Bureaucratic transformation through digital governance: Insights from Jakarta smart city and Bourdieu's habitus theory

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Abstract

This study examines the transformation of bureaucratic habitus in Jakarta Smart City (JSC), Indonesia's flagship digital governance initiative, through Pierre Bourdieu's habitus theory, exploring how digitalization reshapes bureaucratic culture, service delivery, and citizen–state relations. The study employs a qualitative approach, combining focus group discussions with government practitioners, expert interviews, and secondary document analysis to capture structural, cultural, and technological dimensions of change. Findings reveal the emergence of a new bureaucratic habitus characterized by agility, data-driven decision-making, and efficiency, replacing rigid, paper-based, and instruction-oriented practices. Yet, challenges persist, including institutional silos, uneven digital literacy, political contestation, and diminished human interaction in public service delivery. The study concludes that the success of digital governance depends not only on technological innovation but also on institutional reform and cultural adaptation, with alignment between digital platforms and citizen empowerment essential for inclusive governance. Policymakers are encouraged to design frameworks that enhance transparency, responsiveness, and citizen-centered services while also mitigating risks of dehumanization. Integrating technological tools with socio-cultural realities remains crucial for achieving equitable and sustainable bureaucratic transformation.

Keywords: Bureaucratic habitus, Digital governance, Digital sociology, Jakarta Smart City, Policy innovation, Public service transformation.

1. Introduction

Since the introduction of internet technology in 1983, the global transition toward Industry 4.0 has accelerated transformation across multiple sectors [1]. Digitalization has become a central driver of efficiency, productivity, and connectivity, reshaping industries and governance alike. This transformation aligns with Castells' notion of the *network society*, in which power, production, and culture are increasingly organized through digitally mediated networks rather than traditional hierarchical institutions [2]. Within the bureaucratic sphere, digital public services have gained momentum, particularly during the COVID-19 pandemic (2020–2022), which, despite its devastating social and economic consequences, served as a catalyst for digital transformation.

Governments increasingly showcase innovation through digital tools—transitioning from *paper motion* to *digital motion*. The integration of the Internet of Things (IoT), big data, algorithmic analytics, artificial intelligence (AI), robotics, and even metaverse applications reflects a broader ambition to modernize public administration and service delivery [3, 4]. Yet, such innovations cannot be reduced to technological adoption alone. They must also accommodate citizen needs, democratic participation, and the cultural adaptation of bureaucratic structures [3].

Digitalization, once limited to specialists, youth, and "tech-savvy" groups, now permeates nearly every domain of social life. This expansion carries profound sociological implications: not only reshaping how society functions but also redefining the role of social research itself in interpreting these transformations [5]. Against this backdrop, Jakarta Smart City (JSC) emerges as a critical case. As Indonesia's capital and its leading economic, political, and cultural hub, Jakarta represents both the opportunities and challenges of digital governance in a developing context.

The establishment of JSC is more than a technological project; it is a structural transformation of governance and bureaucratic practices. While political science has extensively studied power dynamics, the sociological underpinnings of bureaucratic transformation through digitalization remain under-investigated. This article addresses that gap by applying Pierre Bourdieu's concept of *habitus* to analyze how bureaucratic behavior adapts under digital governance. Through field theory, the study examines the interplay between bureaucratic actors, digital infrastructures, and public interactions, highlighting the pressures to internalize new practices within governance structures [6, 7].

Global experiences reinforce the urgency of this shift. Research shows that European governments implementing digital bureaucracy achieved greater efficiency, reduced administrative layers, and lowered costs. Estonia, for instance, requires face-to-face interaction with civil servants for only three services—marriage, divorce, and property transactions—while all others are fully digitalized [8, 9]. Such examples reveal both the potential and challenges of reconfiguring bureaucratic habitus.

This study explores the sociological transformation of bureaucratic habitus within Jakarta Smart City, emphasizing the complex dynamics of bureaucratic-citizen relations in a digital environment. Data were collected through focus group discussions (FGDs), expert interviews, and secondary sources, allowing for a nuanced analysis of bureaucratic adaptation during the pandemic-driven acceleration of digitalization.

The contribution of this research is threefold. First, it enriches the discourse on digital governance by foregrounding the sociological dimension of technological change, particularly the shifts in bureaucratic habitus. Second, it emphasizes the human factor often overshadowed by the allure of digital innovation, underscoring the need to align formal governance structures with cultural dispositions and informal norms. Third, it provides policy recommendations for developing more citizen-centered digital governance models in Jakarta.

Research Gap: Existing studies on smart cities tend to prioritize technological efficiency while overlooking the sociological and behavioral dimensions of bureaucratic transformation, especially in developing country contexts.

Novelty Statement: By applying Bourdieu's habitus theory to Jakarta Smart City, this study advances a sociological understanding of bureaucratic digitalization beyond the scope of technology adoption.

Policy Implications: The findings underscore the importance of aligning digital infrastructures with institutional and cultural adaptation to strengthen citizen engagement and improve the quality of public service delivery.

2. Methodology

This study employs a qualitative approach to analyze the transformation of bureaucratic habitus within Jakarta Smart City (JSC). Qualitative inquiry was selected to capture not only institutional structures but also the cultural and everyday practices that underpin bureaucratic adaptation to digital governance.

