



Transformation of Public Service: A Bibliometric Analysis and A Study of The Population and Civil Registration Office in Palembang City

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ABSTRACT

This study aims to see research trends related to the digital transformation of public services globally and combine them with field studies to see the readiness of government agencies in digital public service transformation using the government-to-citizen theory consisting of support, capacity, and value. This study uses a bibliometric analysis method sourced from Scopus as a database and a descriptive qualitative method with data collection techniques carried out by observation, interviews, and documentation. The data used are data from 2019-2024 using Scopus and bibliometric analysis using Vosviewers software. The results of the study show that in terms of support, Disdukcapil has allocated human resources and created several digital innovations such as PACAKELAH TERUS, SIJAGO, and AMPERA CAKEP. Then in terms of capacity, employees are considered competent because they have undergone training, but the technology used is still limited, the waiting room is uncomfortable, and there is a limited budget for the construction of a new building. Then the bibliometric study shows that research on service digitalization, especially in the 2021-2023 period, is growing with a focus on the use of big data, artificial intelligence, collaboration and process automation to improve service effectiveness. The connection is by knowing and understanding this trend, so it is recommended that Disdukcapil can align digitalization strategies with global developments, such as agency preparation in this case meaning strengthening internal capacity and collaborating with other parties to achieve goals.

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ABSTRAK

Penelitian ini bertujuan untuk melihat tren penelitian terkait transformasi digital layanan publik secara global dan menggabungkannya dengan studi lapangan untuk melihat kesiapan instansi pemerintah dalam transformasi layanan publik digital dengan menggunakan teori Government-to-citizen yang terdiri dari support, capacity, dan value. Penelitian ini menggunakan metode analisis bibliometrik yang bersumber dari Scopus sebagai database dan metode deskriptif kualitatif dengan teknik pengumpulan data dilakukan dengan observasi, wawancara, dan dokumentasi. Data yang digunakan adalah data tahun 2019-2024 menggunakan Scopus dan analisis bibliometrik menggunakan software Vosviewers. Hasil penelitian menunjukkan bahwa dari sisi dukungan, Disdukcapil telah mengalokasikan sumber daya manusia dan menciptakan beberapa inovasi digital seperti PACAKELAH TERUS, SIJAGO, dan AMPERA CAKEP. Lalu dari segi kapasitas, pegawai dinilai kompeten karena telah mengikuti pelatihan, namun teknologi yang digunakan masih terbatas, ruang tunggu kurang nyaman, dan adanya keterbatasan anggaran untuk pembangunan gedung baru. Kemudian kajian bibliometrik menunjukkan bahwa penelitian mengenai digitalisasi layanan, khususnya dalam periode 2021–2023 semakin berkembang dengan fokus pada penggunaan big data, kecerdasan buatan, kolaborasi dan otomatisasi proses untuk meningkatkan efektivitas layanan. Kaitannya yaitu dengan mengetahui dan memahami tren ini, sehingga disarankan Disdukcapil dapat menyelaraskan strategi digitalisasi dengan perkembangan global, seperti persiapan agensi dalam hal ini berarti memperkuat kapasitas internal dan berkolaborasi dengan pihak lain untuk mencapai tujuan.

A. INTRODUCTION

Technological innovation, including digitalization, is transforming society in various fields (Duncan et al., 2021; Hilbert, 2020; Abdulai et al., 2023). The digital era brings new challenges and great opportunities for central and local governments to improve the quality of services to the public (Alim & Ibrahim, 2024; Fauzi et al., 2022). In the current era, the need for public services is required to be fast and efficient. This trend is what then refers to the adoption of digital technology to improve the public service experience by processing information more efficiently (Fang & Ju, 2024). The pace of digital transformation has triggered the transition from the industrial revolution 4.0 era to the society 5.0 era. Society 5.0 or known as super smart society In Revolution 5.0, machines and technology are used to help humans achieve more efficient and effective service goals (Nastia, 2024).

Along with the development of the era towards society 5.0, digital transformation is no longer just an option, but a necessity for the government. This is because digital technology allows the government to provide faster, more precise, and more affordable services, as well as increase interaction with the community in a more transparent manner. In this process, the success of digital transformation is also not only influenced by the adoption of technology, but also by various types of stakeholder involvement, so that collaboration plays an important role in the development of digital transformation. This model involves various actors who contribute synergistically in creating community-based digital innovation (Arintyas, et.al., 2023). The stages of digital transformation (digitization, digitization, and digital transformation) guide public organizations towards comprehensive technology integration to create new value. In addition, challenges in digital transformation include budget limitations, resistance to change, and the need for technical training for officials. However, opportunities such as improving audit efficiency and quality, as well as transparency, provide significant value in public oversight (Mali et al., 2024).

