Citizens' Perspective on Land E-Mutation at Upazila Land Offices in Mymensingh

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ABSTRACT

Bangladesh's land administration system is intricate due to manual record keeping, paper-based evidence, inaccurate survey records, and coordination problems among ministries and departments. To improve the mutation and other land-related services and attain the 'Vision 2021', the Government of Bangladesh (GoB) has taken initiatives for land administration through digitization. One of the initiatives was land E-Mutation, which enables citizens to submit an online application for change of ownership with reduced time, cost and visits compared to the conventional method. The broad objective of this study was to analyze the impact of E-Mutation at Upazila land offices from citizens' perspectives and explore the potentiality of mitigating corruption in Bangladesh. This study followed a quantitative approach where the survey method was conducted through a structured questionnaire. The study area was the Upazila land offices located in the Mymensingh district. The study's findings showed that citizens are aware of the E-Mutation process; however, there is a need for heightened digital literacy among them. The inauguration of E-Mutation has lessened citizens' time, cost and visits to the land offices. 76 percent opined that E-Mutation had decreased the time. 45 percent stated that mutation service had enhanced transparency through online-based applications and payment. Moreover, 35.8 percent of respondents opined that E-Mutation has a noteworthy impact on reducing corruption. Another notable finding is that 53.1 percent of respondents are satisfied to some extent; however, there are still challenges that need to be addressed, such as document processing, lack of digital literacy, and the interference of brokers at Upazila land offices. A further mixed-method study with a greater sample size would be beneficial to evaluate the overall impact of E-Mutation from the citizens' perspective.

Keywords: E-Mutation, Citizens' perspective, Upazila Land Offices, Digital Literacy, TCV, and Corruption.

INTRODUCTION:

Bangladesh is the eighth most densely populated country in the world (Worldometer, 2023) where land is a valuable and scarce resource likewise in other countries. The ownership of any piece of the land is heavily contested and subject to frequent changes, highlighting the necessity for efficient land administration services (UNPSA, 2020; FAO, 2013). Bangladesh manages the land-related records through acts from the British period with modifications made in

the Pakistan and Bangladesh periods (Rahman and Hossain, 2020). The Ministry of Land (MoL), Ministry of the Law, Justice and Parliamentary Affairs (MLJPA), and Ministry of Public Administration (MoPA) are all involved in land administration and management. The ownership of land is documented through several tangible papers, for instance, deeds, parchas, registration and mutation, where different ministries and departments are involved (Rahman and Hossain, 2020). Consequently, the property ownership

changes are complicated and lengthy, leading to disputes and corruption (Alam *et al*., 2022). The involvement of officials in land record management and the prolonged judicial process has worsened the system (Rahman and Hossain, 2020). Moreover, the land transfer process may be susceptible to several sales due to inadequate coordination among land administrative bodies. For instance, a buyer's failure to manually update the record could end up in multiple ownership - a common source of the disputes (Rahman, 2020). Therefore, Bangladesh's land administration system is intricate due to the manual record keeping, paper-based evidence, inaccurate survey records, and coordination problems among ministries and departments responsible for land administration (Talukder, 2019). Transparency International Bangladesh (TIB) report revealed that land remains a significant factor in 60 per cent of all awaiting civil cases or approximately 18 lakh cases. Another report from TIB stated that the rate of bribery in the land sector was 70 per cent back in the 2010. ('Bribery Rampant Land Offices', 2015; the Transparency International Bangladesh, 2010). The most prevalent forms of corruption in land administration are the bribery of public servants, the falsification of land claim documentation, the lack of accurate and up-to-date land records, inadequate oversight mechanisms, and delays in the land registration process (Transparency International, 2011).

In order to guarantee efficient land service delivery and address the long-standing issue of corruption in land administration, the need for a comprehensive strategy centered around innovation in land administration became indispensable (Ministry of the Land, 2020). In Bangladesh, land frequently changes hands; a crucial part of land administration record-keeping is mutation. Mutation is the record system for an ownership change, for instance, replacing the previous owner's title with a new owner (Chowdhury, 2019, p. 5). To pursue 'Vision 2021' and enhance land-related services, the Government of Bangladesh (GoB) has inaugurated innovative land administration initiatives to replace the outdated service delivery model and automate the mutation process that would be hassle-free for the citizens (Chowdhury, 2019; Saif and Hawlader, 2018).

