



## Citizen Participation in Digital Demographic Data Systems: Evidence from Non-Permanent Residents in Surabaya's PUNTADEWA Application

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### ABSTRACT

This study analyzes the participation level of non-permanent residents in using the Himpun Data Demografi Kawasan (Puntadewa) web application in Surabaya City. The research employed a descriptive quantitative method with a sample of 115 respondents selected through purposive sampling. Data were collected using a Likert-scale questionnaire (1-5) that measured digital literacy, perceived benefits, mobility, trust, and frequency of application usage. The data were analyzed using descriptive statistics (percentage, mean, and standard deviation). The findings indicate that the participation level of non-permanent residents remains relatively low due to limited digital literacy, low perceived benefits, and weak trust in government. The novelty of this study lies in its specific focus on non-permanent residents, a group that has been largely overlooked in previous e-Government research. Theoretically, this study contributes to the development of public technology adoption models (TAM, UTAUT), and practically, it provides policy recommendations to improve digital literacy and government transparency

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## **INTRODUCTION**

The availability of accurate and up-to-date population data is one of the key pillars in supporting sustainable development in urban areas (Bhaskara, 2024; Dwiyanto, 2021). Population data serves as the foundation for development planning, budget allocation, public service provision, and population mobility control. Without valid data, governments face difficulties in mapping community needs and formulating evidence-based policies. (Bhaskara, 2024) emphasizes that the accuracy of demographic data has a direct implication for the quality of public policies, ranging from the provision of health, education, to transportation facilities. In the context of a large metropolitan city such as Surabaya, high levels of migration and population mobility add further complexity to maintaining demographic data accuracy (Nugroho, 2022).

Surabaya, as a metropolitan city, is not only inhabited by permanent residents but also by a large group of non-permanent residents such as students, contract workers, migrants, and individuals temporarily residing for work or study purposes. The presence of these non-permanent residents contributes to the city's social and economic dynamics, but at the same time creates challenges in population administration. Their high mobility, temporary residential status, and perception that population registration is not urgent often result in inadequate data recording. Consequently, population data does not fully reflect actual conditions. To address this challenge, the Surabaya City Government developed the Puntadewa (Himpun Data Demografi Kawasan) application, designed to collect demographic data in a more integrated, transparent, and real-time manner (Surabaya, 2022). This application aims to simplify the population registration process, enabling both permanent and non-permanent residents to register, update demographic information, and access related services independently through digital platforms.

According to (As'adi, 2024) the use of web-based applications in public administration has great potential to improve bureaucratic efficiency, accelerate service delivery, and strengthen citizen participation in governance. Nevertheless, the success of such digital innovations largely depends on the extent to which the public is willing and able to participate. Previous studies have highlighted several factors influencing citizen participation in digital services. (Prayoga & Nurhadi, 2022) found that the low adoption of demographic applications in Yogyakarta was primarily due to limited socialization. (Lestari et al., 2023) and (Putri & Hidayat, 2023) emphasize the importance of digital literacy as a determinant of participation in e-government. On the other hand, public trust is also a critical factor, with (Bouckaert & van de Walle, 2003) arguing that trust in government is a prerequisite for citizen engagement in digital services. However, most of these studies tend to focus on permanent residents or the general population.

To date, studies that specifically analyze the participation of non-permanent residents in the use of digital demographic administration applications remain limited. Yet, this group has unique characteristics such as high mobility, diverse levels of digital literacy, and relatively low trust in government. These conditions raise distinct empirical issues compared to permanent residents. This forms the research gap addressed in the present study.

Accordingly, this research introduces novelty by focusing on the participation level of non-permanent residents in Surabaya, integrating five key variables: digital literacy, perceived benefits, mobility, trust, and frequency of use. This approach is expected to provide a comprehensive explanation of both the drivers and barriers to Puntadewa application usage.

Theoretically, this research enriches the literature on public technology adoption by referring to the Technology Acceptance Model (Davis, 1989), the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003), and the Digital Competence Framework (European Commission, 2018). The integration of these theories provides a solid conceptual framework for understanding the phenomenon of low digital participation. Practically, this research is expected to offer valuable insights for the Surabaya City Government in enhancing the effectiveness of the Puntadewa application through digital literacy strategies, more inclusive socialization efforts, and transparent data management. Therefore, the objectives of this study are: (1) to analyze the participation level of non-permanent residents in the use of Puntadewa, (2) to identify factors influencing participation, and (3) to determine the dominant factors that either hinder or encourage participation.

