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Digitalization in the Land Service Delivery: Comparison between Bangladesh and Indonesia

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Abstract

The administration of a country's land system has a major impact on its economy and society. Digital land management has the potential to improve the land administration of developing countries and make it more efficient. The governments of Bangladesh and Indonesia have implemented a digital land management framework in the land system to ensure optimal land development, in particular, to deliver land services efficiently. The land offices of both countries have a variety of obstacles when it comes to delivering digital services. Because of this, it is important to recognize the current use of digitalization and identify the variables influencing digitalization in land service delivery by land offices in order to make informed decisions about their future. Content analysis was applied to gather data for the study, which used a qualitative approach. The correct deployment of digitization in land administration in both nations is being slowed down by a lack of institutional and operational capability and personnel misconduct in service delivery.

Keywords: *Digitalization, Service Delivery, Land Office, Bangladesh, Indonesia*

Introduction

Proper land management is essential to reducing land-related complications in all countries (Hoque, 2016). South and South-East Asian countries can benefit greatly from the use of information and communication technology (ICT) in their land management systems by digitizing them. Negotiation, coordination, networking, and ICT regulation are all important in these countries if land management is to be effectively digitalized (Gessi, 2006). By enabling file and data exchange across government agencies, digital service delivery can reduce inefficiencies in processes and, as a result, errors introduced by manual procedures while also reducing the amount of time necessary to complete transactions. In addition, consumers can now input their information online, considerably enhancing the service level they receive (Lin et al., 2001, cited in Asad, 2013). As a result, digitalization has a favourable impact on improving service delivery efficiency and enhancing customer happiness. Land service modernization is perceived as costly and time-consuming, but the initiative to begin the process is

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the right one to provide proper digital service. The land sector can benefit from digital transformation by using information technology to become more economically mature, thereby contributing to the achievement of long-term development objectives. For underdeveloped countries, a 10% increase in Internet use correlates with an additional 1.35 percent GDP growth, while for rich countries, a 1.19 percent rise (Kusmiarto et al., 2021).

The government of Bangladesh has set up a task force to modernize land registration and management as part of the digitalization process that began in 2008. Among the suggestions, the task force made following its seven-month investigation was the urgent requirement for the digitization of land records, registration, paperwork, and other related data (Islam et al., 2015). It is important to preserve local land records (upazila and zonal land offices) and centralized documentation to make it easier for citizens to obtain necessary documents in their area. The digitization of land records will undoubtedly alter the economic landscape of Bangladesh. There is little public awareness of the progress that has been accomplished, but the premise is that it will curb corruption and minimize land conflicts (Hossain, 2017).

It is not just Bangladesh that has embraced digital change, but Indonesia as well. There are four electronic-based land services provided by the Indonesian government agency [Ministry of Agrarian and Spatial Planning/National Land Agency (ATR/BPN)]: Electronic Mortgages, Land Value Zone Information (ZNT), Land Certificate Check, and Letter of Registration Information (SKPT). At least 72 types of land services are provided by Indonesian land offices, which are categorized into six service categories: First-time land registration services; data maintenance services; land registration and information services; land measurement; land regulation and arrangement; and complaint management services (Kusmiarto et al., 2021).

Citizens have been subjected to abuse, maltreatment, and a general lack of cooperation by land office employees (Billah, 2017). In addition, land governance is plagued by issues such as a lack of institutional and operational capability, a lack of specific norms and regulations, a lack of flexibility on the part of service providers, and a lack of necessary resources and logistical backup. By using their muscular might, the land grabbers control ownership through fraudulent documents and deprive the governments of revenue (Barakat, 2001). In both countries, these issues obstruct the successful digitalization of service delivery and satisfaction for citizens. The study's rationale is that land offices in Bangladesh and Indonesia are providing digital services through the digitization of land paperwork at an accelerated pace. The study's goal is to discover how far the land offices in both countries have progressed toward digitalization and what obstacles remain in the way.

Improved land administration and digital management systems have been on the way to implement by the governments of Bangladesh and Indonesia to improve the quality of land-related services for citizens (Hossain, 2015). All land services must be implemented digitally in both countries to meet the new challenges the world is facing.

