be dominated by educated, urban users, while low-income and rural populations remain excluded. The *Epetition.kz* platform reproduces this pattern: digital literacy and access determine participation, leading to an uneven civic landscape. Addressing these gaps requires both technological innovation and targeted public education campaigns.

3.4. Platform design and its potential impact

The institutional and technical design of e-petition platforms plays a critical role in shaping citizen engagement. Mackintosh (2004) conceptualized e-participation in three tiers: *information*, *consultation*, and *active involvement*, noting that digital tools can range from simple information-sharing mechanisms to genuine participatory systems. Similarly, Leston-Bandeira (2020) emphasizes that well-designed petition systems perform multiple functions: linkage, campaigning, agenda-setting, and scrutiny, which depend on transparency, accessibility, and responsiveness. For instance, comparative studies demonstrate that countries with user-friendly, interactive designs such as the UK Parliament's petition site foster stronger trust and participation (Blumenau, 2021; Demirdoven et al., 2020). Transparency, visible government feedback, and the display of signature progress create a perception of accountability and efficacy.

By contrast, Kazakhstan's *Epetition.kz* faces several design limitations: while it symbolizes progress toward open governance, it requires users to authenticate through *egov.kz* using a digital signature, which excludes citizens with limited technical access or low digital literacy. As Kurmanov, Selteyev, and Almaganbetov (2023) found in their study on open government tools, digital awareness in Kazakhstan remains low, particularly among older and rural populations. Therefore, the design of *Epetition.kz* may inadvertently reinforce digital inequalities rather than mitigate them.

The literature shows that e-petitions increase the civic engagement opportunities, but the effectiveness of e-petitions lies in the interplay of motivations, institutional responsiveness, media dynamics, and platform design. In semi-authoritarian states like Kazakhstan, engagement is more expressive and visibility-oriented, but is limited by less accountability of government

and inequality within the structure, leading to symbolic engagement. Nevertheless, limited attention has been given to the particular factors that contribute to the choice of citizens to sign e-petitions in such contexts, and there is a significant deficit of the empirical studies on e-petitioning in Kazakhstan; thus, the current study fills this gap by examining the motivations, barriers and the overall factors that affect the participation of citizens within the country.

Conceptual Framework

This study is mainly grounded on the theory of Habermas of the public sphere that analyzes democratic participation as reliant on the capacity of citizens to articulate views, share issues and participate in open discussions with the state (Habermas, 1992). This perspective is relevant since involvement in e-petitions could be interpreted as an example of citizen activity when people publicly make their demands and are trying to draw societal issues to the government. The framework of Habermas in this work is rather a basis of interpretation of why such participation is a critical aspect of a democratic practice.

In order to describe the difference in participation in the digital conditions, the study also relies on the concept of the public screen proposed by DeLuco and Peebles (2002). The public screen, in contrast to the classical public sphere, focuses on visibility, communication mediated, emotional appeal, and the flow of political messages throughout online spaces. This is specifically applicable to e-petitions, as citizens are prone to encounter them via social media, online news, and other networked communication methods. Their involvement might thus not just be based on the issue, but also on whether a petition gains publicity and is seen.

The framework is further expanded by the critique of the public sphere offered by Fraser who states that the unequal conditions under which e-participation takes place (Fraser, 1990). Fraser states that formal openness does not automatically lead to equal participation since social and structural inequalities still dictate who can be effectively part of the public discourse, whose voices are listened to, and which issues are perceived as rightful issues of public concern (Fraser, 1990). This observation is particularly applicable to the current study, since the involvement of citizens in e-petitions can be predetermined by the differences in digital literacy, understanding of e-government tools, civic motivation, confidence in the responsiveness of the government, the sense of procedural complexity, and access to the needed information. The viewpoint of Fraser thus offers a valuable correction to idealized assumptions of equal access by highlighting the fact that the digital public world is still guided by unequal resources, capabilities and opportunities.

Taken together, these perspectives present a coherent framework of studying the participation of citizens in e-petitions in Kazakhstan as a digital civic engagement that is mediated through communicative opportunity and mediated visibility and that is characterized by unequal participation opportunities. In this scheme, the participation of citizens in e-petitions is considered the dependent variable, and the digital literacy, civic motivation, trust in the responsiveness of the government, perceived complexity of the procedures, media exposure, privacy concerns, and the demographic factors are considered the independent and

the primary explanatory variables (DeLuco and Peebles, 2002; Fraser, 1990; Habermas, 1992). Using this reasoning, the conceptual model that is shown in Figure 1 integrates these conceptual ideas to investigate the joint effects of structural and perceptual variables on participation.

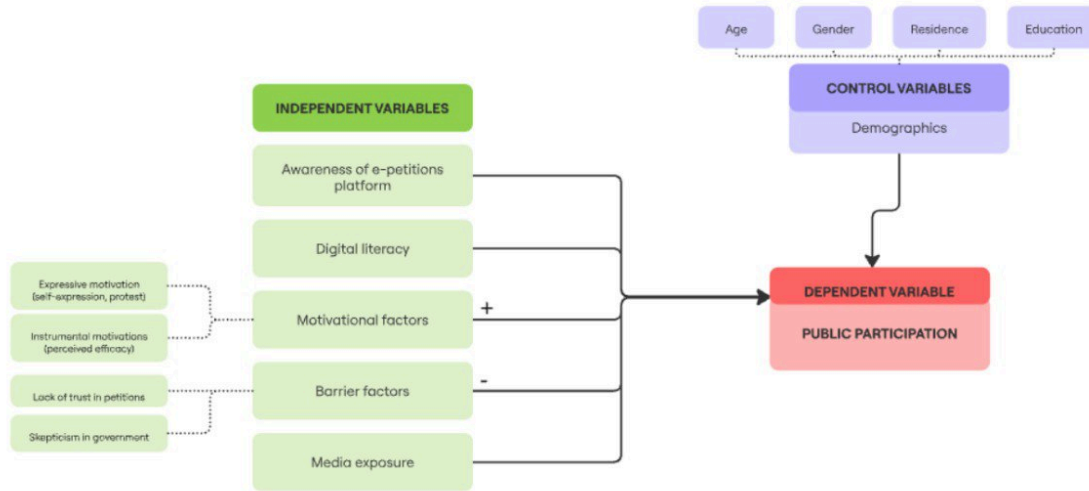


Figure 1. Conceptual framework

Therefore, the following hypotheses are proposed:

- H1.** Higher levels of digital literacy and familiarity with e-government services are positively associated with citizens' likelihood of signing an e-petition.
- H2.** Greater trust in government responsiveness and policy change are positively associated with participation in e-petitions.
- H3.** Higher perceived procedural complexity of the e-petition platform is negatively associated with citizens' willingness to participate.
- H4.** Higher exposure to e-petition campaigns through social media and interpersonal networks is positively associated with the likelihood of participation.
- H5.** Stronger civic motivation and internal political efficacy are positively associated with engagement in e-petition activities.
- H6.** Greater concerns about data privacy and perceived personal risk are negatively associated with willingness to participate in e-petitions.

In addition to the main independent variables, demographic characteristics such as age, gender, education are controlled for in the analysis, as the conceptual framework suggests that these factors may influence citizens' likelihood of participating in e-petitions.

4. Methodology

4.1. Research Design

To comprehensively address the research question “*What are the key factors influencing public participation in electronic petitions in Kazakhstan?*”, this study adopts a mixed-methods research design, integrating quantitative and qualitative approaches. This design ensures both breadth and depth of analysis: while the quantitative component captures general trends and correlations, the qualitative part provides contextual insights into the motives, perceptions, and barriers shaping citizens’ engagement with e-petitions. The combination of methods allows for triangulation and enhances the validity of findings by examining the phenomenon from multiple perspectives.