This concept emphasizes human creativity and the ability of machines to work together to achieve greater goals (Jayanti et al., 2024). Digitalization of public services or e-government is the government's effort to increase the efficiency, effectiveness, transparency, and accountability of government administration through the use of information and communication technology (ICT) in the government process (Irfan & Anirwan, 2023). In utilizing digital service innovation, the Government to Citizen model is an option for establishing relationships between the government and the community (Alia & Utami, 2023). According to Indrajit, (2016) to apply the concept of digitalization in the public sector, three elements must be owned and considered properly, namely support, capacity, and value. Previous studies have discussed whether and how the COVID-19 pandemic has affected government digital transformation (Moser, 2023; Junaidi, 2021; Sisilianingsih et al., 2024). Research by Nurlaila et al., (2024) highlights the importance of digital transformation in improving the quality of public services in local governments. Other studies show that digital transformation can include sustainability goals (SDGs) if carried out with a focus on benefiting citizens (Sucupira Furtado et al., 2023). In practice, digitalization requires significant resources and carries great risks (Zhao et al., 2023; Mensah & Dutta, 2024).

One of the programs carried out by the DKI Jakarta Government through the AJAKIN System (Jakarta Asset Initiation) program is very relevant in this study because it reflects one of the concrete implementations of digital reform in government that was developed to digitize the asset utilization process so that it is easier for the public to access information and submit cooperation proposals transparently. The reform led by UP JAMC underlines the importance of special task units in achieving professional, transparent, and efficient asset management, which ultimately increases regional income and public trust Wellyani, W., & Lutfi, A. (2024). The success of digital reform in the AJAKIN program shows how technology can improve governance and is a very relevant aspect in the discussion of e-government adoption and digital transformation in public services in the era of Society 5.0.

Local government digitalization involves managing and utilizing various resources to achieve digitalization goals. Local governments often adjust and optimize their structures within resource constraints to drive reform efforts efficiently (Han & Zhang, 2024). In improving the fulfillment of service needs in local governance, especially Government To Citizen (G2C), it must be fulfilled with resources, complete infrastructure, reliable resources, and an understanding of digital and information technology (Arif et al., 2013; Nurhidayah, 2023; Yamin et al., 2021). With the many studies that have been conducted on the digital transformation of public services, this study will focus on the aspects of digital transformation that are analyzed including the implementation of e-government in public services, especially in DISDUKCAPIL. The novelty of this study lies in a comprehensive study of the digital transformation process in important areas in the provision of public services, which provides empirical insight into the challenges and opportunities in integrating digital technology in public administration studies, especially in the aspect of public service innovation.

Then, to help understand research trends related to digital transformation in public services by identifying key literature, key concepts, and relationships between existing studies, bibliometric analysis is used. Through this approach, it is possible to evaluate how e-government policies have been implemented in various countries or other agencies. The connection is that the DISDUKCAPIL case study provides a qualitative dimension that enriches the understanding of how digital transformation is implemented in the field. By reviewing policies, interviews with officials, and observations of existing systems and infrastructure, practical obstacles that may not be detected in bibliometric studies can be identified. This approach also helps assess whether digitalization policies are truly effective or still hampered by technical, social, or bureaucratic constraints. Thus, the combination of

bibliometric analysis and case studies provides a more comprehensive picture of e-government implementation, enabling policy recommendations that are more evidence-based and relevant to local conditions.

B. LITERATURE REVIEW

One of the significant shifts in public service management is the transition from a service-dominant approach to a citizen-capability approach. Sicilia et al. argue that this transformation is not merely evolutionary but represents a fundamental change in the ethos of public service provision, emphasizing the role of citizens as active participants rather than passive recipients of services (Sicilia et al., 2015). This perspective aligns with the findings of Khalil and Adelabu, who advocate for diverse methodologies and strategies to enhance service delivery in public administration, highlighting the importance of adapting to the evolving needs of society (Khalil & Adelabu, 2012). Furthermore, Ajibade et al. emphasize the role of technology, particularly e-governance, in revitalizing public services, suggesting that the integration of information and communication technologies can significantly improve the efficiency and effectiveness of service delivery (Ajibade et al., 2017). On the other hand, although e-government innovations have been widely implemented and developed, their implementation still faces various challenges. As according to Prayitno (2023) who stated that the adoption of e-government in Indonesia has not been fully optimal, one of which is due to the digital divide. In addition, other challenges are the readiness of human resources, limited infrastructure, and aspects of data security and privacy, including low digital literacy in several regions.

The professionalization of public service delivery is another critical aspect of transformation. Mbandlwa discusses the challenges and strategies for enhancing the effectiveness of public services in the Southern African region, emphasizing the need for professionalization to leverage resources and avoid duplication of efforts (Mbandlwa, 2023). This notion is echoed by Dlamini, who highlights the importance of effective leadership in driving service delivery improvements in the South African public sector (Dlamini, 2022). The emphasis on leadership and professionalization is crucial, as it fosters a culture of accountability and performance orientation, which is essential for successful public service transformation (Hope, 2013).