Methodology

Following a qualitative approach, this study was carried out. Since the research is conducted in a natural setting, the qualitative technique was employed as the primary method of data collection. The research was based on secondary data obtained from numerous sources, such as journal articles, books, newspapers, dissertations, and grey literature. An internet search yielded relevant data for our study. In addition, due to the newness and shortage of data, the research team turned to 'netnography' to gather information. Both countries' land ministries' websites were browsed heavily for this investigation.

Literature Review

Research on land administration digitization is scarce in many countries. This research is exceptional in the sense that digital land service delivery in Bangladesh and Southeast Asian countries has never been compared. Indonesia's land service delivery has undergone a digital transition, as detailed by Kusmiarto et al. (2021). Indonesia's Digital Governance Assessment Framework (DGRA) has been used to assess if a land office is ready to carry out digital transformation visions. Land offices in Indonesia have been shown to have issues with accuracy, consistency, consistency of data, and completeness of data in their digital land service delivery (Kusmiarto et al., 2021). There were no digital records or information management in Bangladesh's land sector prior to digitization, and all land surveys for more than 100 years were done manually. When it comes to ensuring accountability in the land sector, a manual information management system unintentionally hinders field operations and is a huge obstacle to digitization. For the efficient implementation of digitalization, every land office requires ICT-skilled personnel (Hasan, 2017).

Land records in Bangladesh may be preserved digitally by using an e-Service Center and DLRS to input the *khatian* records and print the information. Some officials and employees, however, lack enthusiasm and are reluctant to use digital services because they fear that they will limit their ability to engage in corruption and irregularities (Hossain, 2015). To counter this, the traditional paper-based land management policies in Indonesia can readily be replicated and falsified. Data harmonization and openness, lightening data access, permanent record management, and, most crucially, a solution that is less expensive and faster have been implemented to increase land ownership by the public (Thamrin et al., 2021).

Before digitalization, people had to spend a lot of time and money to receive land service and to change their land title. There were instances where land mutation took an additional 3 to 4 months or required payment to an intermediary. The land mutation system has to be automated in order to better serve the public (Saif & Hawlader, 2018).

Land administration and information services can benefit greatly from digitalization, which can make land markets and urban and rural economic growth more efficient and effective (Goyal, 2011). With land mutation, a person would have to approach the Upazilla Land Office and confront a variety of difficulties. In this light, land records and land service apps and databases assist service providers and customers alike in delivering and receiving better digitalized services (Nahrin & Rahman, 2009). However, there are numerous institutional restrictions on Bangladesh's land administration and management and service provision. More time, expense and trips were required for service recipients who sought service from multiple offices (Islam et al., 2015). The service seekers would substantially benefit from the automation of registration records, which would provide them with information on registration records (Khan et al. 2009). The mutation process must be automated in order to provide better service to citizens (Subedi, 2016). In order to supply digital services successfully and efficiently, service providers' mindsets must also be altered. However, land and sub-registry offices collude to commit corruption, and officials and employees are engaged (Masum, 2017). People who have paid bribes to them and had land ownership illegally transferred or documented in their names often work together with touts and land sharks (Talukder et al., 2014). The rise in land disputes in the country is attributed to corruption in the land sector. An IT-based solution to land administration's uncoordinated and disaggregated executive process could be best for decreasing corruption and existing difficulties with land services (Hasan, 2017).

A series of extensive and time-consuming procedures are also evident in Indonesia when it comes to delivering land services to citizens, particularly in relation to the land certification system. It takes a long time, and several departments are involved in keeping track of crucial files and documents. This complicated system of procedures boosts the bribery and fraud activities of government personnel in the delivery of services to the public, which the citizen does not realize. As a result, a number of critical issues or problems have been identified, such as a) many irresponsible parties forged documents with the assistance of government officials in order to seize land by force, creating problems for legitimate landowners trying to prove their ownership; b) irresponsible parties also sell land to uneducated parties using fake documents made by bribing officers, resulting in the existence of dual land ownership between two landowners (Thamrin et al., 2021).

Digital Land Management in South East Asian Countries

In land administration, South East Asian countries have implemented a variety of digital services. Land service delivery in Indonesia and Malaysia has been digitalized in a variety of ways. Land administration systems (LAS) in Malaysia have begun using a new 3D technique to account for the increased complexity of land ownership in cities. The Land Administration Domain Model (LADM): ISO 19152:2012 is critical in the development of a 3D-enabled system for Malaysian land administration. Additionally, Malaysia's government agencies benefited from the use of 3D data (Rajabifard et al., 2021). It has also been digitalized so that land titles are more indestructible in Malaysia (Amernudin, 2019). The Land Management Bureau (LMB) in the Philippines has implemented a new digital system to speed up the processing and issue of land titles. For the administration, survey, management, and disposal of A&D and other public lands, LAMS implemented a computerized information system as part of its Land Administration and Management System (LAMS). Land information may be processed quickly and easily with this technology.