Data collection combined two strategies. First, three Focus Group Discussions (FGDs) were conducted with JSC employees, retired bureaucrats of the DKI Jakarta Provincial Government, governance experts, and frontline officers handling citizen complaints. These FGDs provided diverse perspectives on how digital governance reshapes bureaucratic behavior. Second, secondary data were obtained from official documents, government reports, academic literature, and the JAKI super-application, which offers direct insight into citizen complaints and bureaucratic responses.

The data were analyzed through thematic content analysis informed by Pierre Bourdieu's habitus theory, linking micro-level practices with macro-level transformations. Triangulating FGDs, documentary evidence, and digital platform data enhanced the validity of findings. All participants provided informed consent, and confidentiality was maintained to uphold ethical standards.

3. Results

3.1. The Digital Transformation of Jakarta: An Overview

The Jakarta government implemented the JSC concept as outlined in the Regional Regulation [10]. The development of the smart city concept was a priority of Governor Anies Baswedan's administration (2017-2022), aimed at building a clean, modern, and service-oriented government based on transparency, accountability, and exemplary conduct, optimizing public engagement and the use of smart city technology.

In Jakarta, preliminary data obtained by researchers identified several challenges in developing a smart city. The first challenge is the Legal Basis for Integration, which highlights the need for legal products that support and encourage Regional Apparatus Organizations (RAOs) to integrate their digital services into a unified system. The second challenge is Digital Literacy among Officers, which involves providing technical guidance to RAO officers to implement digital transformation in all available public services. The third challenge is Data and Service Standardization, which relates to the process of standardizing data and public services to facilitate the integration of digital applications. Finally, Public Socialization and Education are crucial, as the essence of public services provided by the government is citizen satisfaction. Therefore, the smart city concept must also be usable by 'smart people' through education and information dissemination.

Regulatorily, the formation of the JSC structure was established through the Governor Regulation [11, 12]. CRM later became known as the Quick Response to the Public. The issuance of this regulation aimed at achieving efficiency and effectiveness in handling public complaints through the integrated CRM application system within the JSC. Previously, over 150 service applications operated by various RAOs functioned in silos. To enable all related officers to coordinate and resolve citizen reports promptly, the CRM Officers application was created, linking all departments, agencies, bureaus, and administrative areas in Jakarta, down to districts, sub-districts, and regional offices.

Governor Regulation [12] was revised two years later through Governor Regulation [13]. This new regulation, signed by Governor Anies Baswedan, reaffirms the CRM Application as Jakarta's official complaint channel and includes Technical Guidelines for Public Complaint Evaluation and Instructions for Submitting CRM Accounts in each city/regency administration, district, and sub-district, and all RAOs in Jakarta.

Furthermore, based on the Guidelines for Follow-Up on Public Complaint Handling through the CRM Application, as stated in the Decision of the Regional Secretary of the DKI Jakarta Province Number 99 of 2022, CRM comprises 13 official complaint channels:

1. Jakarta Kini (JAKI) through the JakLapor feature;
2. Twitter @dkijakarta;
3. Facebook Pemprov DKI Jakarta;
4. Email dki@jakarta.go.id;
5. Social Media Accounts of the Governor/Deputy Governor;
6. SMS 0811272206;
7. Pendopo Balaikota[i];
8. Inspectorate Office;
9. Mayor's Office;
10. District Office;
11. Sub-district Office;
12. Public Aspirations via Mass Media; and
13. LAPOR 1708.

Not all public complaint channels under CRM utilize digital services. According to the Decision of the Regional Secretary of the DKI Jakarta Province No. 99/2022 dated June 30, 2022, during Governor Anies Baswedan's tenure, the public could also report directly by visiting the Pendopo Balaikota[ii], Inspectorate Office, Mayor's Office, District Office, and Sub-district Office. Most of the public complaints received by JSC include issues related to damaged roads, waste, illegal levies, illegal parking, public transportation, Jakarta Smart Card (Kartu Jakarta Pintar (KJP))[iii], Jakarta Health Card (Kartu Jakarta Sehat (KJS))[iv], street vendors, and drainage.

