

Digital Population Identity (IKD): Implementation of Public Policy Innovations and Efforts to Realize Single Identity Number (SIN)

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ABSTRACT

Transformation in the public service sector is rapidly evolving, driven by advances in various fields, especially information technology. In Indonesia, public services are shifting towards the New Public Services (NPS) paradigm, focusing on fulfilling public interests and satisfaction. To achieve this paradigm, it is crucial to implement integral and comprehensive policy innovations that emphasize collaboration and create high value, thereby improving organizational performance. This study aims to explore policy innovations in public services, particularly focusing on the government's Digital Population Identity (IKD) policy. The IKD is intended to eventually lead to the establishment of a Single Identity Number (SIN), which will enhance service delivery efficiency. This research employs a qualitative approach, using literature review techniques based on academic sources and other supporting references. Additionally, interviews are conducted to gather relevant data and insights. The findings are expected to provide a deeper understanding of how digital identity policy innovations can streamline public services, improve efficiency, and foster a more integrated and accessible service system. This study contributes to the development of policy innovations that prioritize public satisfaction and the improvement of public service performance.

Keywords: Digital Population Identity, Public Service Policy Innovation, Single Identity Number, New Public Services

INTRODUCTION

Public services today have undergone a significant transformation (Irfan et al., 2023; Krajewski, 2017; Maulana et al., 2024). This transformation in public services is influenced by the rapid development of information technology, which in turn has a positive impact on improving the quality of services provided (Agostino et al., 2020, 2022; Enang et al., 2022; Filgueiras et al., 2019). The ease and affordability of access to services, the acceleration and accuracy of service delivery, and the reduction of stigma or negative perceptions about service quality are clear evidence of this positive transformation that we can experience today (Agbozo & Medvedev, 2020; Kekez et al., 2018; Kitsios et al., 2023; Makasi et al., 2022; Osborne & Strokosch, 2022).

Due to the rapid and significant advancement of information technology and other supporting factors, the government actively uses and implements these technologies in various forms of public services to improve service quality and user satisfaction (Ibrahim et al., 2020; Noor, 2022; Oppong et al., 2021). Some familiar examples of the government's use and implementation of information technology today include the *Peduli Lindungi* application, currently called *SATU SEHAT*, which covers vaccination data and health monitoring; the *Mobile JKN* application, which includes health information and BPJS health data; the *DGT Online* website, providing tax-related information and online tax reporting mechanisms; the *JAKI* application, offering information channels available in Jakarta and a platform for complaints from residents; and the *OSS* website and application, which handle the management and online addition of business licenses and other tasks related to business activities (Efendy et al., 2022; Fadhillah et al., 2022; RINJANI & Sari, 2022).

To enhance the quality and satisfaction of public services by offering convenient and affordable administrative services, the Government, through the Ministry of Home Affairs, formulated Law Number 23 of 2006 concerning population administration, which was later updated to Law Number 24 of 2013 regarding the management of population administration information, carried out through the development of the Population Administration Information System (*SIAK*). This policy aims to create nationally integrated population data in the future, facilitating service users in performing all service activities. Such integration is expected to enable continuous improvement of service quality and fulfillment of user satisfaction.

Efforts to realize nationally integrated population data through the Population Administration Information System (*SIAK*), as well as the creation of the *Single Identity Number (SIN)* or the use of the Population Identification Number (*NIK*), which is unique, singular, and inherent to each registered Indonesian resident, are crucial components in identifying individual information related to public services, especially tax services. Consequently, the Government, through the Ministry of Home Affairs, introduced a policy innovation outlined in Regulation of the Minister of Home Affairs Number 72 of 2022 on the Standards and Specifications of Hardware, Luna Devices, Electronic Identity Card blanks, and the implementation of *Digital Population Identity (IKD)*. Currently, the *Digital Population Identity (IKD)* functions as a complement to the physical Electronic Identity Card (*KTP-El*), so that if the *KTP-El* is lost or damaged, individuals can still use their *Digital Population Identity (IKD)*. However, the policy's direction regarding the functions, benefits, obligations, and urgency of this innovation remains unclear, which has contributed to the low community participation in adopting the *Digital Population Identity (IKD)*.

Several factors also contribute to the low public participation in using the *Digital Population Identity (IKD)*. These include the uneven availability of compatible devices

or gadgets that meet the criteria, standards, and specifications required for creating and using the *IKD* across different social levels. Additionally, limited and unreliable internet connectivity in various regions of Indonesia affects the creation and use processes. Public concerns regarding the security of the *Digital Population Identity (IKD)* application discourage engagement. Moreover, information dissemination, education, and socialization efforts related to the *IKD* policy remain minimal at the community level. Finally, there is considerable variation in the public's understanding of information technology and the *Digital Population Identity (IKD)* itself.