System (LAMS) consists of four components: public land application (PLA); inspection, verification, and approval of survey (IVAS); e-survey plan; and client-transaction monitoring (CTM). All land applications are processed and approved by the PLA; it also enables effective storage of data to prevent the issuing of double titles and enhance transparency. The IVAS is designed to keep track of the regional offices' verification and approval of the survey. Digital survey data (DLSD) generated from an e-survey plan is the first step in this process. As an accredited geodetic engineer, you can apply online for e-surveys, which expedite boundary verification. By using the LAMS kiosks in all DENR regional offices, CTM allows clients to maintain track of the status of the survey and their application electronically by text or SMS and on the Internet, reducing the risk of fraud (DENR, 2016).

During the years 1984-2002, the World Bank worked with Thailand's Department of Lands (DOL) to promote the establishment of a national land information system for the provision of electronic land services. The Royal Thai Government's (RTG) e-governance and economic development aims are furthered by this national land information system, which not only promotes the delivery of land services but also enhances the security of property data (Bell, Nettle, & Taylor, 2009).

A comparison between Bangladesh and Indonesia

When comparing the two countries' digital land service delivery, the management and use of digitalization may be seen. The use of digitalization and land management in both countries has been shown to differ.

Land Management in both countries

There are land offices at all levels of government in Bangladesh, which are overseen by a Ministry of Land that oversees all land services. This comprises a wide range of functions, such as maintaining the records of property, selling and purchasing land in various ways, creating the deeds of the property and preserving them, managing land-related issues, updating the land map and information, as well as tax and revenue collection (Choudhury et al., 2011). It is the responsibility of all land offices and officials/staff from the national level down to the local level to sustain land management activities. As a result of their work, the officers and workers at the Land Offices collectively manage land. The land offices provide a wide range of services tailored to the needs of service recipients. The land services include the acquisition of land deeds, the measurement of land, the transfer of ownership, and the resolution of property disputes, among other things. All land-related services must be obtained through a trip to the local land office. This ministry's Land Transfer Registration Office delivers a copy of the land deeds to the property owner. To obtain a land deed, customers must go to that office and submit a request to the appropriate land officer, who must then authorize the document. Before putting up for sale or purchasing a property, a landowner must finalize the transfer of ownership at the local land office. Deed writers work in those offices and give property ownership transfer deeds to the landowners in those offices. Providing land services is complicated by the fact that land management is under the purview of these two ministries, which means that the supply of land services is delayed as a result (Talukder et al., 2014).

Standards for land service have been implemented in Indonesia by the Ministry of ATR/BPN at all three levels of government: regional, provincial, and central offices. Since the passage of Act No. 5 in 1960, the President of Indonesia has delegated authority to the National Land Agency (NLA) to administer two land-related functions: land rights and land usage. All of these land offices provide services to the general public (Andrayani et al., 2015). Land tenure (and cadastre), land valuation, land usage, and land development in a more standardized, multifunctional, and interdependent manner are the four primary characteristics of land management in Indonesia. Property rights are documented through the processes of land tenure and land registration. Data on the value of land rights is gathered by land valuation (land price, transaction price, and mass valuation). It is important to understand that land use and land development planning provide zoning regulations that define the features of a given area or location (Indrajit et al., 2020). Mandatory under the Spatial Management (Planning) Act, Indonesian municipalities are responsible for drafting land use policies and drawing out plans for the development of land in their jurisdictions. Service beneficiaries must also contact other government institutions or officials/partners in that country to obtain the necessary papers. Land and property papers aren't connected to all land offices because of official delays and time limits; thus, services are based on the type of service requested. The Land Office counter for service receivers has also faced a variety of difficulties in presenting the necessary paperwork (Zulkifli et al., 2021).