The distribution points of citizen reports received through the JAKI application can be observed in the following image:
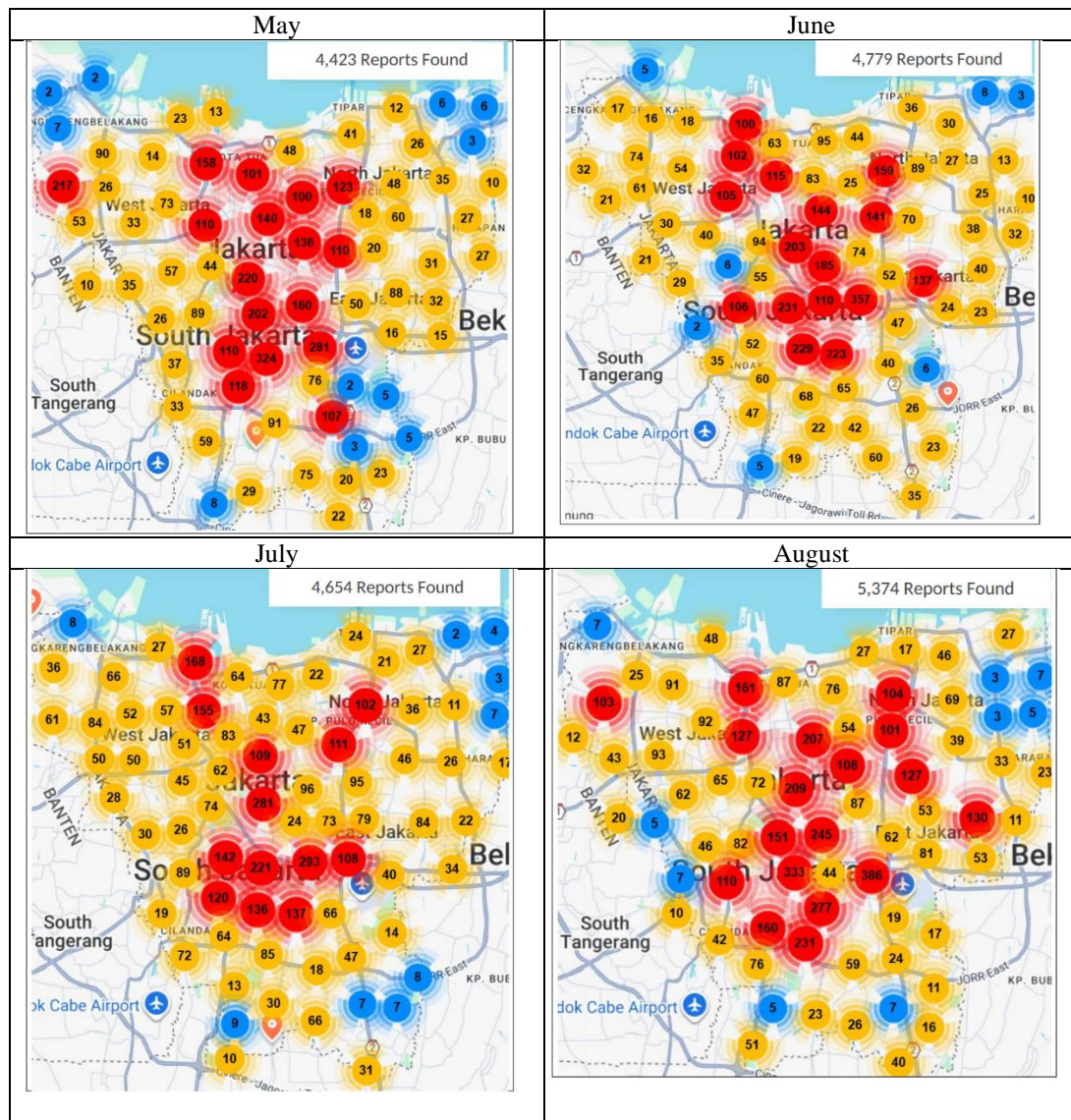
Figure 1.
Distribution Points of Public CRM Reports in the JAKI Application
During the Periods of May, June, July and August 2025.
Source: Pemerintah Provinsi DKI Jakarta [14].

Figure 1 shows fluctuating citizen complaints submitted through the CRM application from May to August 2025, averaging 4,807 reports per month. Most complaints related to traffic congestion, road damage, noise, waste, and illegal parking, each exceeding 500 cases, with concentrations in North and Central Jakarta. The visualization uses blue circles (1–9 complaints), yellow circles (10–99), and red circles (100+), revealing that grievances are unevenly clustered, dominated by red markers in the city's busiest areas. This indicates that digital platforms not only capture complaint volumes in real time but also map the geography of urban discontent, reflecting citizens' growing reliance on digital governance to demand accountability and responsiveness.

The transformation of Jakarta's bureaucracy illustrates a dual dynamic of structural constraints and cultural adaptation. Bourdieu's concept of *habitus* explains why bureaucrats tend to reproduce entrenched practices, while Castells' framework [2] highlights how digital networks redistribute power and reshape governance. Within the Jakarta Smart City (JSC) study, however, both opportunities and challenges emerge. On the one hand, digital platforms create avenues for greater citizen participation, enhance transparency, and enable real-time governance [2, 15, 16]. On the other hand, structural resistance, uneven institutional capacities, and cultural inertia remain significant barriers to reform [17-19].

3.2. Political Interests Vs Digital Services

The digital relationship between the bureaucracy and citizens strengthens when citizens feel their reports are addressed promptly and accurately by officials. However, this research notes a political dynamic that has generated both support and opposition to the bureaucratic digitalization policy. During the leadership transition in Jakarta on October 17, 2022, media were abuzz with Acting Governor Heru Budi's policy to reopen the complaint post at Pendopo Balai Kota. Netizens quickly popularized the hashtag #BackToStoneAge to criticize the policy, implying it replaced digital services with manual ones.

In reality, the direct complaint post had been established before Acting Governor Heru took office. The government accommodates public complaints not only electronically but also through conventional channels. Beyond the legal formal

aspects, there is an evident contestation in the arena of public service in Jakarta, particularly in the pursuit of capital for advantage and power. This situation involves claims and public opinion formation that new officials' policies nullify the innovations of their predecessors. However, this is not accurate when viewed from the chronology of regulation formation. Hence, this contestation is one of the gaps addressed in this research, analyzed through Pierre Bourdieu's habitus concept.

The integration of over 150 service applications into CRM and the provision of 13 complaint channels, as mentioned above, have successfully garnered numerous prestigious national and international awards for JSC. This achievement highlights JSC as a role model with challenges, strengths, and potential that can be replicated in other regions of Indonesia.