The GoB is making commendable progress toward digitizing public services to cut down on the time, expense, and inconsistencies associated with obtaining public services (Chowdhury, 2019, p. 3). Recognizing the potential benefits of digitization of the land management system, the GoB has initiated efforts to implement the innovation. The initial land management service to be digitalized was 'E-Mutation' started in 2018, which enabled citizens to submit an online application for a mutation with reduced time, cost and visits compared to the conventional method (Rabbani and Hossain, 2019, The Financial Express, 2020). E-Mutation was launched in 61 districts, 485 Upazila's (sub-district) and 3,617 Union land offices on 1 July 2019. Recently, the Ministry of Land received the United Nations Public Service Award 2020 for the first time. Since the inauguration of the online application system under 'Digital Bangladesh', this platform has been delivering cost-effective services to citizens including women and disabled people (Kanda *et al*., 2021; The Business Standard, 2022).

Considering the potentiality of E-Mutation to redress the challenges of accessing mutation services from land offices, this study aimed to the explore citizens' perspectives on how E-Mutation will facilitate hassle-free land mutation services with reduced time, cost, and visits in Bangladesh. Furthermore, the present study looked into how the E-Mutation presents an opportunity for combating corruption related to land mutation in Upazila Land Offices.

Objectives of the Study

The broad objective of this study was to assess the impact of E-Mutation from citizens' perspectives and its potential to mitigate corruption in land offices of Mymensingh district. The specific objectives were:

a) To explore the existing practice of E-Mutation in the Upazila (sub-district) land offices;
b) To analyze how E-Mutation combats corruption at Upazila land offices;
c) To address the existing challenges of the E-Mutation system at Upazila land offices.

Review of Literature

This section reviews the relevant literature addressing the research objective: the existing practice of E-Mutation in the Upazila land offices, the impact of E-Mutation from citizens' perspective and the factors contributing to the combating corruption through E-Mutation in Upazila land offices. The land administration system in Bangladesh is decentralized, with the majority of the land administration functions being carried out at the district and upazila levels (Ministry

of the Land, 2017). The primary obligations include maintaining records of government-owned khas lands, allocating and managing vested and abandoned lands, conducting land surveys, and determining land ownership (Ministry of Land, 2017). Land administration creates, transfers, and extinguishes land rights (Islam, 2019). The land administration system in Bangladesh is still conventional and characterized by the inefficiencies, complexity in record keeping, disputes and corruption. Moreover, corruption can lead to delays in land registration, unfair land use decisions, and biased land dispute resolution (Akter, 2022).
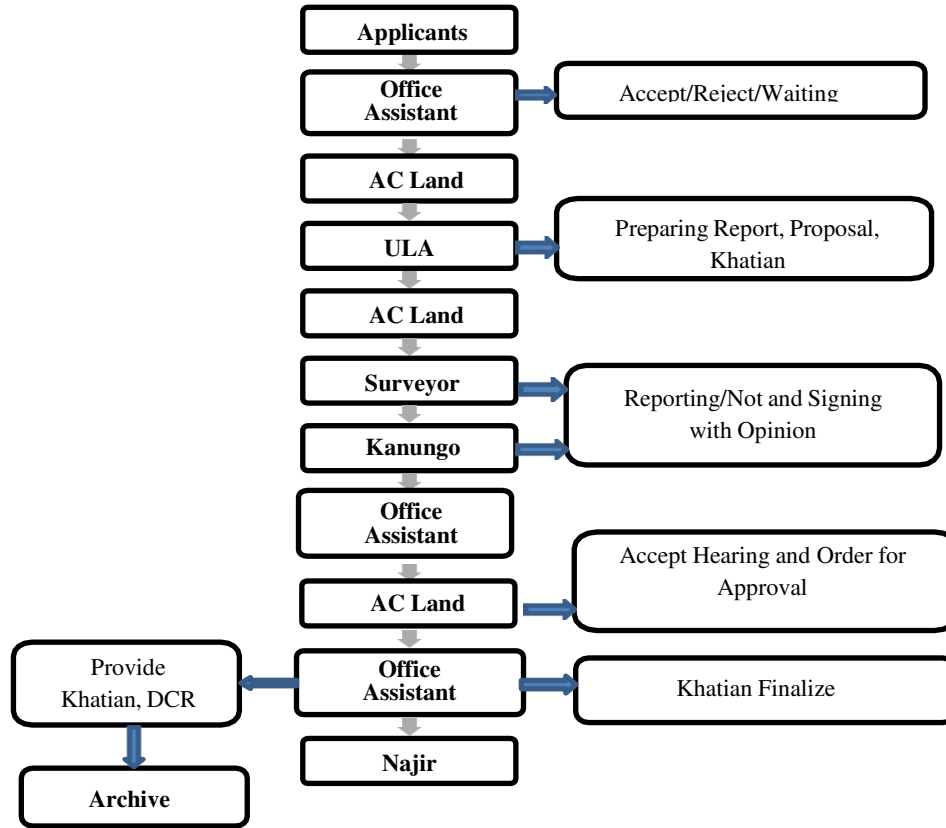
Fig. 1: E-Mutation Process; Adapted from Chowdhury, (2019, p. 7).