There are several types of leadership styles such as autocratic, bureaucratic, participative, delegative, transactional, servant, transformational, and charismatic. These different leadership styles influence public service reform. For example, in the autocratic leadership style, the centralization of decision-making is on the leader who is in power and authority. This leadership style is viewed negatively and is not suitable for supporting public service reform because employees only do work based on what is ordered by a leader. This is different from the democratic leadership style, where the leader prioritizes cooperation to achieve goals. In addition, a leader is also open to suggestions, opinions, and even criticism from his subordinates, and holds discussions or meetings, and prioritizes joint decisions to achieve goals. So this leadership style is more widely used in achieving public service reform (Bagus & Sasmito, 2021).

Moreover, the role of citizen engagement in public service delivery cannot be overstated. Research by Gumah and Aziabah indicates that citizens' perceptions of government agencies significantly impact the perceived efficiency of public services (Gumah & Aziabah, 2020). This aligns with the findings of Campenhout et al., who note that decentralization efforts in Uganda aimed to empower local stakeholders and enhance service delivery, although challenges remain in achieving effective local-level governance (Campenhout et al., 2019).

The integration of citizen feedback into service delivery frameworks is vital for ensuring that public services meet the actual needs of the community (Gao et al., 2023).

The successful digital transformation of public services relies heavily on the professionalization and continuous training of civil servants to develop a "digital mentality" and new competencies in digital technologies and their impact on public administration. To enhance coordination and effectiveness, the establishment of a dedicated ministry or department for digital transformation is suggested, with clearly defined timelines for upskilling civil servants to meet evolving technological demands (Semenova, 2019). This shift requires structured training programs, ongoing professional development, and a cultural change that fosters adaptability and innovation. Investments in staff training, process optimization, and capability-building are essential to ensure the effective adoption and utilization of digital information systems, which in turn drive the overall transformation of public sector operations. Additionally, e-governance necessitates new forms of leadership that embrace forward-thinking strategies, integrated management disciplines, and enterprise transformation practices to navigate the complexities of digital reform. Effective digital governance depends not only on technological adoption but also on sound leadership, tailored strategies, and an innovation-driven mindset that moves beyond the traditional bureaucratic culture (Abdullahi et al., 2024). Furthermore, digital transformation enables enhanced organizational performance, international market expansion for SMEs, and improved customer communication, marketing, and sales efficiency (Wahid, 2021). By fostering a culture of digital competency and leadership, governments can qualitatively transform public administration, improve service delivery, and increase overall governmental effectiveness in the digital era.

C. METHOD

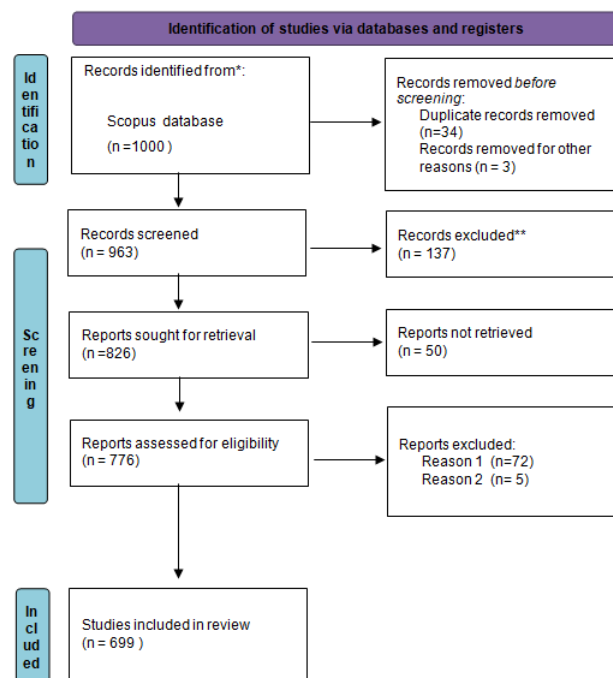
This study uses the bibliometric analysis method (Bellis, 2009) and a combination of descriptive qualitative methods (Moleong, 1989), data were collected based on observations, and direct interviews. Bibliometric analysis is a field of research that combines information science methodology, statistics, and data analysis to study patterns in the scientific literature (Du et al., in Muhammad, 2020). The main purpose of bibliometric analysis is to understand, measure, and analyze the impact and influence of scientific work and research trends in various disciplines (Sari, 2023). In this finding, citation authors will also be shown by showing the most author citations, by looking at citations based on title, author, and where and when the document was published that supports, provides evidence, illustrates, or explains what the author wants to say (Moed, 2006). Bibliometric analysis using tools like VOSviewer and RStudio reveals patterns of collaboration and thematic of digital transformation" (Rahayu & Himmawan, 2023)

Article selection using the Scopus database. TITLE-ABS-KEY ("digital AND transformation AND for AND public AND service" (LIMIT-TO (LANGUAGE, "English"))). Year range 2019-2024, Article type: research articles. The articles obtained were 699 articles with inclusion criteria taking articles from 2019-2024. Bibliometric examination is a technique for tracking significance in principle and practice. Journals of movers and scientists from various disciplines and several influential articles use bibliometric strategies to concentrate on the intricacies of development in various fields and capture emerging patterns (Liang et al., 2022).