In Indonesia, the province with a population of 10,679,951 is almost the center of everything [20]. It not only serves as the nation's capital but also as an economic, defense, security, cultural, developmental, and technological hub. The DKI Jakarta Provincial Government holds special authority that distinguishes it from other provinces in Indonesia.

Jakarta has four Deputy Governors from the civil service who assist the governor in governance [21]. The mayors/deputy mayors and regents/deputy regents are administrative officials from the civil service appointed by the governor after consideration by the regional parliament. Jakarta also adopts city and regency councils as deliberative bodies at the municipal and regency levels, comprising representatives from each sub-district. Another distinctive feature is that the governor can attend cabinet meetings concerning Jakarta and participate in state events alongside the president. These privileges are unique to Jakarta.

In addition to its strategic position and special authority, Jakarta's urban population is highly familiar with using the internet. The East Ventures - Digital Competitiveness Index (EV-DCI) 2023 report ranks Jakarta as the province with the highest score (76.6), followed by West Java (62.2) and Yogyakarta (54.2) in second and third place out of 38 provinces in Indonesia. Globally, comparative insights from cases such as Seoul, Singapore, and Barcelona demonstrate that successful smart governance requires not only technological infrastructure but also cultural shifts within the bureaucracy [21, 22].

3.3. The Sociological Dimensions of Digital Governance

In digital governance, sociological analysis plays a crucial role. The utilization of digital media by citizens and the government's commitment to providing public services through service applications ultimately transforms the bureaucratic arena from being rigid, convoluted, opaque, costly, and slow to more flexible, accessible, transparent, affordable, and efficient. However, as Van Dijk warns in Orton-Johnson [23] the emergence of inequalities in the Network Society cannot be avoided. These inequalities manifest in the form of disparities in mobility capacities, where digital networks transcend physical meetings, resulting in higher social classes having greater mobility capacity compared to lower social classes. The next gap lies in the expertise required to access information, which encompasses operational skills (proficiency in hardware and software), formal skills (understanding the formal characteristics of each medium), information skills (ability to select, process, and evaluate computer data), and strategic skills (using the internet to achieve goals).

Understanding digital sociology is essential to observe these network society inequalities. With the widespread use of digital technology in social life, the social and technical interactions between people and machines, as well as everyday environments and objects, become a reality. This new society is no longer merely about producing material goods but processing information and data [24]. Consequently, in digital governance, big data plays a significant role in policymaking. The main challenge, however, is how the government structure can involve citizens in the decision-making process [25]. Therefore, government bureaucracy should consider sociological dimensions in the implementation of digital governance.

The current transformation occurs when digital governance merges with public space. As defined by Habermas, et al. [26] public space is a realm of social life where something approaching public opinion can be formed. Prerequisite access ensures this for all citizens. Parts of the public space arise from every conversation where individuals gather and form a public body. Their behavior is not akin to businesspeople or professionals prioritizing transactions for personal gain but rather as members within a constitutional order. Their habitus as a public body, when deliberating, guarantees the freedom to assemble, associate, express themselves, and publish opinions related to public interest.

Digital governance holds strong promise, having transformed citizenship, bureaucracy, politics, and interdependence among nations and regions globally over the past 25 years. Much remains unknown about technological advancements and the ongoing convergence of current capabilities across knowledge, technology, and society, which holds significant promise in advancing individual, community, societal, and national welfare through governance that benefits the public [27].

Lips [28] explains the unique nature of governance that affects the context and outcomes of digital governance and its relationship with citizens, seen from the socio-technical phenomenon of digital governance, which is highly complex and overlaps with the digital economy and society.

Digital government is an evolving and dynamic concept expected to become a fair government in the future. Digital government involves the introduction, implementation, and use of digital technology and data in governance and its external relations (including citizens, businesses, civil society, and international organizations) and the democratic, governance, and managerial implications. In contrast, e-government is a term used before "digital government" [29].

The situation differs when governance does not fully rely on technology. In the past, community interactions were warm in public spaces. Residents would regularly check announcement boards at local offices, and district couriers on motorbikes would deliver meeting invitations from the sub-district head. Specific mechanisms similar to standard operating procedures (SOPs) were not stringent. Various tools were necessary to ensure that district letters reached the village head.

In the digital era, the involvement of actors, mechanisms, and tools becomes more streamlined. The need for couriers and envelope makers is eliminated. Time is not wasted on typing or fixing letters or waiting for a supervisor's signature. In

the digital era, bureaucracy becomes faster and more efficient by cutting mechanisms that can be replaced by the internet. However, this raises questions about the future of public spaces, previously full of warm interactions.

4. Discussion

4.1. Pierre Bourdieu's Habitus: A Theoretical Lens

Digital governance is not merely a matter of technological adoption but also involves profound cultural and behavioral shifts within bureaucratic structures. For this reason, this research employs Pierre Bourdieu's concept of habitus as a theoretical lens. Unlike approaches that focus solely on institutional design or policy efficiency, Bourdieu's framework illuminates how dispositions, routines, and practices embedded in bureaucrats' everyday lives shape their responses to digital transformation. Habitus enables this study to uncover the subtle yet powerful processes through which bureaucratic actors internalize, resist, or adapt to the logic of digital governance. By applying this perspective, the analysis moves beyond a technological narrative and situates Jakarta Smart City (JSC) within a broader sociological understanding of how bureaucratic behavior evolves in response to structural pressures and digital infrastructures.