4.1.1. Quantitative Component

The quantitative phase employs a nationwide online survey involving approximately 300 respondents. This sample size offers a balance between feasibility and representativeness, sufficient to identify statistically significant patterns across major demographic categories. Since the online survey was distributed primarily through social media platforms and public Telegram and WhatsApp channels, the study employs a non-probability convenience sampling approach. This method was selected for its practicality in reaching a diverse population of internet users across Kazakhstan within a limited time frame. In addition, a snowball sampling technique was partially applied, as participants were encouraged to share the survey link with their peers, thereby broadening the sample base. Although this method does not ensure full representativeness, it enables access to a wide demographic of digitally active citizens, which is the key population segment relevant to studying engagement with e-petitions.

Variables

Dependent Variable:

Public participation in e-petitions, operationalized as the degree to which individuals engage with the *Epetition.kz* platform. It will be measured through questions such as “Have you participated in an e-petition?” and “How many e-petitions have you signed?”

Independent Variables:

Awareness of the e-petition platform. The extent to which individuals are aware of *Epetition.kz*, its purpose, and functions. Awareness is crucial since citizens cannot participate without knowing the platform exists.

Digital literacy. The self-reported ability to navigate digital tools (e.g., using e-signatures, completing forms). Participants rate their competence on a five-point Likert scale, revealing potential digital skill gaps.

Motivational factors. *Self-expression* - the need to express beliefs or values (“Signing e-petitions helps me express my views”). *Community influence* - the role of peer trust in

participation (“I am more likely to sign if shared by someone I trust”). *Expressive protest* - participation as a symbolic form of disagreement (“I use e-petitions to protest against policies I disagree with”). *Perceived efficacy* - the belief that participation can lead to real change (“I believe signing e-petitions can influence policy”).

Barrier factors. *Lack of personal connection* - petitions not reflecting individual interests. *Skepticism in government* - doubts about state responsiveness. *Time and effort* - perceived procedural complexity of signing petitions.

Media exposure. The frequency with which citizens encounter petition-related information via social media, television, radio, or online news platforms. This variable also examines whether media coverage enhances petition credibility and influences participation decisions.

Control Variables:

Demographic characteristics such as age, gender, education, and place of residence are included to explore subgroup differences in participation patterns.

Data Analysis method

The quantitative analysis proceeded in three stages. First, descriptive statistics were used to characterise the sample across demographic categories. Before hypothesis testing, Cronbach's alpha was calculated to assess the internal consistency and reliability of each composite scale to confirm their suitability for use as aggregated indices. Second, bivariate analysis served as the primary hypothesis-testing layer. Because most explanatory variables were measured on ordinal Likert-type scales, Mann-Whitney U tests were used to compare signers and non-signers on each variable, given the non-normal distribution of ordinal data and the unequal group sizes. Meanwhile, for categorical demographic variables (gender, age group, residence, education), chi-square tests of independence were applied. Spearman rank-order correlation coefficients (r) were calculated to summarise the strength and direction of each variable's association with participation. Each hypothesis was evaluated on the basis of statistical significance ($\alpha = 0.05$), the direction of group differences, and the magnitude of the correlation. Third, to complement and contextualize the bivariate findings, a full-sample binary logistic regression was estimated with actual e-petition participation as the dependent variable. All key explanatory variables were standardised prior to entry, allowing regression coefficients and odds ratios to be compared directly in terms of relative contribution. Meanwhile, model performance was assessed using overall classification accuracy and the AUC-ROC statistic.

4.1.2. Qualitative Component

The qualitative component was included to explore the deeper meanings and perceptions, which could not be fully captured through survey data alone. While the survey identified general patterns of participation, it could not sufficiently explain how citizens

understood the legitimacy, accessibility, and usefulness of e-petitions in practice. For this reason, the study utilized semi-structured interviews with 9 participants. The number of interviews was kept relatively small because the qualitative phase was designed not to replicate the survey at a larger scale, but to include different stakeholder perspectives that could provide deeper insight into the e-petition process. Thus, the interview sample included not only citizens with different levels of participation, but also stakeholders such as a technical specialist, media and government representatives, whose perspectives were important for understanding platform design, communication dynamics, and public visibility.

A purposive sampling strategy was used in order to ensure diversity in age, gender, residence. This variation was important because the study aimed to capture a broad range of experiences and perceptions rather than focus only on active users of the platform or only on citizens as in the survey component. Each interview lasted approximately 30 to 45 minutes and was conducted either online or in person, depending on the participant's preference and accessibility. The interview guide focused on participants' awareness of Epetition.kz, their views on the usability of the platform, their trust in the responsiveness of state institutions, the role of media and interpersonal networks in shaping engagement.

Qualitative Data Analysis Method

The qualitative data were analyzed using thematic analysis. Interview transcripts were coded to identify recurring patterns, shared perceptions, and meaningful differences across respondents. Themes were developed inductively from the data, while remaining informed by the study's conceptual framework and research objectives. This approach made it possible to reveal the emotional, symbolic, and contextual dimensions of participation, including the role of trust, frustration, procedural barriers, media visibility, and stakeholder-specific perspectives in shaping experiences with e-petitions.

5. Analysis

5.1. Quantitative analysis

The quantitative analysis is based on an online survey dataset of 297 respondents. Participation in e-petitions was operationalised as a binary dependent variable, indicating whether a respondent had ever signed an e-petition. Overall, 18.5% of respondents ($n = 55$) reported having signed an e-petition, while 81.5% ($n = 242$) reported never signing one. This distribution indicates relatively low adoption of e-petition participation within the surveyed population. The sample was slightly more female (52.2%, $n = 155$) than male (45.5%, $n = 135$), with a small proportion not disclosing gender (2.4%, $n = 7$). Respondents were concentrated in working-age groups, with the largest segment aged 41–55 (33.7%, $n = 100$), followed by 18–28 (30.6%, $n = 91$) and 29–40 (25.9%, $n = 77$), while 9.8% were 56+ ($n = 29$). The sample was predominantly urban (70.7%, $n = 210$) compared to rural (29.3%, $n = 87$). Educational

attainment was relatively high: Bachelor's degree holders comprised 46.8% ($n = 139$) and Master's or higher 16.8% ($n = 50$), while 22.2% had technical/vocational education ($n = 66$), 11.1% secondary education ($n = 33$), and 3.0% reported no formal education ($n = 9$).

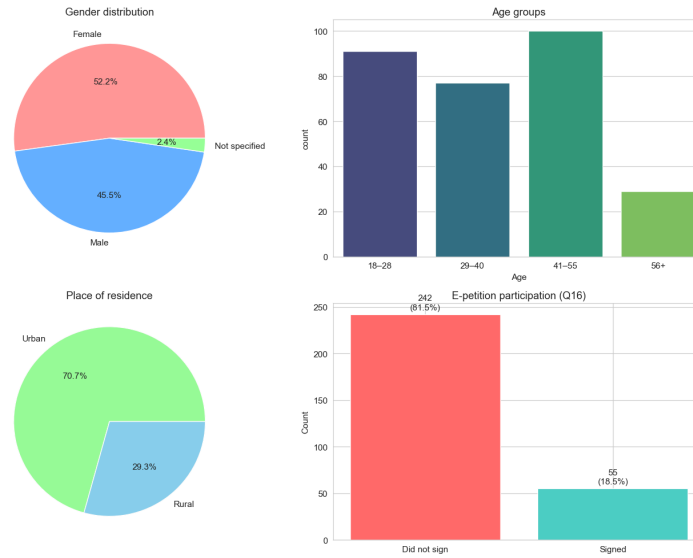


Figure 2. Respondents distribution

In demographic analysis, among age, gender, place of residence and education, only age showed a clear statistically significant association with participation ($p = 0.0443$). Participation rates were highest among respondents aged 18-28 and declined in older age groups, indicating that younger individuals were more likely to sign e-petitions. By contrast, gender was not significantly related to participation ($p = 0.6579$), and neither was place of residence ($p = 0.5969$). Education was not significant in the chi-square comparison ($p = 0.1009$), although a positive ordinal relationship emerged in the Spearman test ($p = 0.0113$), suggesting that participation tends to rise with educational attainment even if categorical group differences are not strong enough to be conclusive. Taken together, the demographic analysis indicates that age is the clearest demographic correlate of participation, whereas education shows only a modest positive tendency, and gender and residence place not being meaningful predictors.