Utilization of digital system in land office

The land office's institutional and operational capacity determines how effectively the digital system may be utilized. Human resources, ICT tools, powerful network connections, apps, and a land office database are some of the factors that contribute to an organization's operational and institutional capabilities, respectively. First and foremost, in order to deliver digital services, every land office must ensure efficient utilization of ICT tools. With the proper use of ICT, public services can be digitalized by cutting costs and visits while promoting innovation, ease of use and responsiveness. Digital services like mutation and right-recording (E-mutation and E-khatian) are now available through Bangladesh's land offices, giving them an advantage over their competitors. There is a need for a sufficient number of computers, internet access networks, policy action, budget and experienced personnel to promote digitalization. Every land office must, secondly, ensure that it has the right people in place to effectively deliver digital land service. The Upazila land offices in Bangladesh need sufficient human resources that are well-versed in the use of ICT in providing services to citizens. In order to ensure that land offices are properly digitalized, a variety of apps and databases can be used. All of Bangladesh's upazila land offices are participating in various pilot projects under the direction of the country's land ministry to provide digital land services. Once land development tax (LDT) software is completed, citizens can use mobile devices to pay LD tax (Islam et al., 2020).

In addition, a pilot project has been launched to digitalize the mouza map, allowing citizens to view and download their own map. After a landowner's death, an inheritance calculator was made available to determine how much of the land would be passed down through the family. Fourth, the land offices must have a strong network connection in order to provide effective digital land service. It encourages the cops to complete their duties on schedule and ensures that citizens receive the service they expect. The Land Ministry has implemented many digital systems to provide land services to citizens all around the country and save time, cost, and suffering. It's a shame that so many people working in Bangladesh's land offices lack the necessary digital skills to help their fellow citizens. In spite of the fact that land office personnel are better trained and more knowledgeable than their younger counterparts. However, the local level's shortage of qualified personnel at land offices, particularly in rural unions, causes difficulties in providing land services. As a result, individuals in rural union parishads (in English…..) are unable to get effective digitalized services because of the absence of competent labour (Azad, 2017).

Land offices in Indonesia have begun using the Digital Governance Assessment Framework (DGRA), which has allowed them to digitize formerly paper-based documentation. Several initiatives have been launched and are being

mainstreamed to improve the quality of land spatial and textual data. Land offices are now using ICT technologies and databases in order to provide digital land services to service receivers, as detailed in an Activity Diagram in the attachment section of land service standards. Furthermore, all Land Offices follow a standardized input, processing, and output method. There is a Land Office counter where service recipients can submit the necessary paperwork. The land office/counter clerk staff is responsible for ensuring that all documents are in order by comparing them to the applicable regulations. Files are processed rapidly and entered directly into Land Office Computerized System (KKP) without validation or cross-checking against the authenticity of the applicant's documents at their issuing institution if all conditions have been met. The counter clerks, however, frequently return the paperwork to the applicant because it is incomplete, requiring the applicant to resubmit the document before it may be returned to the counter again. There will be proof of receipt of the files for those who requested land service. To put it simply, the service system doesn't check the papers prior to their entry. Input officers must be able to quickly and accurately digitize and enter data from paper-based documents submitted to the Land Office counters. Despite the possibility of human mistakes and poor digitization. It is, therefore possible to have inefficiencies in Indonesia's land offices if the synchronization and consistency of the digitalization process are not controlled.

Challenges in delivering digital service in both countries

When it comes to offering digital services at all land offices, both countries face similar issues. The challenges are:

Delay in forwarding application to a higher authority

Within the Bangladeshi system, local land office officials are required to forward the application of service recipients for desired land services to the higher authority within the stipulated timeframe. Regarding logistical support, they cannot deliver the documents on time due to a lack of high-speed internet connectivity and trained staff members, as well as power outages. As a result of these issues, not only does the delivery of service take longer, but it also agitates service providers. The restrictions on land offices also cause delays in service delivery in Indonesia.

Lack of coordination

The copy of registration and notice of mutation to the upazila land office is not sent on time in Bangladesh by the land transfer registration office (sub-registrar office). In order to prepare for new mutations, the AC land must review all relevant documents and paperwork. This problem prevents service providers from properly digitalizing their services. However, there is a lack of coordination in Indonesian land registration and ownership processes between the Ministry of Agriculture and Spatial Planning, the National Land Agency, and the National Land Center (Aspan et al., 2021).

With time, senior authorities have become accustomed to the manual procedure.