French sociologist Pierre Bourdieu is renowned for his concepts of field, capital, and habitus in examining societal developments, inequalities, and potential social conflicts. Through Bourdieu's lens, social science approaches have expanded beyond politics and organization to include digital sociology. Bourdieu's field theory posits that society consists of various fields—structured social spaces with their own rules, norms, and forms of capital. Individuals and groups within these fields compete for resources and power, and their position within a field is determined by their capital (economic, cultural, social, and symbolic).

The utilization of Bourdieu's concepts in political sociology is exemplified in Haryanto [30] which employs Bourdieu's field theory as a conceptual framework to study civil society organizations in Indonesia that operate outside traditional arenas. This research focuses on leaders from various sectors, such as agrarian, anti-corruption, law, and human rights, who act as boundary crossers. These leaders move across different fields, which leads to several significant implications: the creation of sectoral policies, the establishment of political relationships, and the exertion of political control within the state arena.

Haryanto's work demonstrates the practical application of Bourdieu's field theory in understanding how civil society organizations interact with and influence the state. By crossing boundaries, these leaders leverage their positions and capital to navigate and shape multiple fields, effectively impacting policy-making and political dynamics [30].

Bourdieu's concept of habitus has been underutilized in organizational studies compared to his other concepts of field and capital. Habitus, however, is essential for understanding field and capital, as it encapsulates the dispositions formed by past experiences that shape perceptions, evaluations, and actions [31]. Power relations within and between organizations are produced, reproduced, and contested. The roots of Bourdieu's field analysis present both challenges and advantages, given the critiques of reductionism in his thought. The dynamics within the field and the role of materiality in habitus relations should be considered [6]. Bourdieu's concepts of field and capital are widely used in economic sociology, but the concept of habitus remains underexplored in organizational transformation literature [31].

In digital sociology, Bourdieu's framework can reveal the social impacts of digital communication technology utilization. Ignatow and Robinson [32] note that three interrelated features of Bourdieu's sociology have enabled the development of approaches in the digital era: first, Bourdieu's theory is inseparable from empirical research practice; second, his ontological stance combines realism and social constructionism; and third, his familiarity with concepts from other disciplines and participation in interdisciplinary collaborative projects.

Warwick, et al. [33] state that Pierre Bourdieu posits social reality exists in two forms: in the field, which encompasses the environment and people around us, and in habitus, the reality within our minds and bodies. Habitus is a system of enduring dispositions produced by integrating past experiences, functioning as a matrix of perception, evaluation, and action at any moment, and enabling the accomplishment of diverse tasks. Habitus is a generative process of habits and repetition, not implying automatic reflex but a condition realized and reflected as instincts with origins and causation that are consciously internalized and form those instincts.

Bourdieu introduced the concept of habitus in 1962 through his article describing the life trauma of farmers between capabilities and expectations due to enforced celibacy and the failure of household reproduction. Bourdieu later frequently used habitus in his articles on Algeria, explaining the slow economy and the mismatch between the economic nature of actors and the economic world in which they act. He sought to mediate the relationship between structure and agency [7].

4.2. The Birth of a New Bureaucratic Habitus

According to Max Weber in Anter [8] bureaucracy resembles a machine. It is faceless, devoid of personal feelings, detached from drama and emotions, and separate from the political arena. Power resides in the office, not in individuals. Bureaucracy adheres to a meritocratic system rather than patronage, demonstrates loyalty to service, and maintains stability and insulation from political interference [34]. Bureaucracy possesses a habitus that is deeply ingrained in the bodies and minds of officials through regulations, work mechanisms, and power relations. Transforming this habitus through the implementation of digitalization compels the bureaucracy to cultivate a new habitus [9].

Behind the emergence of a new bureaucratic habitus due to the implementation of public services through digital bureaucracy, there are both positive and negative aspects, each with its own challenges, as previously discussed. However, through FGDs, it has been agreed that the bureaucratic habitus formed as a result of quicker resolution times, more effective complaint handling mechanisms, fewer personnel, and more efficient costs. From these influences, the bureaucratic habitus in the digital era is as follows:

1. Agille rather than Rigid. Bureaucracy moves more quickly and freely based on functional roles. It no longer operates hierarchically within a tiered and rigid organizational structure. The streamlined structure facilitated by digitalization accelerates bureaucratic movements. The bureaucratic orientation now emphasizes thinking and acting to resolve citizen complaints promptly and accurately, meeting citizens' expectations.
2. Data-Driven rather than Instructions-Based. The accumulation of various complaint data, analyzed and prioritized by the JSC center, is monitored for resolution progress. The algorithmic movement of citizens' interest in a complaint prompts government response. The more reports or the more viral the coverage of a particular case, the more it garners bureaucratic attention. Formed teams can then act without waiting for written instructions from superiors, as was the old pattern.
3. Economical rather than Wasteful. Digital complaint handling has successfully created a new habitus of thrift. Bureaucracy is required to change its habitus towards practical actions that reduce the use of paper, ink, pens, and all kinds of non-digital office supplies. Bureaucratic tasks, such as delivering letters, are no longer necessary.