The bibliometric investigation itself is a well-known and comprehensive strategy for investigating and describing information from a large number of logical works. This approach is used to investigate clear transformative interests and to gain a center in a particular exploration area. Bibliometrics can include analysis of electronic journals, voice messages,

Figure, and video (Diodato & Gellatly, 2013). Literature selection follows the PRISMA 2020 Flow diagram protocol where PRISMA is a set of evidence-based minimum items for reporting in systematic reviews and meta-analyses. PRISMA primarily focuses on reporting reviews that evaluate the effects of interventions, but can also be used as a basis for reporting systematic reviews with purposes other than evaluating interventions (e.g. evaluating etiology, prevalence, diagnosis, or prognosis).

The relevance is that the DISDUKCAPIL case study provides a qualitative dimension that enriches the understanding of how digital transformation is implemented in the field. By reviewing policies, interviews with officials, and observations of existing systems and infrastructure, practical obstacles can be identified that may not be detected in bibliometric studies. This approach also helps assess whether digitalization policies are truly effective or are still hampered by technical, social, or bureaucratic obstacles. Thus, the combination of bibliometric analysis and case studies provides a more comprehensive picture of e-government implementation, allowing for more evidence-based and locally relevant policy recommendations.



Source: Author's Work

Figure 1. Prisma Flow Diagram

D. RESULT AND DISCUSSION

The development of digital transformation in public services creates a new chapter of government towards electronic government (E-GOV). The relationship between government and services provided to the community is called Government To Citizen (G2C). Field research uses the G2C theory of Indrajit, (2016) in which the development of E-Government is seen from the elements of support, capacity, and value. The results of observations and in-depth interviews conducted at the Palembang City DISDUKCAPIL will be described below:

Support

The first and most crucial element that must be possessed by the government is the desire (intent) of various public and political officials to truly implement the concept of e-government, not just follow the trend or oppose initiatives related to the principles of e-government. The expected support is in the form of allocating several resources (human, financial, energy, time,

and information) at every level of government, building various supporting infrastructures and superstructures, and socializing the concept of Government To Citizens (G2C). The results of observations and field interviews conducted showed that the resources allocated in the implementation of digital services at DISDUKCAPIL were two people in charge of handling online services, as many as five people who became IT staff who could handle if there was system maintenance. The infrastructure available to support digital public services includes equipment such as computers, wifi, hard drives, and several digital public service innovations that have been launched such as PACAKELAH TERUS, SIJAGO, and AMPERA CAKEP.

Then to support the policy is also available to support digital public services including equipment such as computers, wifi, hard drives, and This reflects the implementation of e-Government and Smart City policies that support the modernization of population administration, and are in line with bureaucratic reform policies that aim to simplify procedures to be faster, easier, and more transparent. For socialization, DISDUKCAPIL usually introduces innovations online and offline, online socialization is carried out with the INSTAGRAM media platform and the agency's official website. Offline socialization is carried out by visiting several public sectors such as schools, hospitals, and other institutions, as well as installing banners in every corner of DISDUKCAPIL so that people who still use manual methods for file management can find out if there are online services.

The socialization strategy carried out shows a commitment to increasing accessibility and public participation in digital services. This is in line with the concept of Government to Citizens (G2C) which aims to strengthen interaction between the government and citizens through the use of technology. In addition, the implementation of digital services helps reduce administrative burdens, optimize budget use, and increase operational efficiency by reducing dependence on manual services. With the increasing use of online services, the need for conventional administrative staff can be diverted to more strategic tasks. However, although there are initiatives to provide digital services as well as infrastructure and human resource support, several aspects of implementation have not been optimal. Factors such as bureaucratic slowness, resistance to change, budget constraints, and technological readiness can be obstacles that reduce the effectiveness of this policy.

Capacity

Capacity is the element of ability or empowerment of the local government in realizing the dream of e-government into reality. Three main things in this element are first, the competence of human resources in organizing public services based on e-government. Including the ability to use technology and provide responsive services. Second, in terms of infrastructure and technology capacity that aims to support digital connectivity. The third is the availability of a budget to support the implementation of e-government (Indrajit 2016). When viewed from the perspective of human resource competence, based on the results of interviews conducted with several employees of the Palembang City Population and Civil Registry Office, it was explained that employees, especially operators, had undergone training for services so that they were able to master technology and have good communication. Then, the community also gave a statement that employees had provided services appropriately. However, on the other hand, although employee competence was quite good, there was an imbalance between the number of operators and the intensity of the community which reached 400 people per day. According to Pertiwi & Azis (2022), this imbalance caused errors in data entry due to excessive workload and resulted in less than optimal service. Based on the results of interviews conducted with the head of the operator, it was stated that the shortage of employees was caused by employee selection which took a long time and was sometimes also caused by restrictions on employee recruitment to save the budget and reduce the bureaucratic burden.