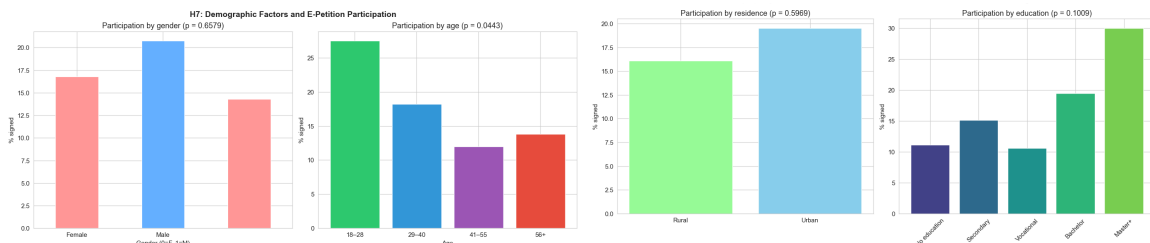


Figure 3: Bar charts for H7: Demographic factors

The survey consisted of 51 questions (questions are presented in *Appendix A*), which were divided into 4 main blocks: motivational and barrier factors, digital literacy, and media exposure.

Before hypothesis testing, Cronbach's alpha test was conducted to evaluate internal consistency and reliability of scales within the blocks of questions between each other in representing the block. After aggregating all into following categories, we received that motivational factors ($\alpha = 0.843$), barrier factors ($\alpha = 0.816$), media exposure ($\alpha = 0.762$), and digital literacy ($\alpha = 0.687$) - all show acceptable reliability, confirming their suitability for use as aggregated indices. They were further used in different hypotheses, depending on the context of the question.

Bivariate analysis

First, bivariate analysis was conducted to test our hypotheses and check the correlation of each factor with our dependent variable.

H1: Digital literacy (positive)

The hypothesis that higher digital literacy is positively associated with participation in e-petitions was supported. The aggregated digital literacy index differed significantly between signers and non-signers ($p = 0.0020$), with signers reporting higher average levels of digital capability. At the item level, the most important differences were found for experience using a digital signature ($p = 0.0009$) and confidence in registering on websites ($p = 0.0050$). By contrast, general self-reported ability to use the internet for government services did not reach conventional significance ($p = 0.0682$). The corresponding Spearman correlation was positive and statistically significant ($r = 0.180$, $p = 0.0019$), indicating that digitally more capable respondents were more likely to have signed an e-petition. Substantively, this suggests that digital literacy functions as an enabling condition for participation: individuals may be willing to engage, but without sufficient confidence in online procedures, participation remains less likely.

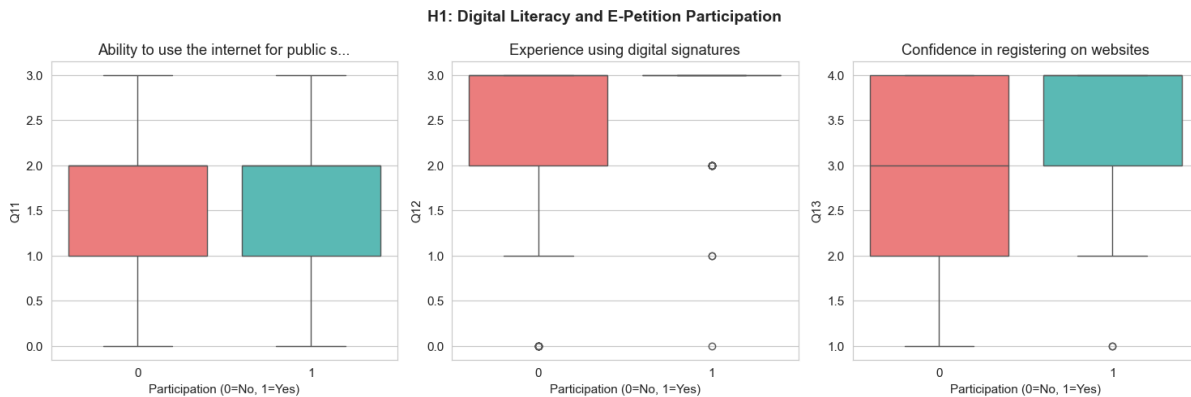


Figure 3. Grouped box plot for H1: Digital Literacy

H2: Trust in government responsiveness and policy change (positive)

The hypothesis that greater trust in policy change is associated with higher e-petition participation was not supported in a consistent manner. The aggregated trust-related index was not statistically significant ($p = 0.3796$). Likewise, belief that petitions can influence policy (Q33) showed no meaningful relationship with participation in the full sample ($p = 0.8769$; $r =$

0.009). However, doubt that the government takes petitions seriously differed significantly between signers and non-signers ($p = 0.0474$; $r = 0.115$), implying that signers are more skeptical of the government's actions for the policy change. This suggests that perceptions of governmental responsiveness may play some role, but the evidence is too limited and inconsistent to conclude that trust in government is a major determinant of participation. Overall, trust in policy change does not drive people to sign petitions, while signers are more skeptical of policy change due to petitions than non-signers.

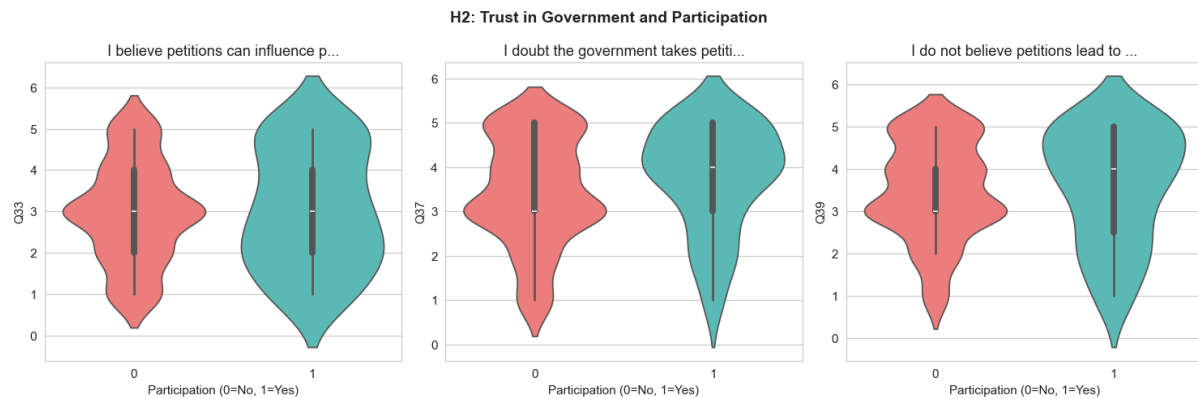


Figure 4. Grouped violin plot for H2: Trust in government

H3: Perceived procedural complexity (negative)

The expectation that greater perceived procedural complexity would reduce participation was not confirmed, as it did not distinguish signers from non-signers. Although the perception that signing requires too much time and effort moved in the expected direction, as signers reported somewhat lower burden than non-signers, the effect remained below the threshold of statistical significance ($p = 0.0996$; $r = -0.096$). Other indicators, including uncertainty about how petitions reach authorities and difficulty navigating the platform, were also non-significant. These findings suggest that procedural complexity was not a strong direct predictor of actual participation in the full sample.