For clarity, the following illustration depicts how the bureaucratic habitus has changed by utilizing digitalization through the JSC.
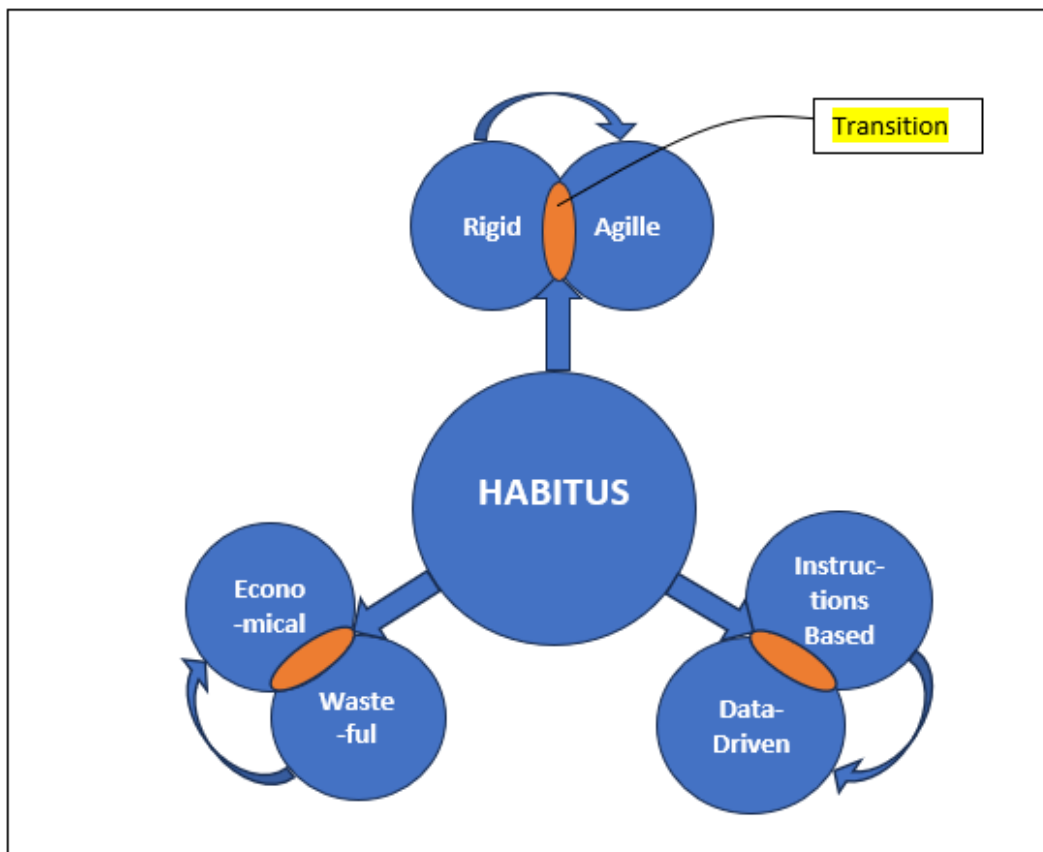

Figure 2.
New Habitus of Digital Bureaucratic.

Figure 2 illustrates the transformation of bureaucratic habitus within Jakarta Smart City (JSC) as a result of digitalization. The bureaucracy, once characterized by rigid structures, instruction-based mechanisms, and wasteful practices, is gradually shifting toward a new habitus that is agile, data-driven, and resource-efficient. This transformation reflects the emergence of digital governance, where decision-making is increasingly informed by real-time data rather than hierarchical commands, and where efficiency is prioritized through the reduction of paper-based and redundant processes.

However, this transformation does not occur in a linear fashion. Between the old and the new habitus lies a transitional zone where bureaucrats experience uncertainty, anxiety, or even frustration due to limited digital literacy and the uneven adaptation to new technologies. This transitional experience underscores the cultural and psychological dimensions of bureaucratic change, reminding us that digital governance is not only about technology adoption but also about reshaping dispositions, practices, and institutional cultures.

The emergence of a new habitus involves a transition from being rigid to agile, from being instruction-based to data-driven, and from wasteful to economical. During this transition period, elements of the old habitus coexist with practices of the new habitus.

The birth of a new bureaucratic habitus is an inevitability and a consequence of implementing digital governance policies. Bureaucracy operates like a robot, functioning according to programs inputted into the system. The relationship between bureaucrats and citizens gradually transforms and becomes mediated by applications.

4.2. Exploring The Trasformation of Bureaucratic Habitus

The FGD results indicate that the emergence of a new habitus through the implementation of digital bureaucracy is an inevitability. The research findings reveal that the new habitus emerging from the implementation of JSC services includes faster bureaucratic services, greater convenience, and increased certainty due to a more agile, data-driven, and economical habitus. Services are faster because the relationship between citizens and service officers can occur anytime and anywhere. For instance, citizens reporting road damage can open the JAKI application and submit a report or write on Twitter, directing it to @dkijakarta. The convenience of digital services is experienced by citizens through simplified service mechanisms. Complainants only need to fill in their complaint, provide the location address of the issue, and add a photo of the damaged road. Certainty regarding the handling of the complaint can also be monitored by the complainant, who receives updates on the status of their report from the relevant government officials.

The data on citizen reports received and processed from May to August 2025 amounts to 18,346 reports from 13,546 reporters. JAKI is the most frequently used digital platform for citizen reports, followed by Email, Whatsapp/SMS, and Twitter. For further details, refer to the table below:

Table 1.
Reports dan Reporters per Channel May-August 2025.