These issues serve as significant obstacles to policy implementation, preventing the government's intended benefits from being fully realized. Therefore, it is critical to develop appropriate strategies and methods to address these challenges, ensuring the advantages of this public service policy innovation are felt by all.

According to Yosar Kardiati (2022), policy innovation can serve as an answer or an alternative solution to problems encountered by communities. Policy innovation and innovations in public sector activities are designed to address market failures. In other words, both policy innovation and public sector innovation aim to overcome market failures and all associated deficiencies. The need for innovation in public organizations arises from several factors. First, the public sector's size significantly impacts many countries' GDP percentages; thus, innovations here can drive productivity growth by reducing input costs and increasing product value through more effective organization. Second, policies must adapt to economic evolution within a global context. Third, the public sector establishes rules that guide innovation in the private sector.

Therefore, public services in Indonesia, which are currently embracing a new approach or paradigm known as New Public Services (NPS), urgently require policy innovations formulated and implemented collaboratively across various sectors. This collaboration is essential to meet the growing community needs while ensuring satisfaction with the quality of public services.

In the realm of public service transformation through digitalization, several studies have investigated the role of information technology in improving service quality and accessibility. For example, Siahaan (2020) analyzed the impact of digital identity systems on the efficiency of public services in Indonesia, highlighting significant benefits in reducing bureaucratic delays. However, this study primarily focused on administrative efficiencies and did not explore broader public participation challenges or security concerns regarding digital identity systems. Similarly, Rasyid et al. (2021) examined the role of digital government services in improving public satisfaction, emphasizing the convenience and accessibility offered by platforms such as online tax services. Nevertheless, Rasyid's research did not deeply probe the barriers hindering widespread adoption, particularly technological and infrastructure challenges in rural areas.

The objective of this study is to analyze the challenges and policy innovations necessary for the successful implementation of the *Digital Population Identity (IKD)* in Indonesia, focusing on overcoming existing barriers such as technological access, security concerns, and public participation. The findings are expected to provide valuable insights for policymakers, enabling the design of more effective strategies that increase public engagement and ensure the success of digital public services. Ultimately, this study aims to contribute to the development of a more inclusive and efficient public service system, improving service quality and fostering greater public satisfaction.

RESEARCH METHOD

The research method carried out was a qualitative approach, using literature review techniques derived from academic literature and similar research references, and was strengthened with interview techniques to collect data and other supporting information. Furthermore, a data analysis process was conducted based on the theory and concept of public policy innovation, followed by a data interpretation process.

RESULT AND DISCUSSION

The policy of creating and using Digital Population Identity began to be introduced and implemented by the Government in 2022. The Ministry of Home Affairs is the party that is fully responsible for this policy innovation, the Population and Civil Registration Service in all regions in Indonesia as an extension and or implementer of this policy innovation in the field, while people who are 17 years old and older and already have an Electronic ID Card are the target participants of this policy innovation.

As the theory of policy innovation cited by Ahmad Saruri in his journal explains that innovations and experiments in the central and regional governments, especially in the field of services, are currently taking place in various parts of the world as part of the government's efforts to revitalize public administration. Tyran in a journal written by Ahmad Sururi also corroborated his previous statement by explaining that the power of spreading policy innovation occurs by referring to two important determinants, namely internal determinants (including the social, economic, and political characteristics of a country) and regional diffusion (including the possibility of a country to adopt policies from neighboring countries that have adopted such policies).

By referring to these two theories, it can be concluded that nowadays all over the world, especially for those in the public service sector, policy innovation is very necessary to revitalize the quality of administration and public services.

There are at least two factors that must be considered when formulating a policy innovation, namely internal determinant factors and regional diffusion.

However, in its implementation, according to Elanor D Glor in a journal written by Ahmad Sururi, explained that the successful implementation of innovative processes to

improve governance, public administration performance and to effectively overcome public problems must require a commitment to overcome them and the right way to deliver innovations, including:

1. Conveying the advantages they have by Digital Population Identity compared to Electronic Identity Card-Innovation Characteristics (Products),
2. Conducting active socialization about Digital Population Identity through social media - Communication Channels,
3. Approaching with citizens' devices to be able to help convey Digital Population Identity so that they are willing to be involved in its creation - Change Efforts from Agents,
4. Approach young people who are open to an innovation to be willing to be involved in its creation – the Social System.