## **LITERATURE REVIEW**

### **Theoretical Review**

#### **Digital Participation in Population Administration**

Citizen participation in e-Government is a critical determinant of the success of digital bureaucratic transformation. Participation can be understood as the active involvement of citizens in utilizing digital services, updating demographic data, and providing feedback (Bhaskara, 2024). In the context of population administration, participation levels can be conceptualized through (Arnstein, 1969) which distinguishes between passive, interactive, and collaborative forms of participation. Among non-permanent residents, participation is often hindered by high mobility, limited awareness of administrative obligations, and low digital literacy (Lestari et al., 2023; Prayoga & Nurhadi, 2022; Zainuddin & Santoso, 2021). The Puntadewa application in Surabaya was designed to address these challenges; however, its effectiveness largely depends on the extent of involvement of non-permanent residents.

In addition, public trust plays a pivotal role. (Bouckaert & van de Walle, 2003) argue that citizens' trust in government, particularly in safeguarding data security and confidentiality, significantly determines their willingness to use digital services. In this regard, low levels of public trust may inhibit participation, even when digital applications are accessible and user-friendly. Trust, therefore, should not only be regarded as a supporting factor but as a prerequisite for the adoption of public technology.

#### **Technology Adoption Frameworks and Conceptual Model**

This study employs the Technology Acceptance Model (TAM) developed by (Davis, 1989), which highlights two main constructs: Perceived Usefulness and Perceived Ease of Use. In the case of Puntadewa, perceived usefulness refers to the extent to which the application is considered beneficial for demographic registration, while perceived ease of use concerns users' ability to access and operate the application without technical difficulties.

Beyond TAM, the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by (Venkatesh et al., 2003) also provides a relevant framework. UTAUT incorporates performance expectancy, effort expectancy, social influence, and facilitating conditions as critical determinants of technology use. In this study, the mobility of non-permanent residents and limitations in infrastructure can be explained through the UTAUT perspective. Accordingly, the integration of TAM and UTAUT offers a more comprehensive understanding of the determinants of digital participation.

Digital literacy, as a central variable in this research, is further conceptualized through the Digital Competence Framework (DigComp) developed by (European Commission, 2018) and reinforced by (OECD, 2022). This framework encompasses five dimensions: information literacy, communication, content creation, safety, and problem-solving. Low digital literacy directly constrains non-permanent residents' ability to use the Puntadewa application effectively. Therefore, digital literacy must be viewed as a foundational factor in measuring levels of digital participation.

Based on these theoretical foundations, the conceptual framework of this study illustrates that digital literacy, perceived usefulness, mobility, trust, and frequency of use are interrelated factors influencing the participation of non-permanent residents in the Puntadewa application.

## **METHODOLOGY**

This study employed a quantitative descriptive approach, chosen to provide an objective overview of the participation level of non-permanent residents in using the web-based application Himpun Data Demografi Kawasan (Puntadewa) in Surabaya City. According to (Sugiyono, 2019), quantitative descriptive research is appropriate for analyzing data by describing phenomena as they are, based on information obtained directly from respondents.

### **Research Location and Period**

The study was conducted in Surabaya City during August–September 2025. The selection of this location was based on the city's high migration flows and significant presence of non-permanent residents. Furthermore, Puntadewa was developed and implemented by the Surabaya City Government, making it a relevant object of research.

### **Population and Sample**

The population of this study consisted of all non-permanent residents residing in Surabaya. A purposive sampling technique was employed, with the inclusion criteria being non-permanent residents who had used or were at least familiar with the Puntadewa application. A total of 115 respondents were selected, which was considered sufficient to obtain representative data. (Ghozali, 2018) asserts that a sample size of more than 100 respondents is adequate for descriptive quantitative research.

### **Research Variables and Operational Definitions**

The research variables were determined based on the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and prior studies. These include:

1. Digital Literacy – the ability of respondents to use information technology and web-based applications.
2. Perceived Usefulness – respondents' views on the extent to which Puntadewa provides benefits in demographic registration.
3. Mobility – the degree of respondents' residential movement within a certain period.
4. Trust – respondents' confidence in the security, confidentiality, and proper use of their demographic data.
5. Frequency of Use – the intensity with which respondents utilize the Puntadewa application.