Channel	Number of Reports	Number of Reporters
JAKI	12,765	10,153
Email dki@jakarta.go.id	1,788	1,117
Whatsapp/SMS 0811272206	1698	993
Twitter @dkijakarta	962	578
Pendopo Balaikota	378	267
Social Media Accounts of the Governor/Deputy Governor	232	116
LAPOR 1708	204	166
Public Aspirations via Mass Media	122	7
Facebook Pemprov DKI Jakarta	113	86
Mayor's Office	47	38
Sub-district Office	37	25
Total	18,346	13,546

Source: Pemerintah Provinsi DKI Jakarta [14].

Table 1 presents the distribution of reports and reporters across different service channels within Jakarta Smart City (JSC) during the period of May to August 2025. The data indicate that digital platforms—particularly the Citizen Relation Management (CRM) application—account for the highest number of submitted reports, reflecting the increasing reliance of citizens on mobile and online systems to voice complaints and requests. Social media channels, such as Twitter and Instagram, also play a significant role, serving as accessible and popular tools for real-time interaction between the public and government. In contrast, traditional channels such as call centers LAPOR 1708 and direct visits to government office show a relatively lower volume of reports, highlighting the gradual decline of face-to-face mechanisms in favor of digital engagement.

The issue of damaged roads and clogged drainage ranks among the top algorithms in Jakarta compared to citizens reporting issues with the KJP and KJS, which receive minimal attention. The government is more vigilant about issues with a higher potential for wider virality compared to those with less public attention. Officials responding to citizen reports in the field also focus solely on addressing the reported issues using technical equipment rather than ensuring citizen satisfaction with services or empowering them to independently address issues through community efforts.

By implementing services through digital applications, the expectation is that citizens' needs for government action will improve. However, this is not necessarily the case. Changes in service actions and interactions between citizens and government bureaucrats have given rise to a bureaucratic habitus based on algorithms from analyzed data, emphasizing quantitative aspects, cost-effectiveness, and faster procedures.

In the era of digital services, the role of government is disrupted, especially in empowering and educating citizen behavior to be more proactive in addressing issues in their own environment. Digital services not only provide convenience but also pamper and even lull citizens. The fact that small—yet significant—matters can actually be addressed together within a community or even individually by fostering awareness and strengthening personal character cannot be overlooked. For example, in managing waste disposal, which leads to other issues such as clogged drainage, floods, infrastructure damage, and increased disease outbreaks that risk lives. Yet, educating and fostering community awareness to collaboratively address waste disposal issues is a fundamental aspect that cannot be ignored.

The concept of a smart city does not always unfold positively. Several regions are suspected of spending budgets on acquiring smart city assets, which significantly drain the Regional Revenue and Expenditure Budget (Anggaran Pendapatan dan Belanja Daerah (APBD)). After meeting various infrastructure needs, bureaucratic machinery fails to function due to insufficient capacity and personnel to operate the technological devices. As a result, despite the substantial budget allocations, smart city facilities become stalled projects due to corruption by officials, as seen in legal cases involving the Bandung Smart City project 2023, Tasikmalaya Smart City 2022, and several other regions.

In the context of bureaucratic service development in JSC, which has birthed and managed the super application JAKI, various social media platforms, and several offices that still provide face-to-face services, the transformation of

bureaucratic habitus that occurs is primarily driven by changes in policies embodied in government regulations. The transformation of bureaucratic habitus that occurs after the implementation of regulations not only impacts how JSC officials and staff manage applications but also pressures bureaucracy related to service mechanisms. For example, in citizen complaints regarding damaged roads or sidewalks reported through one of the CRM complaint channels, then forwarded to technical officers in the Public Works Office and shared with the relevant district and sub-district heads. In each mechanism flow, data monitoring on how long officials handle complaints is also observed.

Thus, the transformation of bureaucratic habitus is akin to a machine. Bureaucracy, consisting of humans, has been programmed to promptly respond to citizen reports by going to the site, repairing roads, water channels, or sidewalks as reported by citizens, and then, once all is done, the officer reports back through the application that the issue has been resolved.

Similarly, citizens who report issues do not know when the officers come to repair damaged roads or clogged drainage. Suddenly, they find that roads or drains are functioning properly. Once again, there is no humane interaction between bureaucracy and citizens in the digital world. While this may be positive in terms of the effectiveness and efficiency of bureaucratic work, there has been a degradation in the quality of political sociology. Ideally, the experience of interacting, conversing, greeting, and smiling between citizens and government officials implementing political policies should continue even amidst the rapid use of digital technology. Citizen satisfaction is not solely based on algorithms indicating the number of processed or resolved reports but also on how bureaucratic actions successfully foster empowerment within various communities.

4.3. Towards a Sociologically-Informed Smart City Development

The next question is how to embrace sociological principles in smart city development. The challenges faced by governments in the digital era require various interdisciplinary perspectives that no longer adhere to conventional views. One such perspective is digital sociology, which opens wide doors for individuals to receive attention from their governments. This was also noted by Jeffrey Alan Johnson in his article "Representing 'inforgs' in Data-driven Decisions" [35]. He wrote that Jean-Jacques Rousseau proposed a system in The Social Contract where citizens participate directly in governance. He did not represent the desires of specific individuals but rather the "will" that an individual possesses as a citizen, known as "the general will." Therefore, for the social contract to function properly, bureaucracy must not operate on behalf of ruler interests. All mechanisms it operates must aim at fulfilling societal aspirations. This underscores the importance of governance structures that grow in sync with social transformations.