By referring to these two existing theories, it can be concluded that in its implementation, policy innovation is said to be successful if all parties involved in it are equally committed and collaborate with each other to support and implement policies, so that the policy innovations presented can achieve the goals and the benefits of policy innovation can be felt by the entire community.

The Digital Population Identity Policy is expected to be a solution that can answer and overcome problems related to public policy and other matters related to public administration. According to Fahmi, Y. (2023), the General of Dukcapil of the Ministry of Home Affairs, Zudan Arif Fakrulloh, the problems that are currently occurring and are the basis for consideration for this policy innovation are presented, which include:

1. Procurement blank Electronic ID Card (KTP-El);
2. Constraints networks in each region;
3. Regional growth which includes regional expansion and development.

By referring to the problems above, then the Government, in this case the Ministry of Home Affairs, presents a policy innovation, namely Digital Population Identity as a solution to the existing problems. The following is an overview of Digital Population Identity.

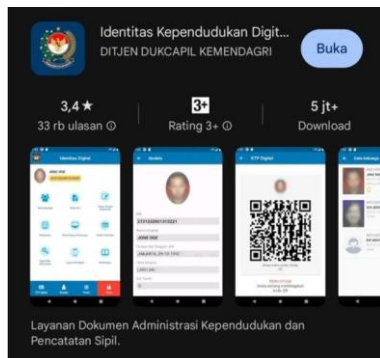


Figure 1. Public rating or assessment of the Digital Population Identity (IKD) application



Figure 2. IKD initial view



Figure 3. Login initial view (with password)

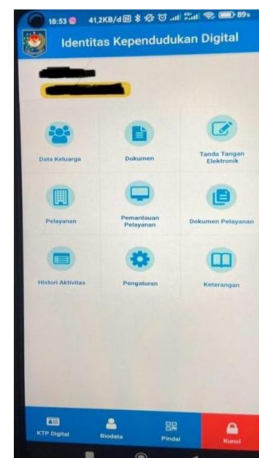


Figure 4. Dashboard view



Figure 5. Display of documents available in the IKD application



Figure 6. Digital ID Card Document Display

This policy innovation is enforced nationally and has been implemented in all regions in Indonesia. Digital Population Identity can be made on a mobile phone with the minimum specification android operating system version 11 with the category of mobile phone camera either not damaged or blurred, simply by installing the application on the playstore or appstore with the keyword "IKD" or "Digital Population Identity" and carrying out the registration process, verification of the owner's identity and direct activation of the QR Code at the Dukcapil service unit.

The process of creating a Digital Population Identity is actually not difficult and takes a long time, it's just that the limitations that the community has regarding the availability of appropriate supporting devices and uneven access to the internet network result in not all people being able to be involved and feel the benefits of this policy innovation. In addition, the face verification process which must be carried out directly by the identity owner or which means that it cannot be represented and must also be continued with the process of direct activation of the QR Code in the Dukcapil service unit also results in not all people being able to be involved and feel the benefits of this policy innovation.

Based on the results of data collection that the author conducted using the question and answer method or short interviews with the public as service users and service officers of the DKI Jakarta Provincial Government (Dukcapil service officers of North Gunung Sahari Village) as service officers regarding the Identity Card policy, both the old (KTP-El) and the latest (E-KTP or Digital KTP), the results of the data or information obtained by the author are as follows:

1. The public as service users have been quite satisfied with the existing policies related to the creation and/or use of KTP-El or Electronic KTP.
2. The public as service users feel very helped by the policy of making and/or using KTP-El or Electronic KTP, this is because the public no longer needs to periodically update the physical card from the KTP and indirectly make developments in the public service sector that is currently provided, namely digitally.
3. Apart from all that, there are also people who consider the presence of an KTP-El or Electronic KTP to mean nothing, this is because some administrative arrangements still ask for physical requirements in the form of photocopies of files, including photocopies of KTP-El files or Electronic KTP.
4. Some people as service users feel enthusiastic about the creation and/or use of E-KTP or KTP
5. 5. Some people feel confused about the policy of making and/or using E-KTP or Digital KTP, this is due to the limitations they have regarding the availability of devices and internet network access that are in accordance with the standardization of

the policy of making and/or using E-KTP or Digital KTP, as well as public understanding of the function and purpose and direction of the policy of making and/or using E-KTP or Digital KTP in today's life and coming.