The increasing demand for the land due to a growing population underscores the importance of implementting a digitalized land administration and management system to enhance service delivery for expanding demographics (Hossain and Islam, 2019). The government has recognized the importance of land administration and has taken steps to improve the land administration system, such as digitizing land records and launching the E-Mutation system (Akter, 2023). However, providing digital services presents several challenges for land offices (Akter, 2022). E-Mutation occurs when the new owner's name is changed from that of the previous owners in the Khatiyan (Record of Rights) after land ownership has been transferred (Siddiqui, 1997). The process of E-Mutation involves several steps that start with a citizen's application through the Zami website (**Fig. 1**). An office assistant from the land office assesses the application and provides observation as acceptable/voidable/waiting. AC Land then gives his first order to prepare the draft

of mutation Khatian (Record of Rights-ROR). In the next step, an Upazila land office assistant (ULOA) prepares the RoR and sends it back to AC Land, where AC Land gives the second order, and a surveyor conducts the survey. If there are no issues of interest from the government, the surveyor signs the mutation Khatian (RoR) and sends it to the Kanungo (Chowdhury, 2019). Ministry of Land launched the 'Land Service Hotline 16122' on October 10, 2019, known as 'Citizen Land Service 24/7', and approximately 7.5 lakh domestic calls were answered from the helpline in 2022. Landowners frequently take advantage of the helpline availing services: the land maps, records of rights (ROR, Khatiyan, or Porcha) via mail at home; paying ROR, mutation fees, and land development tax; applying for a mutation, land laws and regulations queries and complaints. Citizens can access land services by contacting 16122 and utilizing other digital services instead of visiting land offices, substantially reducing hassles and financial

costs. Notably, there is now considerably less chance for dishonest government officials to misuse their position of authority, brokers or intermediaries' fraudulence and perpetuate corruption. Therefore, the transparency in mutation services is enhanced ('Three Lakh People', 2022).

Public services that are the cumbersome and lengthy increase citizens' hassles and dissatisfaction. In light of this, a2i (Aspire to Innovate) has evolved to simplify the service process (SPS) by adopting digital or mobile-based services. The goal of SPS is to lower TCV (time, cost, and visit) by addressing the following three factors: firstly, the time required for obtaining a service; secondly, cost; and thirdly, the number of visits needed to get service at the government offices (Siddiquee, 2023; Chowdhury, 2019). Assessing citizens' perspectives of online-based services is pivotal to evaluating the effectiveness of the services. Time, Cost, and Visit (TCV) estimation is a special assessment that evaluates the service delivery process by calculating the impacts from the citizen's perspective (Siddiquee, 2023). To assess the effectiveness of E-Mutation from the perspective of citizens' a study was conducted by Chowdhury, (2009) that followed TCV measurement. The study's findings revealed that E-Mutation had reduced time, cost and number of visits compared to the manual system, eventually increasing citizens' satisfaction (Chowdhury, 2019).