Second, in terms of infrastructure and technology capacity, Disdukcapil uses technological devices such as computers, KTP printers, printers, and scanners to make KTPs and other population documents. However, Disdukcapil employees stated that the quantity of these devices is very limited and several computers are damaged. In addition to the technology aspect, then, according to employees in the Civil Registration Service Sector, Civil Registration Service Sector, and Data Utilization and Service Innovation Information Sector, the infrastructure is adequate from the availability of waiting rooms, prayer rooms, parking lots, and others.

However, a different statement was made by one of the residents who stated that the waiting room was considered uncomfortable because of the limited number of chairs and the minimal number of fans, causing the waiting room to become hot. Therefore, the problems of infrastructure and information technology must be immediately fixed by Disdukcapil, because according to Angguna et al. (2015), 50% of the success of implementing e-government comes from these aspects.



Source: Documentation research

Figure 2. Waiting room in DISDUKCAPIL

Third, when associated with the budget which is one of the absolute resources to be fulfilled (Hendrian et al., 2024), Disdukcapil employees stated that the budget has been sufficient for the needs to carry out e-government services and is provided annually by the government. However, budget limitations to finance the construction of the new Disdukcapil building are still a problem, so building construction will be carried out if additional funds are received.

Thus, in terms of capacity, it is known that *e-Government Capacity* includes HR competencies, infrastructure, technology, and budget. In the Palembang Population and Civil Registry Office, employees are considered competent because they have participated in training, but the number of employees is not comparable to the community served, causing excessive workload. Then in terms of technology used is still limited and there are several damaged tools. The infrastructure is considered sufficient by employees, but the community complains about the uncomfortable waiting room. The budget is sufficient for services, but the construction of new buildings is still constrained by the need for a larger budget.

Therefore, there are several recommended ways to overcome these problems, namely in terms of human resources, rotating assignments are carried out, prioritizing the submission of proposals for additional employees in crucial sections such as operators and increasing work motivation by providing activity incentives. Furthermore, for equipment, a certain time gap can be given in the use of equipment to prevent equipment damage that can disrupt the service process, then allocating the budget in stages to meet important and urgent equipment or infrastructure needs, and collaborating with third parties such as the private sector in funding.

Value

The government must be very careful in choosing the priority of what types of e-government applications should be prioritized for development so that they provide significant value (benefits) that are felt by the community. Misunderstanding what the community needs will backfire on the government which will make it even more difficult to continue efforts to develop the e-Government concept. The benefits of implementing digital services for DISDUKCAPIL itself can be seen from the service aspect that makes it easier for employees to access and process population data so that it is more effective and efficient. This statement is in line with what was conveyed by Tarantika & Megawati (2022) stating that online services help cut the work time of service admins to be faster. So that it makes work easier and simpler and no longer bothers to find old data. Then from the community's side, with online services, the community does not need to come to the place directly. In order to find out more about whether the e-government based innovation program is better and more appropriate to the community situation, a comparative table is presented of one of the service procedures for birth certificates using Pacakela innovation and offline as follows:

Offline Service Process	Pacakela Terus Innovation Service Process
1. The applicant or parent prepares the following files: a. family card, b. marriage book, c. birth certificate, d. husband and wife's ID cards, 2. The applicant or parent comes to the Disdukcapil to submit an application 3. The applicant or parent takes a queue number and waits until the queue number is called 4. The applicant or parent submits the files to the counter officer 5. The officer will verify the data and files submitted 6. After the documents are verified and declared complete, the officer will process the making of the birth certificate. This process usually takes several working days. 7. After the birth certificate is complete, the applicant will be informed to pick it up at the Disdukcapil office.	1. Applicants or parents prepare the following files: a. family card, b. marriage book, c. birth certificate, d. husband and wife's ID cards, 2. Applicants or parents register the newborn delivery process with the hospital 3. Hospital staff verify the data and enter the data on the pacakela terus website which is integrated with the Palembang City Population and Civil Registry Office. Documents will be processed immediately on the day of registration 4. After the birth certificate is complete, the applicant will be informed to pick it up at the office, the document results will be sent back within 2x24 hours via email 5. The applicant will also be informed to pick up the birth certificate that has been printed at the hospital