Table 1. Operationalization of Research Variables

| Variabel                    | Indicators                                                                                                                                                                                  | Question                                                                                                                                                                                                                                                                                                                                                              | Scala        |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Digital Literacy</b>     | <ol style="list-style-type: none"> <li>1. Information search</li> <li>2. Application operation</li> <li>3. Data entry &amp; submission</li> <li>4. Technical problem-solving</li> </ol>     | <ul style="list-style-type: none"> <li>- I can use the internet to search for information related to demographic applications.</li> <li>- I can operate web-based applications such as Puntadewa without difficulty.</li> <li>- I know how to enter and submit data via Puntadewa.</li> <li>- I can resolve simple technical issues while using Puntadewa.</li> </ul> | Likert (1-5) |
| <b>Perceived Usefulness</b> | <ol style="list-style-type: none"> <li>1. Convenience</li> <li>2. Speed</li> <li>3. Accuracy</li> <li>4. Policy relevance</li> </ol>                                                        | <ul style="list-style-type: none"> <li>- Puntadewa makes it easier to provide demographic data.</li> <li>- Puntadewa accelerates data entry compared to manual methods.</li> <li>- Puntadewa improves demographic data accuracy.</li> <li>- Data submitted via Puntadewa is useful for government policies.</li> </ul>                                                | Likert (1-5) |
| <b>Mobility</b>             | <ol style="list-style-type: none"> <li>1. Frequency of moving</li> <li>2. Impact on access</li> <li>3. Consistency of use</li> </ol>                                                        | <ul style="list-style-type: none"> <li>- I have moved frequently in the past year.</li> <li>- My mobility affects my ease of access to Puntadewa.</li> <li>- Changing residence reduces my use of Puntadewa.</li> <li>- Despite frequent moves, I can still access Puntadewa.</li> </ul>                                                                              | Likert (1-5) |
| <b>Trust</b>                | <ol style="list-style-type: none"> <li>1. Data security</li> <li>2. Misuse prevention</li> <li>3. Proper use</li> <li>4. Government reliability</li> </ol>                                  | <ul style="list-style-type: none"> <li>- I believe Puntadewa securely stores personal data.</li> <li>- I trust the government will not misuse the data in Puntadewa.</li> <li>- I believe my data will only be used for demographic purposes.</li> <li>- I trust the government to safeguard my demographic information.</li> </ul>                                   | Likert (1-5) |
| <b>Frequency of Use</b>     | <ol style="list-style-type: none"> <li>1. Routine usage</li> <li>2. Consistency despite obstacles</li> <li>3. Use during data changes</li> <li>4. Preference over manual methods</li> </ol> | <ul style="list-style-type: none"> <li>- I routinely use Puntadewa as needed.</li> <li>- I continue using Puntadewa despite technical challenges.</li> <li>- I frequently access Puntadewa when updating demographic data.</li> <li>- I prefer using Puntadewa over manual reporting.</li> </ul>                                                                      | Likert (1-5) |

Source: Processed by Researcher (2025)

### **Research Instrument**

The instrument used in this study was a closed-ended questionnaire with a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The questionnaire was developed based on the identified research variables and distributed online via Google Forms. Prior to distribution, the instrument was tested for:

- a. Validity Test – using Pearson Product-Moment correlation, where items were considered valid if the correlation coefficient ( $r$ ) exceeded the critical value of the  $r$  table.
- b. Reliability Test – using Cronbach's Alpha to assess internal consistency, with values  $\geq 0.70$  considered reliable (Ghozali, 2018).

### **Data Collection Techniques**

- c. Primary data were obtained from respondents' questionnaire responses.
- d. Secondary data were collected from relevant literature, scientific articles, and official documents on Puntadewa, e-Government, and population administration.

### **Data Analysis Techniques**

The data were analyzed using descriptive statistics, specifically mean and standard deviation for each variable. The results were then categorized into intervals following (Sugiyono, 2019):

- a. 1.00 – 1.80 = Very Low
- b. 1.81 – 2.60 = Low
- c. 2.61 – 3.40 = Moderate
- d. 3.41 – 4.20 = High
- e. 4.21 – 5.00 = Very High

These results were interpreted to assess the participation level of non-permanent residents and to identify the driving and inhibiting factors. This approach aligns with (Lestari et al., 2023), who used descriptive statistics to map the influence of digital literacy, and (Prayoga & Nurhadi, 2022), who emphasized socialization and trust as determining factors.

**RESULTS AND DISCUSSION**

This study involved 115 respondents, all of whom were non-permanent residents in Surabaya City. The respondents consisted of students, contract employees, and informal workers, with varying lengths of stay (less than 6 months, 6–12 months, and more than 1 year). These characteristics are consistent with non-permanent residents who tend to exhibit high levels of mobility. Data analysis was carried out by calculating the mean, standard deviation (SD), and classifying the results into categories based on interval criteria (Sugiyono, 2019).