Land corruption has been pervasive due to citizens' limited knowledge of land services, insufficient oversight or monitoring, inadequate institutional capacity, shortage of human resources, and lack of participation of citizens, the civil society, and other stakeholders (Wheatland, 2016). To redress the corruption in land mutation services, interventions such as E-Mutation have the capacity to utilize ICT and ensure better service delivery to the citizens, eventually building citizens' trust (OECD, 2005). Awareness and digital literacy have been emphasized as crucial factors in enhancing citizens' satisfaction and trust in Upazila land offices in the studies of Khan *et al*., 2009; Akter, 2023. Apart from effective service delivery and trust-building, online-based services can strengthen transparency and accountability (United Nations, 2016). Moreover, citizens ' awareness of their rights, land-related rules, required documents, and digital literacy enables them to notice any mismanagement or corruption of land services (United Nations, 2016).

Though a limited amount of literature focused on the impact of E-Mutation, the service delivery process, and the capability to deliver mutation services with less time, visits, and costs, no studies have been conducted to analyze the impact of E-Mutation in reducing corruption at Upazila levels. Therefore, there is a dire need to conduct extensive research on E-Mutation to explore its potential to mitigate corruption at Upazila land offices and what barriers still need to be addressed.

METHODOLOGY:

Given that this study aimed to assess the impact of E-Mutation on strengthening service delivery, and combating corruption, this research followed an exploratory approach. For a deeper understanding of E-Mutation practices, the study employed a quantitative approach that provided investigator with numerical or quantitative data, patterns, and participant viewpoints to draw the conclusions about the study population (Creswell, 2009). A survey method that is widely used in social research was followed in this study to collect necessary data from the respondents. The survey method is suitable for obtaining information to explain social phenomena and individuals' ideas, thoughts, and perceptions (Aminuzzaman, 2011). The Mymensingh District was selected as the study area for the researcher's convenience. The survey was conducted in the twelve Upazila land offices of the Mymensingh district. The citizens who visited the Upazila land offices for the land-related services, precisely the mutation-related services, were the respondents of this study. The service providers, for instance, Assistant Commissioner Land (AC Land) and Upazila Assistant Land Officers (UALO), were the key informants. Systematic and stratified (non-proportionate) sampling methods have been followed to select the representatives, and the sample size was two hundred and seventy-six (**Table 1**). The result obtained from this research by analyzing all the units is valid for the whole research area. In this study, data have been collected from two sources: primary and secondary. The primary data have been collected from the Upazila land offices of Mymensingh district through structured questionnaires and interviews. The questionnaire was pre-tested prior to data collection**.** The researcher has consulted with citizens and government officials of twelve Upazila land offices, which are situated in the Mymensingh district. Secondary data have been collected from published books, e-books, journals, articles, newspapers, relevant docu-

ments and publications of the government agencies, reports of different organizations, and internet sources related to the study. The collected data were sorted, categorized, and presented according to the study's objectives through tables, bar charts, and pie charts. The data of the tables and charts have been discussed then. Moreover, the collected information and data have been processed using the MS Excel, Statistical Package for Social Science (SPSS) software. In this

study, the researcher and data collection team have been constantly interacting with employees in a complex organizational environment (environment of the Upazila land offices) that may influence the research results. To cope with these influences, the researcher followed the ethics of social research in every step of the study, such as anonymity, confidentiality, informed consent, and honesty in analysis and report writing.

Table 1: Sample Size of the Study.

Name of Upazila Land Offices	Number of Respondents		
	Service Recipients	Service Providers	
Ishwarganj	22	Assistant Commissioner Land	08
Gaffargaon	22		
Trishal	24		
Gauripur	22		
Dhobaura	18		
Nandail	20		
Phulpur	22	Union Land Assistant Officers (ULAO)	08
Fulbaria	22		
Bhaluka	22		
Mymensingh Sadar	24		
Muktagacha	24		
Haluaghat	18		
Total	260	Total	16

RESULTS AND DISCUSSION:
The significant findings of this study are explored in three major aspects: firstly, the present practice of E-Mutation; secondly, the impact of E-Mutation from residents' perspective; and thirdly, the perception of service recipients about combating corruption through E-Mutation at Upazila land offices.