Source: Palembang City Population and Civil Registry Service Procedure Standards

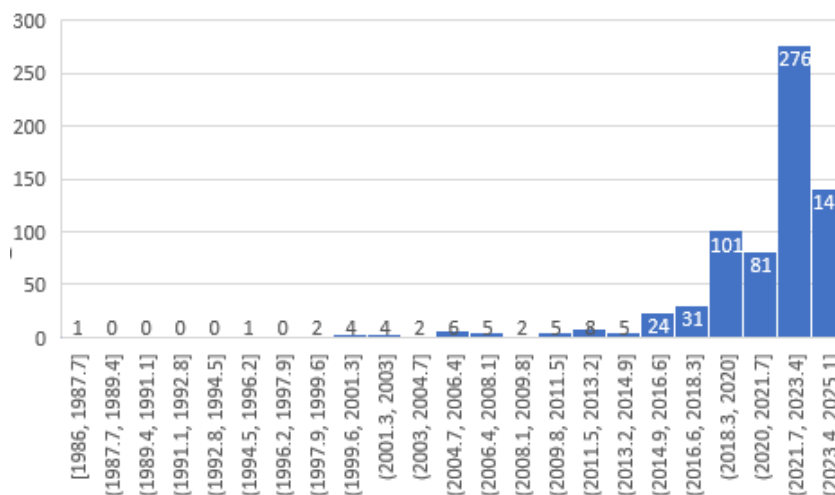
Table 1. Differences between offline and online service processes for making birth certificates

Based on table 1, there is a significant difference between the offline birth certificate service procedure and through the pacakela terus innovation program. Offline services are carried out at the Disdukcapil office and must wait for a fairly long queue process. On the other hand, through the pacakela terus innovation program (hospital integrity service cooperation

certificate printing package), the birth certificate issuance service becomes easy because it is directly at the hospital that collaborates with Disdukcapil where the baby was born and without waiting in a long queue. The birth certificate document is also sent via gmail and also gets a printed version. So parents or applicants do not need to come to Disdukcapil.

Then, the existence of digital-based services and SOPs for each service is also available on the website at the Palembang City Population and Civil Registry Office to encourage openness of information. According to Firdaus & Lawati (2019), Transparency of information is one of the important factors to increase public trust. In addition, the benefits of implementing digital services for the community can also be seen from the aspect of service costs, because online services have offered cheaper communication. The public only needs to access the DISDUKCAPIL website and click on the online service without having to come directly to the agency. In terms of service time, online services offer a fast, efficient, and open system for anyone. The completion of the application can be done in 1x24 hours and free of charge.

Thus, in terms of the benefits of digitalization for Disdukcapil, it includes easy access and processing of population data, increasing the efficiency and effectiveness of employee work. Online services also reduce work time and make it easier to search for data. For the community, online services reduce the need to come directly to the office, increase information transparency, reduce communication costs, speed up the service process, and offer a solution within 1x24 hours. On the other hand, in this study, the documents that have been collected with TITLE-ABS-KEY ("digital AND transformation AND for AND public AND service" (LIMIT-TO (LANGUAGE, "English"))). At that stage, 699 documents were obtained. Documents collected from the Scopus database were taken from the 2019-2024 period, the purpose of which was to see trends over the past five years. In Figure 1 below, we can see the development of research from 2019 to 2024. However, the graph shows that there was research in the 2023-2025 period of 141 studies.

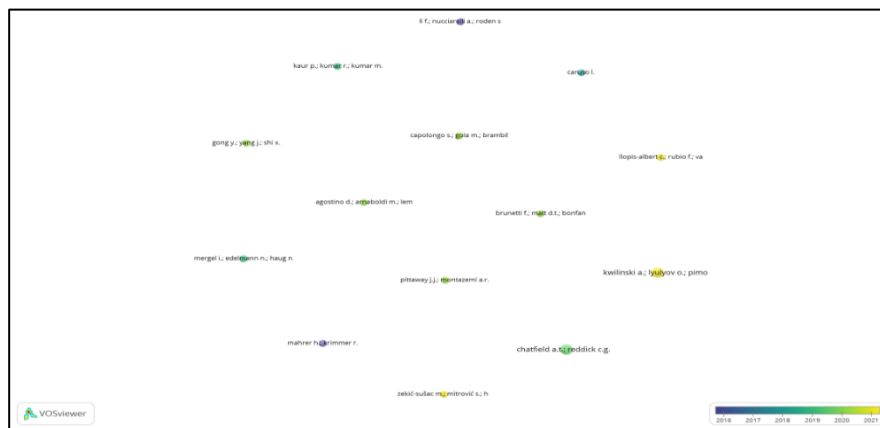


Source: Scopus CSV Data

Figure 3. Years Of Paper

From the Figure above, we can conclude that research with the theme of digital transformation public service has decreased significantly from 2023-2025. The bibliometric analysis of this review was completed with the VOSviewer program, "digital transformation public service" is the keyword used in this study. Bibliometric mapping can show the relationship between themes by using three different visualization networks when conducting bibliometric analysis with VOSviewer. Perception of organization, perception of expanse, and representation of thickness are all included in this representation network. Network-based visualization labels authors and keywords with different colored circles. This tone reveals the creator/slogan as a