As suggested by Markell and Glicksman [36] governance requires attention to three distinct but interrelated keys to optimize policy implementation. Firstly, the actors who are or should be involved in program implementation in different capacities. Secondly, the mechanisms (legal and others) available to promote good governance. And thirdly, the tools available to advance desired outcomes. In this digital era, between actors, mechanisms, and tools, they are like strands of a rope. Their existence complements each other and is difficult to separate.

There are several major challenges that governments need to address and prepare for in the digital era [37]. Firstly, anticipating significant economic impacts is crucial. The government needs to prevent and ensure that start-ups and established companies can develop new business models and digitize their operations. The public sector should play a role in three areas: Human Capital Development. New technologies will require new skills. Therefore, the government should provide education for future digital workforce needs. Governments need to enhance the capabilities of their employees in various digital fields. For example, the City of Montreal has designed a strategy that combines increased support with involvement of universities through immigration policies aimed at attracting and retaining top technical talent.

Regulatory Enablement. Regulations should adapt to the digital technology to be implemented. Furthermore, support for Innovation Ecosystems. Government commitment to supporting and maintaining innovation breakthroughs should be reflected in policies, investments, and budgets for digital programs such as London's investment in building Tech City or known as 'Silicon Roundabout.'

Secondly, directing people to future jobs is essential. Digitalization has transformed the job market. With current technology, half of all activities can be automated. Each automated job will create 2.4 new jobs, meaning up to 375 million workers worldwide will need to shift job categories by 2030.

Thirdly, maintaining national security in cyberspace is crucial. Governments must guarantee the security of citizens' data from hacker attacks. Governments also need to establish a cyber defense branch that synergizes with the army, navy, and air force to anticipate breaches in national security data banks. Collaborative work networks with civil bureaucracy are required to ensure citizens' data is not exploited for the benefit of digital criminals or foreign countries.

5. Conclusion and Recommendations

In the pursuit of smart city development, Jakarta has become a leading example in the implementation of technological innovations to enhance public services and governance in Indonesia. However, this transformation is not limited to the use of technology alone but encompasses profound changes in bureaucratic service mechanisms that affect habitus changes.

Although political scientists have made significant contributions to understanding the impact of corruption on development, sociologists seem to have overlooked the social dimension of this transformation. This article has sought to fill this gap by exploring social changes in bureaucracy, particularly through the habitus perspective proposed by Pierre Bourdieu in the context of Jakarta's digital evolution.

This research reveals that bureaucratic transformation has given rise to a new habitus that affects interactions between bureaucracy and citizens in the domain of digital public services. The process of habitus change involves cultural struggles

within the organization, ultimately developing new behaviors within the bureaucracy. While it is undeniable that the static bureaucracy's role has become more dynamic in the digital arena, bureaucratic habitus still reflects the origins of the arena and the sediment of struggle. Interactions that occur, even conflictual ones, do not significantly change the structure, and arena configurations are reproduced over time except in gradual changes [38].

Furthermore, this research highlights the importance of sociological analysis in understanding the complex dynamics of digital governance. It shows that government digitization is not just about technology use but also about understanding cultural shifts, habitus changes, and social interactions within the bureaucratic environment. The government guarantees that citizen satisfaction is not only fulfilled through algorithmic numbers on various service channels but also ensures that the government promotes citizen awareness to collectively or independently address issues in their environment. In this process, leadership becomes crucial: the Governor of Jakarta as the highest authority sets the vision for digital transformation, the Head of the Communication and Information Agency translates that vision into institutional frameworks, and Jakarta Smart City managers ensure its operationalization through applications and citizen engagement.

The findings of this research have the potential to provide guidance for policymakers and government authorities on the importance of not only digitizing public services but also considering the sociological aspects of such transformations. In view of the evolving digital governance landscape, this research proposes an integrated approach where Western governance principles intersect with Indonesia's rich socio-cultural framework. Strong and consistent leadership at various levels is essential to bridge these approaches and to ensure that sociological considerations are not sidelined by purely technical imperatives.

Jakarta Smart City demonstrates that digital governance entails more than technological integration; it requires a reconfiguration of bureaucratic habitus. By applying Bourdieu's theoretical framework, this study reveals that digital transformation produces new behavioral dispositions within the bureaucracy that are agile, data-driven, and resource-efficient. Policymakers should ensure that these shifts are complemented by efforts to maintain human interaction and community empowerment. Aligning technological tools with cultural and institutional adaptations is essential for achieving equitable and citizen-centered public services. The presence of leaders who can mediate between technology and culture is indispensable to sustain this equilibrium.

This research reveals nuances and complexities of administrative reforms in the context of smart cities, paving the way for a holistic and socially conscious governance model in Jakarta and beyond. Thus, it can be concluded that the achievements of JSC are more than just technological adoption; it is about profound social and cultural changes that need continuous attention to the policy implications of digital bureaucracy implementation to meet citizens' needs and minimize societal disparities in the networked society. Ultimately, the Provincial Government of DKI Jakarta needs to synchronize the structure and bureaucratic habitus in line with the escalation of digital public services. The development of a smart city should be within the framework of governmental sociology, supported by committed leadership, as digital tools alone cannot foster sustainable relationships between the bureaucracy and the citizens.

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[ii] Pendopo Balaikota: Main hall of the Jakarta City Hall, often used for public consultations and community meetings.

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[iv] Kartu Jakarta Sehat (KJS): Health card program providing free medical services for Jakarta residents.