Senior officials in Bangladesh are still used to manual service processes and are uninterested in switching to digital service delivery. In addition, top officials find it tedious to keep up with the latest technological advancements and services. They also forgo training in the land service for mastering ICT. Senior officials in Indonesia are likewise wary of implementing digital land service.

There has been no decrease in corruption

Both countries' land offices have been tainted by corruption. In the supply of digital land services to customers, many employees are looking for kickbacks. Because service recipients aren't informed about how services are delivered, staff members take advantage of this and charge a fee for providing them.

The lack of digital service expertise among service recipients

In both nations, many service recipients have an only rudimentary awareness of the digital land services offered by certain land offices. Consequently, they seek assistance from middlemen and pay a hefty sum for what should be a basic service. Digital land service innovations in both countries can be a bit of a mystery to service recipients.

Apply for a job with the wrong paperwork

In some cases, service providers are unable to provide digital land service in a timely manner due to errors in the application process by service recipients. When requesting necessary services, some customers fail to submit all of the essential documentation, or they submit the wrong documentation entirely. As a result, they will be without land service for an extended period of time. Manual processes and a gulf in information between service recipients in the two countries were to blame for these issues.

Suggestions

In order to better serve customers, land services need to be digitalized. Both countries' service providers struggle to make use of emerging technologies, while customers aren't as aware of the value of on-the-ground support. However, the land office's service delivery has seen a dramatic shift thanks to the implementation of a digital system. Challenges that both countries' land offices must solve in order to improve service delivery through digitalization. In some places of business, the following ideas might be helpful:

All land service delivery offices could be brought under one umbrella in order to remove the delay in digital service delivery. These departments need to work together more closely. As a result, an integrated system between these offices is required so that one office may assist another by giving information about land mutation, registration, and ownership processes.

Delivering efficient digital land service requires solid logistic support, including high-speed internet connectivity, a robust website and homepage, uninterrupted power, and sufficient ICT equipment (computers and laptops with scanners, for example).

All land offices must have enough qualified personnel to provide timely and accurate digital land service at both the local and central levels. It is impossible to provide a high-quality digital land service to citizens if there are not enough trained officials in the land office.

The recipients of the service aren't aware of the Land Office's land service. As a result, it is imperative that both countries' land services be made aware of. As a result, land offices can cut out the intermediaries altogether.

When it comes to digital land service, it's important for people to know what they're getting themselves into. There should be a complaint box in the land office so that service recipients can file a complaint against corrupted actions. Furthermore, there should be a process to address and resolve all complaints honestly. Service providers struggle to meet the needs of all customers due to a lack of qualified staff. For the most part, the service providers don't specialize in any one land service industry. As a result, hiring and developing highly qualified personnel is imperative. In order to acquire the trust of service recipients, service providers should put more effort into maintaining the serial number of applications used in the delivery of land services. A shift in service providers' attitudes can help build customer confidence and satisfaction. Service providers should be approachable, helpful, and cooperative to improve the quality of their interactions with their clients.

An efficient, effective, and high-quality service can only be provided if the Citizen Charter (CC) is properly implemented. As part of the Land Offices' service delivery, there should be an effective Monitoring and Evaluation system in place. It is possible to eliminate delays in service delivery and corruption at the local level land office if the higher authority is properly monitored.

Political representatives can educate their constituents about digital land services while adhering to land office policies. Many Land Office clients' 'elite anxiety' can be alleviated via political engagement. Land office errors can be reduced by using a digitized mouza map of all lands. Service users can lodge complaints about officials using a common web platform. It has the potential to improve the

authenticity with which service providers go about their work. Land laws, rules, and regulations linked to land service should be included in school textbooks to help educate students and the public about these topics.

Conclusion

Corruption must be countered, effective and efficient service delivery must be ensured, and sustainable land management must be ensured in Bangladesh and Indonesia using a digital land management system. As a result, residents in both countries confront a variety of difficulties in obtaining services from the land offices of both countries. The land office and the general public must work together to improve communication and understanding of the digital land service. Both countries' governments should prioritize providing logistical support to all land offices so that land offices at the national and local levels can provide services to the public on time and efficiently while saving money and visits. It's imperative that service providers undergo extensive training in order to alter their behaviour. In both countries, political commitment, provider efficiency, and digitization have a favourable and considerable impact on the level of good governance.

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