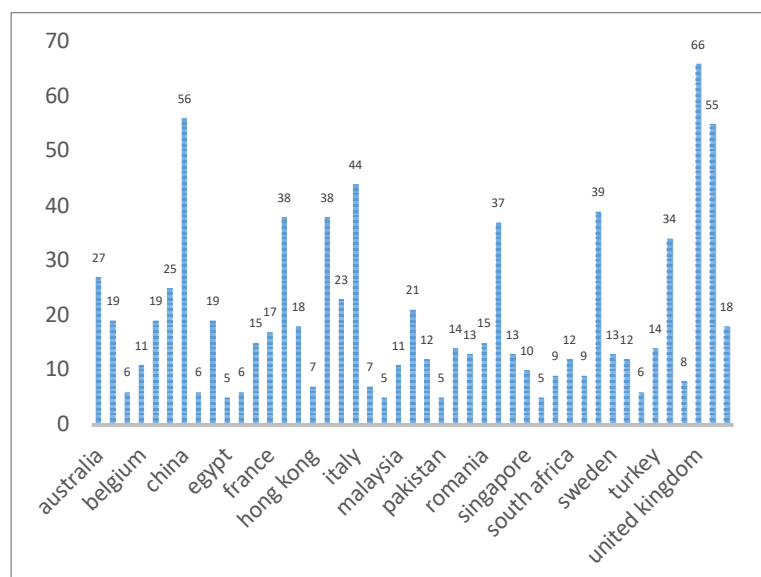
whole. Meanwhile, there is a strong correlation between the size of the circle and the frequency of the author or keyword. Conversely, the size of the letters and circles depends on how often the letters and circles appear. From the development of the research year above, it can be seen that there was a decrease in publications from 2023 to 2024. Meanwhile, from the data, it can be seen that from 2021 to 2023 there was a very rapid spike in publications from the previous year. Apart from that, we look at the author with the most citations.



Source: vosviewrs

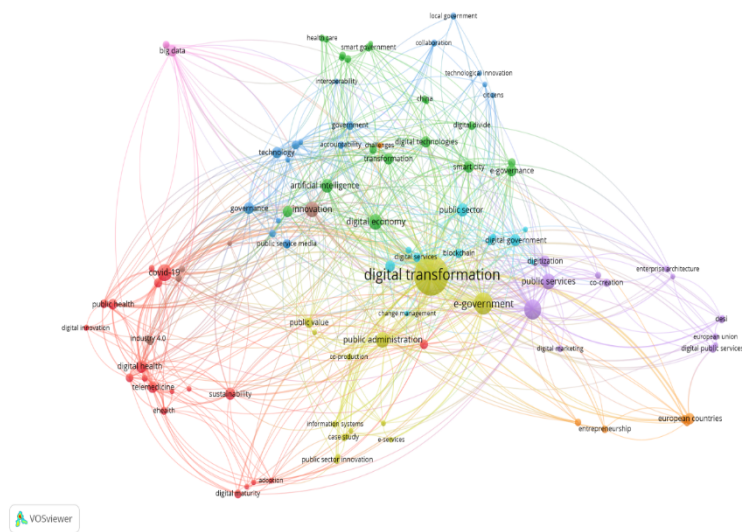
Figure 4 Co-Author Visualization

In Figure 4, the distribution of authors can be seen from the colors shown in the visualization overlay, the brighter the color that appears, the newer the article. The visual overlay shows many authors with the most citations with green to yellow color patterns. This shows that the authors of digital transformation public services indexed by Scopus are relatively new. The visualization above shows that Chatfield & Reddick, (2020) and Kwilinski et al., (2024) occupy the positions with the most citations and in the publication period 2019-2021. The countries that have been successfully identified in the development of research related to digital transformation public services can be seen in the Figure table below.