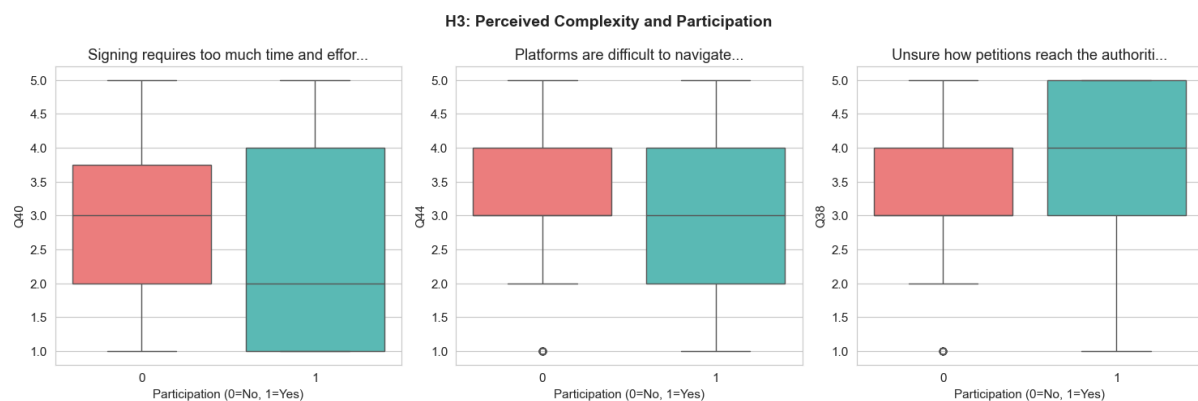


Figure 5: Grouped box plot for H3: Perceived procedural complexity

H4: Media exposure (positive)

The hypothesis that greater media exposure to petitions would increase participation was not supported at the aggregate level, as the overall media exposure index did not correlate significantly with participation ($r = 0.090$, $p = 0.1213$). Nevertheless, one specific channel, exposure through social media, like Instagram, Telegram, Tiktok, showed a clear positive association with participation ($p = 0.0002$). Other channels, including traditional media, online news, and messaging applications, did not produce statistically significant differences between signers and non-signers. Accordingly, the findings do not indicate that overall media exposure robustly predicts participation, limiting it only to social media channels.



Figure 6: Grouped violin plot for H4: Media exposure

H5: Civic motivation (positive)

Civic motivation emerged as the strongest and most consistent determinant of participation. The aggregated motivation score differed significantly between signers and non-signers ($p = 0.0007$), with signers reporting substantially higher levels of civic motivation. Several specific motivational items were significant, including seeing petitions as a way of expressing one's beliefs, addressing issues of local or community relevance, expressing disagreement with policy decisions, feeling part of a collective public opinion, and fulfilling a sense of civic duty. Only the item was not statistically significant, which is signing the petition after someone's recommendation. The Spearman correlation between the overall motivation index and participation was the strongest among the main constructs ($r = 0.198$, $p = 0.0006$). These results indicate that e-petition participation is driven primarily by intrinsic civic and expressive motives and not by interpersonal encouragement.

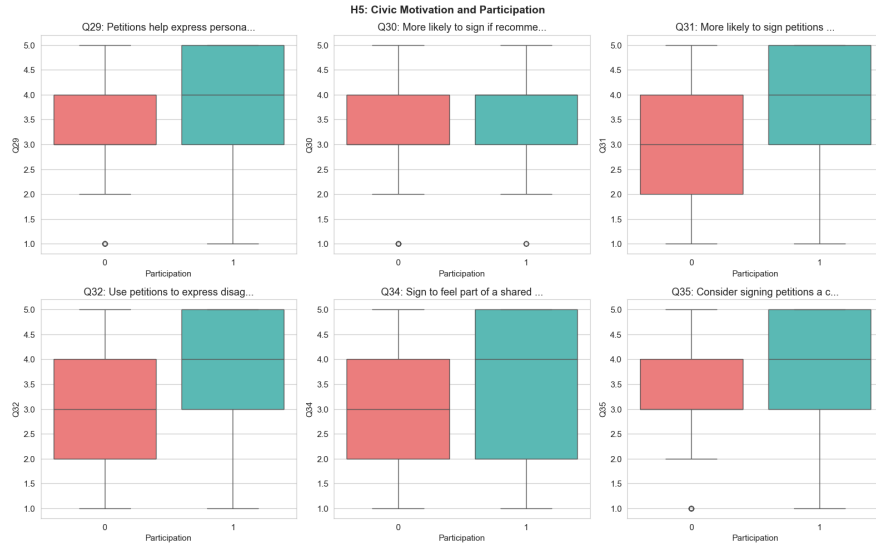


Figure 7: Grouped box plot for H5: Civic motivation

H6: Data privacy concerns (negative)

The hypothesis that data privacy concerns would negatively affect participation was not supported. Although signers reported slightly lower privacy concerns than non-signers, the difference was not statistically significant ($p = 0.1359$), and the correlation with participation was weak ($r = -0.087$, $p = 0.1360$). The pattern is directionally compatible with theoretical expectations, but the evidence does not support treating privacy concerns as a major explanation of participation gaps in this sample.

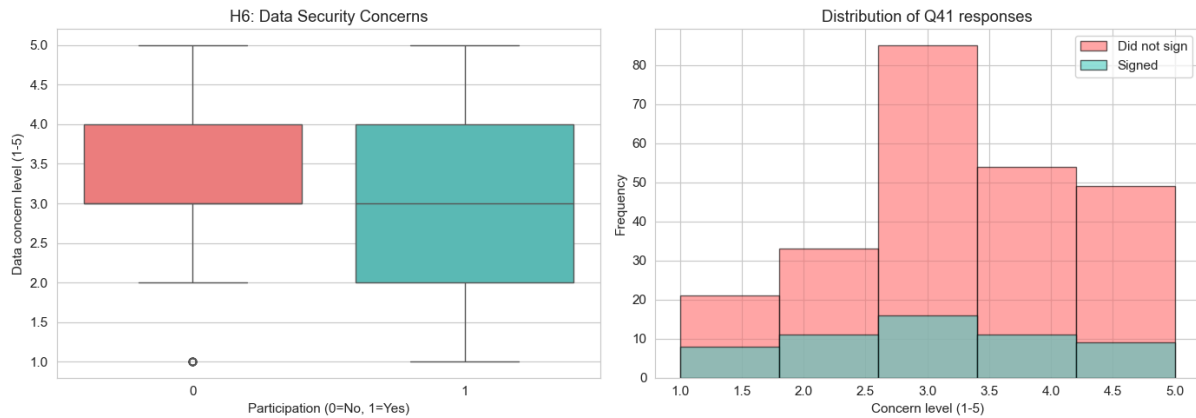


Figure 8: Box plot for H6: Data privacy concerns

Full-sample binary logistic regression

To examine the joint effects of the explanatory variables while accounting for overlap among them, a logistic regression model was estimated with actual participation in e-petitions as the dependent variable. The model demonstrated acceptable discriminatory performance (accuracy = 0.825; AUC-ROC = 0.772), suggesting that it was reasonably effective in distinguishing signers from non-signers.

The full-sample regression results reinforce results of the bivariate analysis:

The strongest positive predictor of participation is civic motivation as well ($\beta = 0.456$; OR = 1.577, $p = 0.0106$), indicating that respondents with stronger civic motivation were substantially more likely to have signed an e-petition. Digital literacy also contributed positively ($\beta = 0.406$; OR = 1.501, $p = 0.0460$), further supporting the argument that digital capability facilitates participation. Media exposure contributed positively ($\beta = 0.221$; OR = 1.25; $p = 0.1913$), but showed no statistical significance. Thus, civic motivation and digital ability are confirmed as the strongest predictors of public participation.