Demographic Profile of Respondent
The study followed a survey method for gathering data from respondents who visited twelve Upazila land offices for land E-Mutation services and the officials (AC Land and ULAOs) responsible for information and service delivery. The survey questionnaire contained questions about demographic information, citizens' awareness and perception of the E-Mutation service, service delivery process, challenges faced, and corruption issues. According to the survey, 63.8 per cent of the respondents were male, and the rest, 36.2 per cent, were female, representing that men mainly process the E-Mutation application at the Upazila level. Most respondents fall into the age group of 28 to 37 (45 per cent), whereas 16 per cent belonged to the age group of 48 to above. Citizens from different age groups have expressed their opin-

ions regarding land services delivery through online-based applications for mutation, as it has tracking options, is transparent, and requires fewer visits and time than the traditional method. The respondents from the different professional backgrounds revealed their perceptions of the how E-Mutation services are provided, what challenges they have faced. Among the respondents, 46 per cent are employed, and 19 per cent are housewives. In addition, 35 per cent (**Fig. 2**) of respondents identified as students; a notable fact is that some of them came to assist their parents in the online application for E-Mutation, and this group drew attention to the need for technological and logistics support and trained human resources for scaling up E-Mutation as well as the land record keeping services. Among the respondents, data revealed that 45 per cent of them have completed higher secondary education (HSC). In contrast, only 17 per cent have finished their bachelor's degree (**Fig. 2**). Education plays a significant for in the process of completing an E-Mutation application, as without basic computer knowledge and digital literacy, citizens can not complete the E-Mutation application, use online payment and tracking service. However, Union Digital

Centre's (UDCs) entrepreneurs can process online applications, upload necessary documents, and make payments.
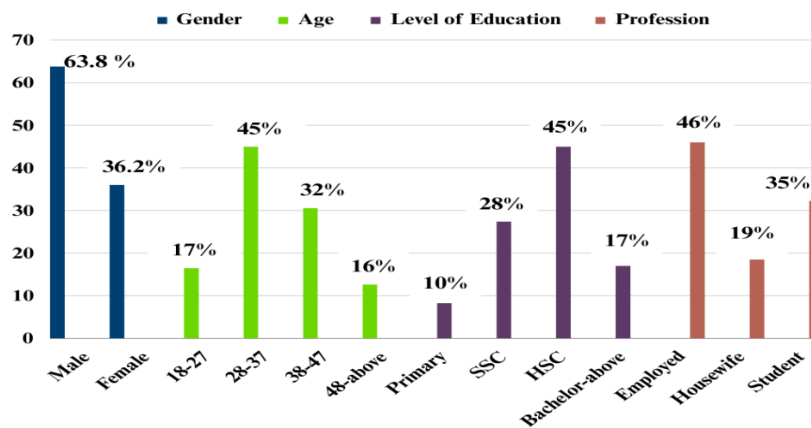

Fig. 2: Demographic profile of respondents; (Source: Field Survey, 2023).