6. Some other people are worried about the policy of making and/or using E-KTP or Digital KTP, while what is a concern for the public about this policy is the level of security of the application or platform used related to E-KTP or Digital KTP considering the rampant cases of data misuse that have often occurred recently.
7. The public as service users feel quite happy, amazed and enthusiastic about the existing policies related to the creation and or use of E-KTP or Digital KTP.
8. The public as service users has not felt any meaningful impact from the policy of making and/or using E-KTP or Digital KTP, this is because the presence of the policy is not adjusted to the policy making of other public service agencies that still require the public to complete the required files and/or documents in physical or copied form.
9. Apart from all that, there are also people who consider the presence of E-KTP or Digital KTP as a form of breakthrough and progress made by the Government.
10. The percentage of digital ID card use in DKI Jakarta Province has met and even exceeded the target set by the Central Government, which is 25 percent in each region. The overview of the percentage of digital ID card use in DKI Jakarta Province obtained by the author (specific to the Central Jakarta area) is as follows:

Figure 7. Percentage of IKD use in the Central Jakarta area

20	SEAN	1006	1020	1020	1004	874	878	882	883	882	885	17.00%	0.06
21	KENARI	1001	1001	1233	1020	1187	1219	1220	1228	1224	1230	54.00%	1.03
22	PANGIAN	11899	1000	1000	2238	2263	2263	2257	2270	2273	2283	43.50%	3.27
23	KACAN	1026	1007	1018	1018	1018	1018	1018	1018	1018	1018	100.00%	0.00
24	KUBANG	14213	1004	1020	1363	1393	1396	1402	1402	1402	1405	29.42%	2.39
25	BUNGLU	16790	4180	1000	1475	1489	1489	1506	1534	1535	1601	28.70%	2.75
26	CEMPAKA PUTIH TIMUR	12384	1046	1000	1677	1729	1729	1758	1765	1787	1842	31.24%	2.04
27	CEMPAKA PUTIH BARAT	12384	1046	1000	1677	1729	1729	1758	1765	1787	1842	31.24%	2.04
28	CEMPAKA PUTIH	12384	1046	1000	1677	1729	1729	1758	1765	1787	1842	31.24%	2.04
29	CEMPAKA PUTIH	12384	1046	1000	1677	1729	1729	1758	1765	1787	1842	31.24%	2.04
30	PERAGANAN	11731	1001	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
31	CIKIN	7134	1001	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
32	GOLONG KEMBAR	7134	1001	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
33	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
34	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
35	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
36	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
37	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
38	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
39	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
40	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
41	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
42	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
43	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
44	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
45	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
46	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
47	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
48	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
49	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
50	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
51	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
52	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
53	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
54	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
55	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
56	KERON SURUH	11280	1000	1000	1042	1052	1054	1064	1068	1072	1080	52.73%	4.08
57	PETAMBURAN	10617	1020	1000	2068	2055	2071	2062	2117	2144	2161	41.00%	2.80
58	KERON MELATI	19138	1000	1000	2776	2786	2780	2792	2792	2797	2803	28.71%	4.52
59	KERON MELATI	19138	1000	1000	2776	2786	2780	2792	2792	2797	2803	28.71%	4.52
60	KAMPUNG BALAI	40813	1000	1000	3731	1382	1386	1387	1392	1397	1404	5.00%	1.88
61	KER TANAH BAKAR	10000	1000	1000	1000	1000	1000	1000	1000	1000	1000	100.00%	0.00
62	KER TANAH BAKAR	10000	1000	1000	1000	1000	1000	1000	1000	1000	1000	100.00%	0.00
63	KAMPUNG RANA	15886	1000	1000	2511	2614	2614	2647	2681	2683	2775	55.25%	2.85
64	KAMPUNG RANA	15886	1000	1000	2511	2614	2614	2647	2681	2683	2775	55.25%	2.85
65	SMANIT TUNGGU	10000	1000	1000	1000	1000	1000	1000	1000	1000	1000	100.00%	0.00
66	SMANIT TUNGGU	10000	1000	1000	1000	1000	1000	1000	1000	1000	1000	100.00%	0.00
67	KER JOMAR BARI	10000	1000	1000	1000	1000	1000	1000	1000	1000	1000	100.00%	0.00
68	KER JOMAR BARI	10000	1000	1000	1000	1000	1000	1000	1000	1000	1000	100.00%	0.00

Figure 8. Percentage of IKD use in the Central Jakarta area

The government or in this case the Ministry of Home Affairs has set a target for digital ID card users in each region, which is 25% of the total population of 17+ or who already have an ID card. The Central Jakarta area has a target of 210,313 out of a total of 841,203 residents, digital ID cards have been made (as of November 17, 2023), amounting to 46.13% or 97,011 population, still 53.87% or 113,302 residents are still lacking to achieve the general target set of 25%.