Source: Scopus data

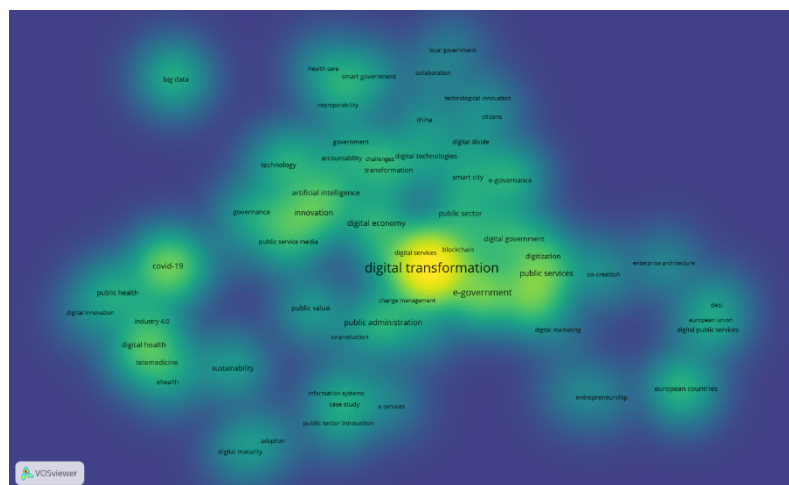
Figure 5 Identified Countries



Source: vosviewrs

Figure 6 Network visualization

Using the co-occurrence criteria, Figure 4 shows the distribution of keywords in the network visualization. Eight different colors are used to represent the research keyword clusters in the figure. In the first cluster, the red circle represents the keywords. The cluster is shown in the green variation circle for the next cluster. The cluster "blue variation circle fuzziness" shows the third cluster. The cluster in the yellow variation circle shows the fourth cluster. The cluster in the purple variety circle shows the fifth cluster. The sixth cluster is represented by a light blue circle with keywords, the seventh cluster is shown by an orange circle the eighth cluster is shown in brown and the last cluster is marked in pink. Nine clusters were found, a total of 163 items or keywords in the network were found with distribution in cluster one of 25, cluster two of 25 items, cluster three of 21 items, cluster four of 20 items, cluster five of 20 items, cluster six 15 items, cluster seven 13 items, cluster eight 13 items, and the last cluster 11 items.



Source: Vosviewers

Figure 7 Density Visualisation

The main cluster shows the most researched research keywords related to the digital transformation of public services, namely related to COVID-19, digital public services, and adaptation towards digital. The transition of public services towards the digital era has indeed occurred the most in the Covid-19 era. An era where large-scale restrictions occur and limit service activities and require each government to make innovations that can be carried out during a pandemic with the aim that services can continue to run. Digital transformation, better known as E-Government, is shown in cluster four, research on E-Government and digital transformation is in the publication range from 2020 to 2022 and it is known that that year was the year of the worst spike in the COVID-19 pandemic. Many researchers are taking advantage of this momentum, seen from the year of publication, the range from 2021 to 2023 saw a spike in publications regarding digital transformation of public services.

E. CONCLUSION

The results of the study show that Disdukcapil is quite good at implementing digital-based services from the three Government indicators to the Community. In terms of support, Disdukcapil has allocated human resources and created several digital innovations such as PACAKELAH TERUS, SIJAGO, and AMPERA CAKEP. So that it can speed up the administrative process and support transparent services through these digital innovations. Then in terms of socialization, Disdukcapil Palembang City disseminates information both online and offline with the aim of expanding the reach of the community so that they can find out the procedures and information needed. Then in terms of capacity, employees are considered competent because they have undergone training, but the technology used is still limited, the waiting room is uncomfortable, and there are budget limitations for the construction of new buildings.

The impact if technology is still limited can result in late services and difficult to access in certain situations due to errors or damage. Then, the lack of supporting facilities in the waiting room, such as air conditioning, chairs, or a large area can cause people to feel bored while waiting in line and tend to be less satisfied with the service as a whole. This is also closely related if the budget is still limited, because budget constraints can hinder the improvement of infrastructure such as waiting rooms and also result in inadequate supporting technology capacity for the development of more sophisticated systems. In terms of value, the benefits felt by employees are increased work efficiency and effectiveness. Then for the community, through online services, the public can access services without having to come to the office, reduce queue density at the location, expand community reach, and reduce administrative costs for the government in the long term.

Overall, the implementation of digital services by Disdukcapil has attempted to adopt a technology-based system to increase bureaucratic efficiency which is one of the main goals of digital transformation in the public sector. This is relevant to the increasing trend of digital transformation in public services, bibliometric studies show that research on service digitalization, especially in the 2021-2023 period, is growing with a focus on the use of big data, artificial intelligence, and process automation to improve service effectiveness. For the development of existing research, we managed to identify 23 with the most publications. We got 23 countries from 699 articles. This bibliometric analysis reveals that digital transformation in public services has become an increasingly popular research topic in recent years. The study identified several interesting trends, including the growing interest in using big data identified in symbolic clusters for better decision-making, as well as the important role of artificial intelligence in process automation and service personalization.

By knowing and understanding these trends, it is recommended that Disdukcapil can align its digitalization strategy with global developments, including preparation for facing faster changes in the public sector. Such as agency preparation in this case means strengthening internal capacity, both in terms of technology and human resources to be able to implement new technologies such as big data, artificial intelligence, and process automation that are increasingly being applied in public services. In addition, it is also recommended to submit a proposal for an increase in the budget based on the urgency of needs to the government or collaboration with third parties who can provide support in the form of technological assistance or improvements to public facilities, as well as making improvements gradually by prioritizing the most urgent aspects. These steps are needed to ensure that the implementation of digital services at Disdukcapil can be more effective, inclusive, and sustainable.

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