Meanwhile, the negative predictor was age ($\beta = -0.416$; OR = 0.660, $p = 0.0144$), confirming that the likelihood of participation declines with increasing age. Additional relatively weaker negative contributions were observed but not statistically supported for privacy concerns ($\beta = -0.286$; OR = 0.751, $p = 0.1085$) and procedural complexity ($\beta = -0.283$; OR = 0.754, $p = 0.1777$).

Some factors displayed contradictory conclusions, as media exposure was significant in bivariate tests but not in multivariate regression, leading to potential suppression effects. Therefore, regression coefficients are best interpreted as relative contributions within this model, rather than as definitive causal effects.

In line with the correlation matrix, which shows the strongest associations with participation for motivation and digital literacy and substantial overlap between motivation and perceived efficacy, the regression results indicate that participation is most strongly associated with motivational and capability-based factors, with age acting as an additional demographic constraint.

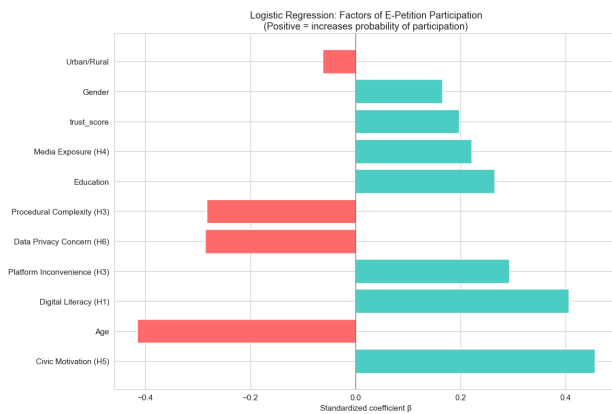


Figure 10: Logistic regression for all factors

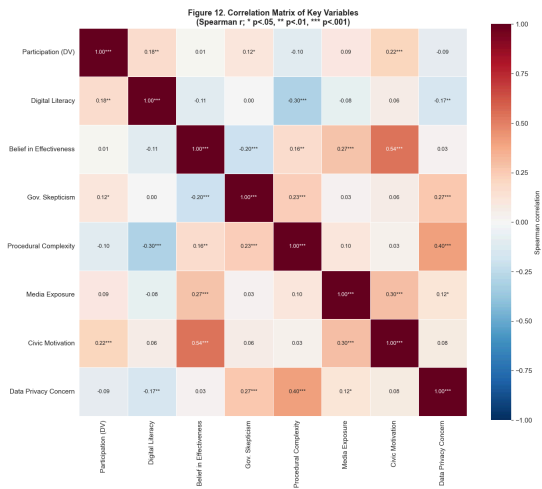


Figure 11: Correlation matrix of all variables

5.2. Qualitative analysis

This section presents the key findings from nine semi-structured interviews conducted with four stakeholder groups: technical specialists (TS1-TS3), citizens (C1-C2), one government representative (GR1), and media professionals (MP1-MP3). To ensure confidentiality, respondents are identified through anonymous coding (See Table 1.). Thematic analysis of the interviews shows that attitudes toward e-petitions in Kazakhstan are shaped by five interrelated factors: perceived legitimacy, usability barriers, trust and transparency, issue salience, and media influence. Across the dataset, respondents generally supported the idea of e-petitions as a civic mechanism, but they also described important institutional and technological weaknesses that limit participation in practice.

Interview No.	Respondent type	Anonymous code
Interview 1	Technical Specialist	TS1
Interview 2	Citizen	C1
Interview 3	Citizen	C2
Interview 4	Technical Specialist	TS2
Interview 5	Technical Specialist	TS3
Interview 6	Government representative	GR1
Interview 7	Media professional	MP1
Interview 8	Media professional	MP2
Interview 9	Media professional	MP3

Table 1. Respondents' abbreviation

One of the most widespread themes of the interviews is that most respondents are generally aware that e-petitions are a valid and potentially useful line of communication between the state and its citizens; however, this legitimacy is conditional since it is considered that the existing system is new and unstable and has not yet been trusted fully. GR1 regarded petitions as a primary tool to communicate the needs of the citizens and shape the policy lines, putting them across as a more institutional and less disruptive method to protest on the streets. Meanwhile, GR1 emphasized that the system is not much older than 1-2 years old and thus cannot be judged in regard to long-term democratic influence. The same cautious support was expressed by other respondents; therefore, TS1 referred to e-petitions as a legitimate channel of communication between the society and the state, although the development of e-petitions was at the same time

referred to as an evolutionary process, which suggests that the trust of the population is yet to be established. On the same note, C1 claimed that the petitions can be effective only in the cases when they are well-worded, have a great number of supporters, and are followed by the evident institutional reactions. These reactions imply that legitimacy lies more inherent on the plane of principle as opposed to the plane of practical experience. Respondents are not opposed to the concept of e-petitions, but they still do not find enough evidence that the system can produce real changes.

A second dominant theme is that platform design and digital accessibility directly affect whether citizens participate at all. Respondents repeatedly emphasized that poor usability is not a minor technical flaw but a real barrier that interrupts civic action. This point was especially strong in the interviews with technical specialists, but it was also confirmed by citizen users. TS2 offered one of the clearest descriptions of this problem, stating that the platform was “understandable, but not convenient” and that using it felt like “you were constantly fighting the website”, meaning that the user experiences the platform not as a facilitator of participation, but as an obstacle. TS3 identified multiple technical failures, including image display errors, poor categorization, absence of a search function, and a broken unauthorized “Create Petition” flow, where “nothing happens, the page simply refreshes.” TS3 also argued that mobile participation is seriously constrained because signing requires launching NCALayer, which is “extremely inconvenient” and discourages ordinary users.

Moreover, citizen interviews reinforce this finding: C2 described the website as “simply terrible and looked amateurish” and noted that it “constantly froze,” even when the issue itself mattered emotionally. C1 similarly pointed to long scrolling, lack of clear navigation, and unnecessary effort in finding relevant petitions. These accounts show that intention alone is insufficient: even motivated users may fail to act if the interface is overly complex, unstable or poorly adapted to everyday digital habits. In this sense, usability becomes a democratic condition of participation rather than a merely technical matter.

The third key theme is that public trust in e-petitions and government responsiveness is closely tied to transparency. Thus, respondents consistently linked willingness to participate with knowing what happens after signing, how petitions are reviewed, and whether any visible government response follows. Where such procedures remain unclear, participation is perceived as symbolic rather than effective. TS2 expressed this, arguing that if users do not understand the next steps, “trust disappears,” and participation feels as though one has merely “checked a box into emptiness”. Likewise, TS3 suggested that the platform should display “success metrics,” such as how many petitions were published, how many reached the threshold, and what outcomes followed. This recommendation is especially important because it shifts attention from technical access to institutional accountability. Citizens presented the same concern: C1 argued that a platform must be “clear, transparent, and reputable” in order to feel trustworthy, while C2 referred to distrust not only in the state but also in the platform itself and in its eventual outcomes. These findings indicate that trust is not simply an abstract political attitude; it is produced through procedural visibility. Citizens are more likely to engage when they can see a

meaningful chain from signature to review to state response; without this, the act of signing loses credibility.