Digital Literacy of Respondents

Citizens were asked about their digital literacy and computer knowledge, and the data showed that 38.2 per cent of the respondents could operate smartphones and computers. In comparison, 26 per cent said they had no computer or digital literacy. 35.8 per cent con- firmed that they have partial digital literacy; for the instance, they can browse the internet to search for information. However, the E-Mutation application was complicated because they needed to learn how to upload documents or check their applications' status (**Fig. 3**).
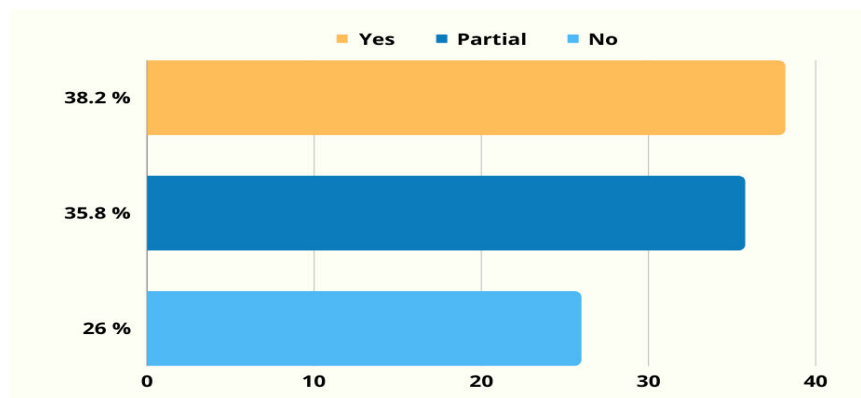
Fig. 3: Digital literacy of respondents; (Source: Field Survey, 2023).

Knowledge and Awareness of Respondent's about E-Mutation

The Upazila land office offers its citizens land-related services, though land services are complicated and time-consuming. Digitization has opened an online-based mutation process; therefore, citizens must be aware of the process, land laws, and land services offered by land offices. Regarding awareness, the respondents of this study were aware that they could apply online for E-Mutation and change land owner-ship in the Khatian (Record of Rights). Among the participants, 39.6 per cent said they learned about E-Mutation through friends or family. Moreover, 37 per cent of respondents knew through government adver-tisements, and 23.1 per cent of the respondents lear-ned through social media (**Fig. 4**). Citizens' access to

information and awareness about e-services are essen-tial to assess the effectiveness of digital service deli-very. Insufficient knowledge and lack of awareness about the E-Mutation system might result in contac-ting intermediaries (brokers), and giving bribe to officials to obtain mutation services. Consequently, they might have to deal with several issues affecting their satisfaction with the land office, delays in the mutation processing, the most significantly, excessive payment, and interference of middlemen.

Present Status of E-Mutation

The GoB has moved the mutation registration process - a change in a property's title ownership in the Khati-yan (Record of Rights) online to save applicants time and hassle at land offices. Currently, the E-Mutation

starts with an online application and payment of fees. The total registration cost is Tk 1,170, which includes the court fee of Tk 20, the notice issuance fee of Tk 50, the record correction fee of Tk 1,000, and the mutation ledger collection fee of Tk 100.
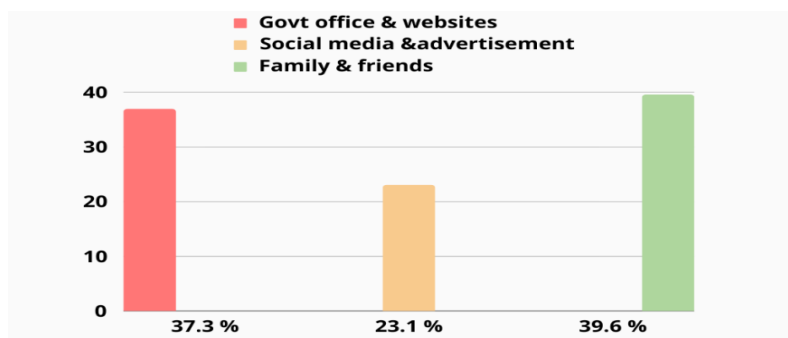

Fig. 4: Knowledge and awareness about E-Mutation; (Source: Field Survey, 2023).

These fees must be payable online via an internet banking service or a mobile wallet that has made the payment process faster and saved citizens' time ('Bangladesh Mandates Online', 2022). After payment is completed, a notice is conveyed through email or SMS; later on, citizens attend the hearing in person. An online tracking option allows citizens to track updates of mutated records on Khatian (Chowdhury, 2019). E-Mutation application status is updated daily and monthly from 4574 offices. Country-wise status showed that E-Mutation applications (as of July 2023) are administered with an average resolved day of 24, and the number of cases resolved is 3,66,667. The acceptance rate is 75 per cent, and only 24 per cent of cases crossed 28 days to complete the E-Mutation process (Ministry of Land, 2023). The overall status of Mymensingh district is shown in the table below (**Table 2**). The acceptance rate for application was the highest (99 percent) at Mymensingh Sadar Upazila land office, whereas the lowest was at Nandail