11. The percentage of use of digital ID cards in several regions in Indonesia has not yet been achieved, even in some areas the percentage of use is still below 5% or very low (for example, areas with a percentage below 5% is the city of Jogja (2.68%) users.

By referring to the data and information obtained by the author above, it can be concluded that there are still many areas that have not met the set targets. This policy innovation has also received many responses and diverse responses from the public, ranging from supportive, doubtful, worried to hopeful. Therefore, it is necessary to conduct a fundamental evaluation related to this policy innovation, so that the response or response that is still not good can be found a solution to solve the problem. In addition, the evaluation of this policy innovation can also produce good sustainability in terms of improving the quality of services and public administration.

The implementation of the Digital Population Identity policy that is evenly distributed in all regions in Indonesia is the capital to start a big step that the Government will take, namely the realization of a single identity number. According to Bappenas. (2016), the General of Dukcapil of the Ministry of Home Affairs, Zudan Arif Fakrulloh in his speech conveyed the importance of encouraging Single Identity Number to support national development.

According to Zudan, Single Identity Number means that every citizen has one Population Identification Number (NIK) which is single and does not change for life. All data from the NIK will be integrated with other population administration data such as driver's license, passport, NPWP, BPJS and other data. Gradually starting in 2016, Single Identity Numbers were built in 50 districts/cities throughout Indonesia. It includes important population data including aggregate data that will help various state agencies carry out their programs.

Digital Identity is a form of manifestation of the existence of a Single Identity Number, where later in addition to eliminating the function of electronic ID cards in the form of Digital Population Identity cards, it will also verify NIK data owned by a person to represent or describe their identity. So that the innovation of this policy can help the Government, in this case the Ministry of Home Affairs and the Population and Civil Registration Office in tidying up the existing population data (where currently there is still duplicate data and blank data in the population system or SIAK), so that in the future

the single identity number effort can be realized and can support the improvement of the quality of services and public administration provided.

In an effort to encourage the realization of a single identity number with the innovation of the Digital Population Identity policy, the author tries to provide recommendations that can be made by the government or related parties, including:

1. The implementation and/or implementation of policies for the creation and use of E-KTP or Digital KTP needs to continue to be developed and carried out in an effort to bring convenience and improve the quality of public services.
2. The implementation and/or implementation of the policy of making and using E-KTP or Digital KTP does not necessarily stop the implementation of the policy on the use of electronic Identity Cards or e-ID cards, but can adjust the needs and limitations of the public as service users for the creation and use of E-KTP or Digital KTP. The examples of adjusting their needs and limitations are: parents or those who are less old and understanding level to use the use of E-KTP or Digital KTP, 17-year-old children who do not have a identity card at all and several other provisions that can be determined later.
3. Continuous development of policies and/or provisions for the creation and use of E-KTP or Digital KTP, as well as clarifying the basis of other rules and provisions related to the creation and use of E-KTP or Digital KTP on each agency who provide public services. This is done so that the benefits of the policy of making and using E-KTP or Digital KTP can be felt by the public as service users.
4. Supervision and improvement of a high security system need to be carried out, to provide assurance to the public in the creation and use of E-KTP or Digital KTP.

The hope is that with the recommendations that the author tries to convey in this writing, the Government or related parties can find answers and/or solutions to things that are lacking or become a record in the current Digital Population Identity policy in an effort to realize a single identity number and improve the quality of public services and administration in the future.

CONCLUSION

Digital Population Identity, introduced by the Ministry of Home Affairs as a policy innovation to enhance public service quality, has elicited mixed public responses ranging from positive to negative, partly due to uncertainties about its future policy direction. Despite this, its potential benefits—particularly in supporting the realization of a Single Identity Number and improving public services—indicate that the policy innovation should be continued, supported, and rigorously evaluated to meet its objectives and deliver tangible daily benefits. Future research is recommended to focus on evaluating the implementation challenges and public acceptance of Digital Population Identity,

providing evidence-based insights to help the government refine the policy for broader and more effective application in public services.