The other theme is that, the respondents do not consider e-petition signing as a normal civic activity. Rather, engaging in participation is normally defined by concerns that are deemed to be personally relevant, emotionally pressing, or having direct links with everyday living. Citizens said they are more likely to support petitions when the issue is emotionally pressing and personally relevant, especially when it concerns safety, domestic violence, healthcare, roads, schools, or the environment. Specifically, GR1 clearly mentioned that people are most engaged when they have already encountered the problem, and this is what is captured in the notion that only people who have encountered the problem themselves can feel it. This was especially evident in the interviews of the citizens: C2 mentioned that in her case it depends on whether it impacts on her safety (C2), so she signed a petition on domestic violence because the problem was relevant to her. She further reiterated that when the concern is on the safety of the people, then individuals would be the most active. This was extended by C1, who indicated that she would most probably endorse the petitions that would influence the everyday life of many individuals like roads, schools, healthcare, or the state of the environment. Meanwhile, she did not accept petitions which are too emotional or poorly argued, but liked those founded on facts, reasons, definite demands and a clear suggestion of change. Similarly, MP2 said that petitions are more likely to receive attention when they are based on evidence and clear demands rather than emotion alone. These reactions indicate that the engagement in Kazakhstan is not a habit but an issue-based and reactive one. Citizens are mobilized when a petition addresses experienced vulnerability, moral interest or actual social injury. Emotion is thus a key mobilizing power, but respondents also emphasize that legitimacy is determined by the presence of clarity and evidence on the side of emotion.

The final major finding is that the media serves as a crucial intermediary between petitions, the public, and the state. Respondents across stakeholder groups described media as a key factor in whether citizens become aware of petitions and whether authorities feel pressure to respond. TS1 noted that “social networks are the main driver” of petition visibility, while C1 argued that traditional media gives petitions seriousness and transforms them from private initiatives into socially significant issues. Media respondents strongly confirmed this. MP2 stated that after a television report is aired, viewers ask, “Where can I sign this petition?” and conclude that “many people learn about petitions only through the media.” MP1 described media as a bridge between society and the authorities, while MP3 emphasized that media increases state responsibility by highlighting public concerns. At the same time, media respondents stressed that coverage is not automatic: MP3 warned about manipulation and information distortion, arguing that the media must protect reliability and prevent political escalation. Thus, the media does not simply amplify petitions; it also filters them according to norms of credibility and public importance.

Overall, the findings show that e-petitions in Kazakhstan are perceived as a meaningful but still fragile form of digital participation. Their future effectiveness depends not only on

technical improvement, but also on stronger transparency, clearer outcomes, higher trust, and broader public awareness. The interviews suggest that e-petitions can become a more credible democratic mechanism, but only if they are supported by better user experience, stronger institutional communication, and continued media visibility.

6. Discussion

The findings of this study offer a layered account of what drives and/ or constrains public participation in e-petitions in Kazakhstan. Overall, both quantitative and qualitative results converge on the same results: participation is primarily an expressive, morally grounded act, shaped less by strategic calculation or institutional trust than by personal relevance, civic identity, and the structural conditions that make engagement possible.

The most significant finding across both analytical strands is the primacy of civic motivation. Quantitatively, the aggregated civic motivation score was the strongest predictor of participation. Specific items that reached significance included expressing personal beliefs, addressing community-level issues, signaling disagreement with policy, feeling part of collective opinion, and fulfilling civic duty, while signing because of others' recommendations did not reach significance. Qualitatively, citizens described signing when an issue felt personally urgent such as domestic violence, road safety, healthcare rather than as a routine civic habit. GR1 captured this clearly: people engage most strongly when they have personally encountered the problem.

This pattern reflects Magesan and Migrow's (2022) distinction between instrumental and expressive motivation, with the data pointing firmly toward the expressive mode. It also resonates with DeLuca and Peeples' (2002) public screen framework, which emphasizes that political participation in digital environments is driven by visibility, emotional resonance, and the performance of civic identity. Citizens sign petitions not primarily because they believe the government will act, but because signing itself communicates something about who they are and what they stand for.

Belief in the policy impact of petitions showed no significant relationship with participation. In fact, signers were often more sceptical about government responsiveness than non-signers, yet still participated. This supports the argument of Ulo (2019) and colleagues that petitioning is driven more by symbolic self-expression than by expectations of change. However, interviews showed that citizens still value responsiveness and expect visible outcomes. While people may participate despite scepticism, continued engagement depends on seeing results. This is consistent with the findings of Solner (2022) and Setyoko et al.'s (2023) that poor government responsiveness undermines sustained participation.

Digital Inequality and Platform Design

Quantitative analysis results showed that digital literacy was positively associated with participation, with the most discriminating items being experience with digital signatures and confidence in website registration. Moreover, age was the clearest demographic correlate of

participation, with younger respondents significantly more likely to have signed an e-petition, a pattern consistent with generational differences in digital confidence and familiarity with e-government tools. These findings reflect Fraser's (1990) critique, which forms a core pillar of the conceptual framework: formal openness does not guarantee equal participation. The platform's authentication requirement via egov.kz creates a structural filter that disproportionately excludes citizens with lower digital confidence.

The qualitative data reinforce this: both technical specialists and citizen users described the platform as unintuitive, unstable, and poorly adapted to mobile use, with multiple concrete design failures: broken petition-creation flows, absent search functionality, poor categorization, cumbersome mobile authentication process. Even digitally capable users reported friction. A poorly designed platform raises the effective digital literacy threshold required to participate, compounding existing inequalities.

Although procedural complexity was not statistically significant overall, the findings still suggest that it matters. Signers perceived petitioning as requiring less time and effort than non-signers. Interview data also consistently showed that participation depends on simple access, convenient design, and easy navigation. Consistent with Leston-Bandeira (2019), effective petition systems must ensure accessibility and accountability; otherwise, civic motivation is weakened by unnecessary barriers.

Media Exposure, Channel Asymmetry and the Clicktivism Gap

The media exposure hypothesis was not supported overall, but channel-level analysis revealed an important asymmetry. Social media significantly increased participation, whereas traditional media, online news, and messaging apps had no effect. In Kazakhstan's media environment, social media serves as the main space for civic visibility, making petitions publicly recognizable, while issues ignored online remain largely invisible.

Qualitative findings, however, complicate this picture. Media professionals noted that when traditional media covers petitions, it often produces immediate public engagement, as audiences actively search for ways to participate. Respondents also emphasized that mainstream media gives petitions greater legitimacy, turning them from informal online initiatives into recognized public issues. Journalists described themselves as intermediaries between citizens and authorities, increasing accountability by drawing attention to civic concerns. At the same time, they acknowledged that coverage remains selective and shaped by editorial decisions, credibility, and political sensitivity. Thus, although traditional media can stimulate participation, its influence remains limited, leaving an important but underused opportunity to strengthen e-petition engagement.

The findings also reflect a pattern of clicktivism: people often react to or share petition content on social media without signing it. In Kazakhstan's semi-authoritarian context, this gap is reinforced by the requirement to sign petitions through a verified digital identity, making participation feel riskier than simply sharing a post. Although privacy concerns were not a strong independent predictor, they negatively influenced participation in the regression model,

while interviews repeatedly highlighted political caution. The lack of direct integration between social media and Epetition.kz further increases this gap, as citizens must independently move from online awareness to the petition platform.

Emotional Appeal and the Evidence Requirement

The study also clarifies the conditions under which emotional framing succeeds as a mobilization strategy. Although Setyoko et al. (2023) and Wijaya et al. (2019) established that emotional language amplifies engagement, both citizen respondents and media professionals applied a credibility filter: petitions grounded in evidence, clear demands, and concrete proposals were more persuasive than those relying on emotional appeal alone. This extends Elnoshokaty et al.'s (2016) argument that moral framing produces fatigue when perceived as unbalanced or performative. In Kazakhstan, where institutional credibility is already fragile, petitions that rely solely on emotional appeal risk being dismissed rather than acted upon.

7. Limitations

A number of limitations are to be noted. First, the survey employed convenience and snowball sampling thus, the results cannot be considered to be entirely representative of the national population. The limited access by citizens to the internet, lower levels of digital literacy or reduced representation in social media platforms resulted in lower chances of being contacted and, therefore, underrepresentation of important insights especially those of rural or digitally disadvantaged groups. This limitation is especially relevant given that digital access itself is one of the factors influencing participation in e-petitions.