**Respondent Characteristics**

Based on the online questionnaire distributed via Google Forms, 115 valid responses were obtained and analyzed.

Table 2. Respondent Characteristics

| <b>Characteristic</b>    |                 | <b>Percentage</b> |
|--------------------------|-----------------|-------------------|
| <b>Gender</b>            | Male            | 42,6%             |
|                          | Female          | 57,4%             |
| <b>Total</b>             |                 | 100%              |
| <b>Age</b>               | ≤ 20            | 10,43%            |
|                          | 20-25           | 63,47%            |
|                          | 26-30           | 19,13%            |
|                          | ≥ 30            | 6,95%             |
| <b>Total</b>             |                 | 100%              |
| <b>Employment Status</b> | Student         | 59,1%             |
|                          | Private Employe | 0,9%              |
|                          | Contract Worker | 13,9%             |
|                          | Migrant         | 26,1%             |
| <b>Total</b>             |                 | 100%              |
| <b>Length of Stay</b>    | ≤ 6 bulan       | 9,6%              |
|                          | 6-12 bulan      | 29,6%             |
|                          | ≥ 1 tahun       | 60,9%             |
| <b>Total</b>             |                 | 100%              |

Source: Processed by the Researcher (2025)

The results indicate that users of the Puntadewa application in Surabaya were predominantly female (57.4%), aged 20–25 years (63.47%), and had stayed in Surabaya for more than one year (60.9%). In terms of employment status, the largest group consisted of students (59.1%).

Digital literacy is a prerequisite for adopting technology-based public services. In this study, it was measured through the ability to search for information, operate applications, enter and submit data, and resolve technical problems.

Table 3. Respondent Characteristics

| Characteristic    |                 | Percentage |
|-------------------|-----------------|------------|
| Gender            | Male            | 42,6%      |
|                   | Female          | 57,4%      |
| Total             |                 | 100%       |
| Age               | ≤ 20            | 10,43%     |
|                   | 20-25           | 63,47%     |
|                   | 26-30           | 19,13%     |
|                   | ≥ 30            | 6,95%      |
| Total             |                 | 100%       |
| Employment Status | Student         | 59,1%      |
|                   | Private Employe | 0,9%       |
|                   | Contract Worker | 13,9%      |
|                   | Migrant         | 26,1%      |
| Total             |                 | 100%       |
| Length of Stay    | ≤ 6 bulan       | 9,6%       |
|                   | 6-12 bulan      | 29,6%      |
|                   | ≥ 1 tahun       | 60,9%      |
| Total             |                 | 100%       |

Source: Processed by the researcher (2025)

Based on descriptive analysis, digital literacy obtained a mean score of 2.32 with an SD of 1.15, which falls into the low-to-moderate category. The highest proportion of responses was found in the ability to search for information (46.1% chose scale 2) and application operation (37.4% chose scale 2). This indicates that the majority of respondents still encounter difficulties in using the Puntadewa application optimally. These findings are consistent with the Digital Competence Framework (DigComp), which emphasizes the importance of information literacy and problem-solving skills (European Commission, 2018). The limitations in digital literacy also align with the results (Lestari et al., 2023), who found that individuals with low digital literacy tend to be less active in participation, as well as with the UN E-Government Survey (Nations, 2024), which highlights digital divides as a global barrier to e-Government adoption.

#### Perceived Usefulness

Perceived usefulness refers to the extent to which respondents recognized the benefits of the Puntadewa application in supporting demographic data recording. The measured indicators included convenience, speed, accuracy, and contribution to policymaking.

Table 4. Respondents' Perceived Usefulness

| No. | Question                                                                           | Response (%) |       |       |       |       |
|-----|------------------------------------------------------------------------------------|--------------|-------|-------|-------|-------|
|     |                                                                                    | 1            | 2     | 3     | 4     | 5     |
| 1   | Does the Puntadewa application make it easier for you to provide demographic data? | 7,8%         | 33,9% | 37,4% | 10,4% | 10,4% |
| 2   | Does the Puntadewa application make it easier for you to provide demographic data? | 6,1%         | 32,2% | 37,4% | 17,4% | 7%    |
| 3   | Does Puntadewa help improve the accuracy of demographic data?                      | 7,8%         | 31,3% | 40%   | 11,3% | 9,6%  |
| 4   | Is the data you provide through Puntadewa useful for government policymaking?      | 5,2%         | 37,4% | 36,5% | 13,9% | 7%    |