REFERENCES

- Agbozo, E., & Medvedev, A. N. (2020). Towards a multi-channel service delivery model in the data-driven public sector. *Business Informatics*, 14(1). <https://doi.org/10.17323/2587-814X.2020.1.41.50>
- Agostino, D., Arnaboldi, M., & Lema, M. D. (2020). New development: COVID-19 as an accelerator of digital transformation in public service delivery. *Public Money and Management*. <https://doi.org/10.1080/09540962.2020.1764206>
- Agostino, D., Bracci, E., & Steccolini, I. (2022). Accounting and accountability for the digital transformation of public services. *Financial Accountability and Management*, 38(2). <https://doi.org/10.1111/faam.12314>
- Efendy, I., Nyorong, M., Amirah, A., & Sari, F. (2022). National Health Insurance (JKN) Mobile Application Use Towards Satisfaction of Participants of the Health Social Security Implementing Agency (BPJS) in Madani Hospital in Medan City. *Journal of Medical and Health Studies*, 3(1). <https://doi.org/10.32996/jmhs.2022.3.1.4>
- Enang, I., Asenova, D., & Bailey, S. J. (2022). Identifying influencing factors of sustainable public service transformation: a systematic literature review. *International Review of Administrative Sciences*, 88(1). <https://doi.org/10.1177/0020852319896399>
- Fadhilah, E. W., Herdiani, A., & Martha, A. S. D. (2022). Improving the Usability User Experience of Peduli Lindungi Application based on Heuristic Evaluation. *Journal of Information System Research (JOSH)*, 4(1). <https://doi.org/10.47065/josh.v4i1.2221>
- Filgueiras, F., Flávio, C., & Palotti, P. (2019). Digital Transformation and Public Service Delivery in Brazil. *Latin American Policy*, 10(2). <https://doi.org/10.1111/lamp.12169>
- Ibrahim, A. N. H., Borhan, M. N., Yusoff, N. I. M., & Ismail, A. (2020). Rail-based public transport service quality and user satisfaction – a literature review. *Promet - Traffic and Transportation*, 32(3). <https://doi.org/10.7307/ptt.v32i3.3270>
- Irfan, M., Aiyub, A., & Chalirafi, C. (2023). Optimization of Public Services. *International Journal of Public Administration Studies*, 3(1), 8–14.
- Kekez, A., Howlett, M., & Ramesh, M. (2018). Varieties of collaboration in public service delivery. *Policy Design and Practice*, 1(4). <https://doi.org/10.1080/25741292.2018.1532026>
- Kitsios, F., Kamariotou, M., & Mavromatis, A. (2023). Drivers and Outcomes of Digital Transformation: The Case of Public Sector Services. *Information (Switzerland)*, 14(1). <https://doi.org/10.3390/info14010043>
- Krajewski, M. (2017). Public services and trade liberalization: mapping the legal framework. In *The Regulation of Services and Intellectual Property* (pp. 157–183). Routledge.
- Makasi, T., Nili, A., Desouza, K. C., & Tate, M. (2022). A Typology of Chatbots in Public Service Delivery. *IEEE Software*, 39(3). <https://doi.org/10.1109/MS.2021.3073674>
- Maulana, R., Akbar, B., & Tahir, B. (2024). Effectivity of Services In South Tangerang City Public Services Mall. *Journal of Social Science (JoSS)*, 3(11), 1895–1914.

- Noor, M. (2022). The effect of e-service quality on user satisfaction and loyalty in accessing e-government information. *International Journal of Data and Network Science*, 6(3). <https://doi.org/10.5267/j.ijdns.2022.2.002>
- Oppong, E., Hinson, R. E., Adeola, O., Muritala, O., & Kosiba, J. P. (2021). The effect of mobile health service quality on user satisfaction and continual usage. In *Total Quality Management and Business Excellence* (Vol. 32, Issues 1–2). <https://doi.org/10.1080/14783363.2018.1541734>
- Osborne, S. P., & Strokosch, K. (2022). Participation: Add-on or core component of public service delivery? *Australian Journal of Public Administration*, 81(1). <https://doi.org/10.1111/1467-8500.12536>
- RINJANI, R., & Sari, N. (2022). Analisis Penerapan Aplikasi Mobile Jkn Terhadap Peserta Badan Penyelenggara Jaminan Sosial Kesehatan Cabang Subulussalam. *PUBLIKA : Jurnal Ilmu Administrasi Publik*, 8(2). [https://doi.org/10.25299/jiap.2022.vol8\(2\).10491](https://doi.org/10.25299/jiap.2022.vol8(2).10491)



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