Second, self-reported survey measures can potentially add social desirability bias and response bias, meaning that respondents can exaggerate their civic engagement, digital competence, or trust to portray themselves in a better light.

Another drawback of the research is the fact that the number of interviewees is limited ($n = 9$). Though the qualitative aspect was intended to reflect the varied views of the stakeholders instead of attaining a high degree of representativeness, the small sample size implies that the results cannot be applied to all citizens in Kazakhstan and that they are rather exploratory and illustrative.

7. Recommendation

The results of the present research reveal that civic motivation and digital literacy are the main factors promoting involvement in e-petitions in Kazakhstan, with institutional trust, procedural design, and media exposure acting as secondary but structurally important factors. These findings imply that to make digital civic engagement effective, one needs to improve it not only on a technical level, but also to make the institutions more transparent, responsive, and inclusive. According to the quantitative and qualitative data, a number of policy recommendations can be promoted to make the Epetition.kz platform more effective and

legitimate in the context of digital governance development in the new environment of Kazakhstan.

First, institutional responsiveness develops as the most urgent place to change. Though civic motivation is the best predictor of participation, qualitative results say that long-term engagement hinges on the view of the citizens that petitions have the potential to yield significant results. On this note, the Government of Kazakhstan needs to focus on procedural openness by posting the information which is detailed on the way petitions are processed, which institutions are going to review them and what the criteria is which is used to accept or reject a petition. Secondly, implementing a publicly visible system of status tracking (that shows where the status is at a stage of being under review, in progress, implemented, or rejected with justification) would enhance institutional credibility. The perception of procedural fairness would be enhanced by providing all-inclusive follow-up reports justifying decisions, with cases of rejection. The experience of other countries indicates that effective feedback loops can contribute greatly to the perceived legitimacy of e-participation mechanisms. The situation in the Kazakhstani context, whereby institutional trust is still weak, visible responsiveness will probably be more effective than promotional efforts alone.

Second, there must be better usability of platforms and technical infrastructure. Although there is a positive predictability of digital literacy to participate, the interview data indicate that there is still discontentment with the technical planning of the platform. Even those who were digitally competent indicated that there were problems with navigation, instability of the platform and the lack of interactivity. In enhancing the technical structure of Epetition.kz, it can thus be strengthened by streamlining the authentication process, preserving the strong level of security, adding the possibility of searching the keywords and filters by their topics and areas, as well as mobile optimization in accordance with the modern trends of digital usage. In addition, it would be more stable on the server and load quicker, which would ease the frustration of the user. Technical friction should be minimized especially in situations where intrinsic civic motivation is a key element of participation. Provided that the level of procedural and technical barriers is high, the moderately motivated individuals can lose interest prior to the process.

Third, the increased digital literacy programs and civic education programs are one of the important long-term investments. Since there is a statistically significant correlation between digital literacy and participation, specific educational initiatives must be put in place to increase access to digital civic instruments. Information gaps that would be detected during interviews would be solved by conducting public awareness campaigns on how e-petitions work and how they impact policymaking processes. The inclusion of digital civic participation modules in secondary and higher education curricula would make knowledge about the mechanisms of participation institutionalized among younger generations. In rural regions, regional training workshops should be based on practical skills like working with digital signatures and navigation across e-governments. Partnership with civil society organizations can also help bring about digital literacy sessions at the community level. Notably, such programs must go beyond technical skills to incorporate civic education that elucidates how instruments of participation

interface with institutional decision-making systems. The lessening of informational asymmetry between citizens and state institutions would alleviate the misconceptions about policy constraints and procedural limitations.

Fourth, increased systematization and responsibility in integrating with media ecosystems would increase visibility and credibility. Though media coverage has not been found to be a direct predictor of involvement in the statistical model, there is qualitative evidence that social media amplification is a significant factor in increasing awareness and legitimizing petitions. Enhancing the interconnection between the formal platform and media platforms might thus increase reach. Collaboration with independent media houses may prompt equal and factual reporting of civic activities. Meanwhile, protection should be upheld against misinformation, false amplification, or manipulation and media activity should facilitate transparency and not distort public discourse.

Lastly, the signature threshold and procedural design might be re-evaluated. Though the 50,000-signature requirement was not explicitly tested in the quantitative model, qualitative interviews indicated that there are concerns that this requirement seems to be unachievable in a fairly new platform with relatively small participation rates. The introduction of tiered thresholds based on the levels of administration could be another option that is looked into by the policymakers as a differentiation between local and national petitions. A temporary reduction of the threshold at the initial stage of the platform formation can also stimulate early involvement and create the initial successful cases that provide people with the necessary confidence. Moreover, institutional advice or assistance in creating petitions might enhance the quality and clarity of the petitions, and therefore, increase the chances of successful reviewing. Procedural design modification should not undermine democratic norms, but instead it can contribute to incremental institutionalization and a culture of meaningful digital participation.

Taken together, these suggestions highlight the fact that the problem of improving the capabilities of e-petitions in Kazakhstan is complex, and the key to its success must be the combination of institutional change, technical renewal, civic education, and procedural adjustment. Policymakers can enhance the process of turning symbolic digital inclusion into substantial, outcome-focused civic engagement by targeting both motivational and structural factors related to participation.

8. Conclusion

This study sought to identify the critical factors that affect public participation in e-petitions in Kazakhstan using both quantitative survey research and qualitative stakeholder interviews. The results of this study yielded valuable theoretical and empirical insights regarding the dynamics of digital citizen participation in a semi-autocratic yet digitally advanced country.

First, it was found that civic motivation is the primary predictor of participation in e-petitions. Those citizens who recognize e-petitions as tools for expressing themselves, taking collective action, and signaling their moral values are more likely to participate in e-petition

campaigns. This finding shows that current e-petitions in Kazakhstan serve as instruments for expressive participation.

Second, digital literacy was found to be a key structural facilitator of participation. Awareness of how digital signatures work and confidence in using e-government services make people more likely to participate. Nonetheless, digital literacy is not enough if e-government services have usability issues or are unresponsive to citizens' demands.

Thirdly, institutional trust did not reveal any predicted correlation with participation. Rather, the results indicate a framework of critical participation, where people participate because they do not trust the government to respond to their demands. This emphasizes another characteristic feature of digital democracy in Kazakhstan: participation can be used as means of surveillance and signaling, as opposed to governance.

Fourthly, media exposure, procedural complexity, and data privacy did not appear to have much influence on citizens' behavior directly; however, qualitatively, they appeared to be significant factors for determining legitimacy and visibility.

Generally, e-petitions in Kazakhstan can be regarded as one of the milestones in formalization of citizen-led agenda setting. At present, though, the system operates at a transitional phase, between symbolic representation and participation.

In order for Epetition.kz to become part of a system of participatory governance, the reforms should focus on transparency, responsiveness, usability, and civic education. Through such measures, e-petitions may transition from sporadic acts of emotion-driven activism into established avenues of constructive discourse between the state and its citizens.

More broadly, the case of Kazakhstan is emblematic of the challenges involved in creating digital democracy in hybrid political regimes. Technological innovation does not automatically lead to democratization; the outcomes depend on how technology interacts with other factors. Through developing such synergies, Kazakhstan may turn its platform of online petitions from mere symbolic participation into active citizenship.

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Appendix A: Survey Questions

Section 1: Demographic Information

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Prefer not to say

What is your age group?

- ☐ 18-28 (Early adulthood)
- ☐ 29-40 (Mid-career adults)
- ☐ 41-55 (Mature adults)
- ☐ 56+ (Senior adults)

Where do you currently reside?

- ☐ Urban area (City or town)
- ☐ Rural area (Village or small settlement)

What is your highest level of education?