Source: Processed by the researcher (2025)

The analysis shows a mean score of 2.83 with an SD of 1.03, falling into the moderate category, with most responses clustering around scale 3 (37–40%). However, the proportion of respondents who perceived the application as highly useful (scale 5) remained relatively low, around 7–10%. These findings are consistent with the Technology Acceptance Model (Davis, 1989) and the study on the JAKI application (Jannah & Ramadhan, 2025), which identified perceived usefulness as a dominant factor influencing technology acceptance. The relatively low level of perceived usefulness may explain why Puntadewa user participation remains limited, a trend also observed by (Prayoga & Nurhadi, 2022) in their study on demographic applications in Yogyakarta.

### Mobility

Mobility refers to the intensity of respondents' residential movement, which may influence their consistency in using the Puntadewa application. High mobility among non-permanent residents represents an external factor that can reduce their level of participation.

Table 5. Respondents' Mobility

| No. | Question                                                                             | Response (%) |       |       |       |      |
|-----|--------------------------------------------------------------------------------------|--------------|-------|-------|-------|------|
|     |                                                                                      | 1            | 2     | 3     | 4     | 5    |
| 1   | Have you frequently changed your residence during the past year?                     | 6,1%         | 26,1% | 41,7% | 18,3% | 7,8% |
| 2   | Does your mobility affect your ease of access to the Puntadewa application?          | 1,7%         | 27%   | 40%   | 21,7% | 9,6% |
| 3   | Does changing residence make you use the Puntadewa application less often?           | 2,6%         | 22,6% | 44,3% | 22,6% | 7,8% |
| 4   | Despite frequent relocation, are you still able to access the Puntadewa application? | 1,7%         | 25,2% | 40,9% | 24,3% | 7,8% |

Source: Processed by the Researcher (2025)

The descriptive analysis produced a mean score of 3.07 with an SD of 0.96, classified as moderate. Respondents with higher mobility tended to use the Puntadewa application less consistently, as reflected in the predominance of responses at scale 3 (40–44%). This indicates that mobility acts as a barrier to participation. These findings corroborate (Bhaskara, 2024), who noted that non-permanent residents often do not prioritize demographic registration due to frequent relocation. Within the UTAUT framework (Venkatesh et al., 2003; Wibowo & Hartono, 2021) mobility interacts with social influence and facilitating conditions, which may further exacerbate its negative effects if adequate governmental support is lacking.

### Trust

Public trust in government is a critical determinant of citizens' willingness to use demographic data-based applications.

Table 6. Respondents' Trust

| No. | Question                                                                                                 | Response (%) |       |       |       |      |
|-----|----------------------------------------------------------------------------------------------------------|--------------|-------|-------|-------|------|
|     |                                                                                                          | 1            | 2     | 3     | 4     | 5    |
| 1   | Are you confident that the Puntadewa application is secure in storing personal data?                     | 11,3%        | 47,7% | 30,4% | 11,3% | 5,2% |
| 2   | Do you trust that the government will not misuse the data in Puntadewa?                                  | 10,4%        | 34,8% | 33%   | 14,8% | 7%   |
| 3   | Do you trust that the government will not misuse the data in Puntadewa??                                 | 10,4%        | 45,2% | 30,4% | 7%    | 7%   |
| 4   | Do you trust that the government is capable of maintaining the confidentiality of your demographic data? | 10,4%        | 40%   | 33%   | 11,3% | 5,2% |

Source: Processed by the Researcher (2025)

This variable obtained a mean score of 2.62 with an SD of 1.02, categorized as low-to-moderate. The majority of respondents fell into the low category (scale 2), with 47.7% selecting this option for the item on data security. This indicates that the level of trust among non-permanent residents is relatively low. These findings are consistent with (Putri & Hidayat, 2023), who found that transparency enhances trust, while national data security incidents (Kompas.com, 2024; Tempo.co, 2024) tend to undermine public confidence. The results also align with (Bouckaert & van de Walle, 2003) and (Nurhayati & Pramono, 2021), who emphasized that trust is a prerequisite for digital participation. Low levels of trust may reduce citizens' willingness to participate in e-Government initiatives, even when digital tools are available.

### Frequency of Use

Frequency of use reflects how often respondents utilized the Puntadewa application, both routinely and when demographic data updates were required.