- ☐ No formal education
- ☐ Secondary school diploma
- ☐ Vocational/technical education
- ☐ Bachelor's degree
- ☐ Master's degree or higher

Section 2: Awareness of E-Petition Platforms

Have you heard of electronic petition platforms such as *Epetition.kz*?

- ☐ Yes
- ☐ No

How familiar are you with the purpose and function of e-petition platforms?

- ☐ Not familiar at all
- ☐ Slightly familiar
- ☐ Somewhat familiar
- ☐ Very familiar

Do you know how the e-petition process works in Kazakhstan (e.g., how petitions are created, signed, and reviewed by authorities)?

- ☐ Yes, I fully understand the process
- ☐ I have some knowledge, but not in detail
- ☐ No, I do not know how it works

Have you ever visited an e-petition platform (e.g., to read or sign a petition)?

- ☐ Yes, frequently
- ☐ Yes, occasionally
- ☐ I have visited once or twice
- ☐ No, I have never visited

Section 3: Digital Literacy

How would you rate your ability to complete online forms?

- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Excellent

Have you ever used a digital signature for an online document or form?

- ☐ Yes, multiple times
- ☐ Yes, once or twice
- ☐ No, but I know how to use it
- ☐ No, and I am not familiar with how it works

How confident are you in registering on official websites for online participation (e.g., government services, petitions, or voting platforms)?

- ☐ Not confident at all
- ☐ Slightly confident
- ☐ Somewhat confident
- ☐ Very confident

Section 4: Public Participation in E-Petitions

Have you ever signed an electronic petition?

- ☐ Yes
- ☐ No

If yes, how many e-petitions have you signed in the past year?

- ☐ 1-3
- ☐ 4-6
- ☐ 7+

What types of petitions are you most likely to support? (Select all that apply)

- ☐ Environmental issues
- ☐ Human rights and social justice

- Political reforms and governance
- Economic policies and labor rights
- Local community issues
- Other (please specify): _____

Section 5: Motivational Factors

To what extent do you agree with the following statements? (Scale: Strongly Disagree - Disagree - Neutral - Agree - Strongly Agree)

- Signing e-petitions helps me express my personal beliefs and opinions.
- I am more likely to sign a petition if it is shared by someone I trust.
- I use e-petitions as a way to protest against policies I disagree with.
- I believe that signing e-petitions can lead to policy change.

Section 6: Barrier Factors

To what extent do you agree with the following statements? (Scale: Strongly Disagree - Disagree - Neutral - Agree - Strongly Agree)

- Most e-petitions do not address issues I care about.
- I doubt that the government takes e-petitions seriously.
- Signing an e-petition takes too much time and effort.
- I do not feel confident that my personal data will be safe when signing e-petitions.
- I prefer other forms of civic engagement (e.g., protests, social media activism, volunteering) over signing e-petitions.

Section 7: Media Exposure

How often do you come across information about e-petitions on the following platforms? (Scale: Never - Rarely - Sometimes - Often - Daily)

- Social Media (e.g., Facebook, Instagram, TikTok, Telegram)
- Traditional Media (e.g., television, radio, newspapers)
- Online News Platforms (e.g., news websites, blogs, independent media)

Have you ever signed a petition after seeing it shared on social media?

- Yes, multiple times
- Yes, once or twice
- No

Section 8: Open-Ended Question

What do you think would encourage more people in Kazakhstan to participate in e-petitions? (Please share your thoughts in a few sentences)

Appendix B: Interview Questions

1. General Citizens (urban & rural)

Purpose:

To explore personal experiences, motivations, digital literacy, and barriers to participation.

Questions:

1. Have you ever heard about epetition.kz? If yes, how?
2. Have you ever signed or created an e-petition? Why or why not?
3. What issues would make you consider signing a petition?
4. How comfortable are you using digital platforms for civic actions like petitions?
5. What challenges do you think prevent people from signing petitions?
6. Do you believe e-petitions can lead to real policy changes in Kazakhstan?
7. How does media (social or traditional) influence your awareness or participation?
8. Would you be more likely to participate if your friends or trusted figures shared a petition?
9. What changes could improve your willingness to engage with e-petitions?

2. Civil Society & Activists

Purpose:

To assess how CSOs and activists use or promote e-petitions and what systemic challenges they face.

Questions:

1. How often do you or your organization use e-petitions in advocacy?
2. What motivates you to start or support e-petitions?
3. What types of issues gain the most public support?
4. What barriers do you face in mobilizing support for petitions?
5. How effective is epetition.kz as a tool for civic engagement?
6. Do you think the current threshold of 50,000 signatures is realistic?
7. How do you evaluate government responsiveness to successful petitions?
8. What role does social media or influencer support play in petition success?
9. What improvements would make the platform or process more effective for public mobilization?

3. Government Officials or Policy Makers

Purpose:

To understand their perception of e-petitions, responsiveness, and the system's integration into governance.

Questions:

1. What role do you think e-petitions should play in the policymaking process?
2. How often do you or your department review e-petitions?
3. What criteria determine whether a petition is taken seriously or acted upon?
4. How transparent is the review process once a petition passes the signature threshold?

5. Do you believe the current platform (epetition.kz) meets the needs of both citizens and officials?
6. How can government institutions better respond to public e-petitions?
7. What challenges do you face in addressing petitions?
8. How could the process be improved to encourage more participation and trust?

4. Media Representatives (Journalists, Digital Media Experts)

Purpose:

To examine how media shapes public perception and visibility of e-petitions.

Questions:

1. How often do you cover or report on e-petitions?
2. What makes a petition newsworthy in your outlet?
3. In your experience, do media reports increase engagement with petitions?
4. Have you seen any cases where media pressure influenced government responses?
5. How does social media influence traditional media's attention to petitions?
6. What are the challenges in covering e-petition-related stories?
7. What could be done to increase the visibility of public petitions through media?

5. Tech Experts / Digital Platform Designers

Purpose:

To assess the usability and accessibility of epetition.kz and understand tech-related barriers.

Questions:

1. Have you evaluated or worked with the epetition.kz platform?
2. In your opinion, how user-friendly and accessible is it?
3. What improvements could make the platform more engaging or easier to use?
4. What digital barriers (e.g., mobile access, authentication) do users face?
5. How can digital literacy be better integrated into platform design?
6. What role does user trust and data transparency play in platform engagement?
7. What international best practices could be applied to improve Kazakhstan's system?

Appendix B. Survey Instruments: Variables, Items, and Scales

Variable	Code	Scale	Hypothesis	Description
Participation (DV)	Q16	Binary (0/1)	DV	Have you ever signed an e-petition?
Digital Literacy	Q11, Q12, Q13	0–3 (composite)	H1	Self-assessed internet skills, online tools use, e-gov familiarity
Belief in Effectiveness	Q33	1–4 (Likert)	H2	E-petitions can influence government decisions
Gov. Skepticism	Q37	1–4 (Likert)	H2	Government ignores citizens' opinions (reverse coded)
Procedural Complexity	Q40	1–4 (Likert)	H3	Signing an e-petition is too complicated
Platform Inconvenience	Q44	1–4 (Likert)	H3	The e-petition platform is inconvenient to use
Media Exposure	Q45, Q46, Q47, Q48	1–4 (composite)	H4	Frequency of encountering e-petitions in media/social networks
Civic Motivation	Q29, Q30, Q31, Q32, Q34, Q35	1–4 (composite)	H5	Desire to contribute to civic life, belief in collective action
Data Privacy Concern	Q41	1–4 (Likert)	H6	Worried about personal data when signing e-petitions
Gender	Q1	Binary (0=F, 1=M)	Demo	Respondent gender
Age	Q2	Ordinal (1–4)	Demo	Age group: 18–28 / 29–40 / 41–55 / 56+

Urban/Rural	Q3	Binary	Demo	Place of residence
Education	Q4	Ordinal (0–4)	Demo	Highest level of education attained