Table 7. Respondents' Frequency of Use

| No. | Question                                                                                    | Response (%) |       |       |      |      |
|-----|---------------------------------------------------------------------------------------------|--------------|-------|-------|------|------|
|     |                                                                                             | 1            | 2     | 3     | 4    | 5    |
| 1   | Do you frequently use the Puntadewa application on a routine basis according to your needs? | 20%          | 40%   | 27%   | 7%   | 6,1% |
| 2   | Do you continue to use Puntadewa even when experiencing technical issues?                   | 16,5%        | 41,7% | 30,4% | 7,8% | 3,5% |
| 3   | Do you often access Puntadewa when there are demographic data changes?                      | 13,9%        | 47,8% | 25,2% | 8,7% | 4,3% |
| 4   | Do you prefer Puntadewa over manual methods in reporting demographic data?                  | 13%          | 51,3% | 21,7% | 8,7% | 5,2% |

Source: Processed by the Researcher (2025)

The analysis revealed a mean score of 2.41 with an SD of 1.00, categorized as low-to-moderate. More than 40% of respondents selected scale 2 (rare use), particularly for the item on updating demographic data (47.8%). This phenomenon aligns with the Technology Acceptance Model (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003), which emphasize that beyond perceived usefulness, external factors such as technical support and facilitating conditions strongly influence consistent usage. The lack of motivation for routine application use highlights the need for more intensive socialization strategies to encourage sustained participation.

### Summary of Results

Table 8. Summary of Mean, SD, and Category

| Variabel             | Mean | SD   | Kategori      |
|----------------------|------|------|---------------|
| Literasi Digital     | 2,32 | 1,15 | Rendah-Sedang |
| Persepsi Manfaat     | 2,83 | 1,03 | Sedang        |
| Mobilitas            | 3,07 | 0,96 | Sedang        |
| Tingkat Kepercayaan  | 2,62 | 1,02 | Rendah-Sedang |
| Frekuensi Penggunaan | 2,41 | 1,00 | Rendah-Sedang |

Source: Processed by the Researcher (2025)

The findings of this study indicate that the low participation of non-permanent residents is primarily influenced by digital literacy and public trust. This aligns with (Bouckaert & van de Walle, 2003), who emphasized the significance of trust in digital governance, while extending prior studies by integrating trust alongside digital literacy as a key determinant often overlooked in earlier research. Unlike (Prayoga & Nurhadi, 2022), who highlighted socialization as the main driver, this study demonstrates that trust in government

is the more dominant barrier in Surabaya's case. Mobility also plays an explicit role in shaping participation in the context of e-Government.

Overall, the results reveal that the participation of non-permanent residents in using the Puntadewa application remains low, reinforcing arguments that Indonesia's e-Government still faces structural (Bank, 2023; Ramadhani & Setiawan, 2022; Yuliani & Kurniawan, 2022). The dominant influencing factors are: (1) Low digital literacy, (2) Suboptimal perceived usefulness, (3) High mobility, (4) Low public trust (5) Infrequent usage of the application. These findings strengthen the theoretical foundations of the Technology Acceptance Model (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003), confirming that the adoption of public technology is shaped by both internal user perceptions and external contextual conditions.

## **CONCLUSION AND RECOMMENDATION**

This study concludes that the participation of non-permanent residents in using the Puntadewa web-based demographic data system in Surabaya remains relatively low due to several key barriers, including limited digital literacy, low perceived usefulness, high mobility, and limited trust in government institutions. Many participants encounter difficulties when operating the system, submitting data, and resolving technical problems, which leads to irregular use and incomplete demographic information. To address these challenges, a set of strategic recommendations is proposed. The Surabaya City Government should strengthen digital literacy through targeted training programs, expand outreach by collaborating with universities, community organizations, and local stakeholders, and build greater public trust by ensuring transparent data governance and robust information security. Furthermore, simplifying the application's interface, improving technical support, and fostering cross-sector collaboration can enhance user experience and collective engagement. Introducing well-designed incentive mechanisms can also motivate residents to update their data more regularly. Implementing these measures is expected to increase participation, improve the accuracy and reliability of demographic data, and provide a stronger foundation for evidence-based urban policymaking and inclusive governance in Surabaya.

## **FUTHER STUDY**

This research still has delays, so it is necessary to conduct further research related to the topic Citizen Participation in Digital Demographic Data Systems: Evidence from Non-Permanent Residents in Surabaya's PUNTADDEWA Application in order to improve this research and add insight for readers.

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