(48 per cent) among the twelve Upazila land offices. The most interesting finding is that Mymensingh Sadar required only 4 days on average. Conversely, the average number of days required was 23 at Nandail. It is evident that the Mymensingh Sadar's E-Mutation service delivery process is more effective compared to the other Upazila land offices; the prominent reason is the location, level of education and digital literacy, and better infrastructure and logistics support. Furthermore, the number of E-Mutation applications is the highest in the Mymensingh Sadar (3278); the second highest application was resolved by Trishal, (1778) and the lowest was by the Nadail Upazila land office (433). Another noteworthy finding was the duration of mutation application processing (**Table 2**), which revealed that most land offices did not exceed four weeks. Previously, the time required for mutation was considerably more than the present-above four weeks, which asserts that the E-Mutation has lessened the duration.

Table 2: Present Status of E-Mutation at Land Offices.

Name of Upazila Land Offices	Total Application Resolved	Average Date Required (Days)	Acceptance Rate (%)	Above 28 Days (%)
Mymensingh Sadar	3278	4	99	1
Gaffargaon	930	20	59	1
Trishal	1778	17	64	0
Gauripur	623	18	58	0
Dhobaura	528	18	68	0
Nandail	433	23	48	1
Phulpur	774	20	77	0
Fulbaria	965	19	49	1
Bhaluka	972	17	56	1
Ishwarganj	649	12	69	0
Muktagacha	1170	17	71	0
Haluaghat	495	20	68	0

Source: Ministry of Land (https://mutation.land.gov.bd/; July, 2023).

Impact of E-Mutation from Citizens' Perspective

Compared to the conventional mutation system, E-Mutation has been anticipated to simplify land services where citizens can apply by themselves or seek help from officials, check updates of the applications, and pay fees through online banking. The figure below (**Fig. 5**) represented the respondents' perceptions regarding the impact of E-Mutation. Among the respondents, a sizeable portion (42.7 per cent) stated that the prominent impact of E-Mutation is the faster processing time. As discussed in the previous section, on average, the E-Mutation processing time is four weeks in most of the Upazila land offices considered in this study. At the same time, 28.1 per cent emphasized the transparency of the process, as the

features of E-Mutation, such as the fixed application processing fee, notification through SMS/email, and application ID for tracking, have made the process more open. In addition, 10.8 per cent of respondents stated that they benefitted from reduced costs, and 6.9 per cent opined that it had reduced corruption cases. Furthermore, 11.5 per cent of respondents marked all of the above options as their opinion (**Fig. 5**). Overall, service recipients were willing to use online services to change their property ownership at reduced cost, time and visits. Despite the majority of respondents mentioned positive impact of the new system, one third of them did not agree that E-Mutation allowed to reduce application costs.
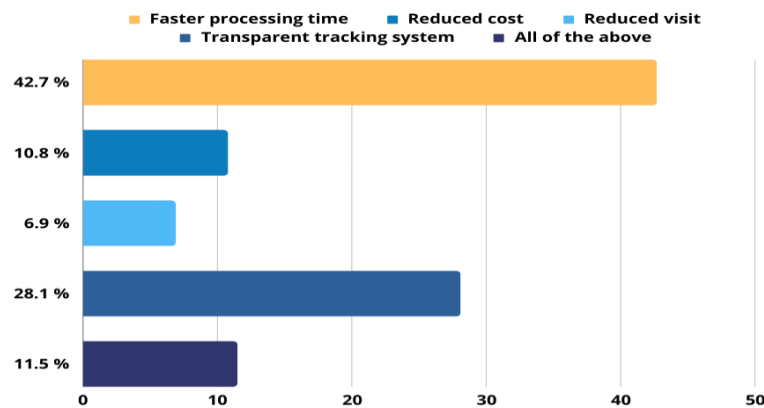

Fig. 5: Impact of e-mutation; (Source: Field Survey, 2023).

Perception of Citizens about Reduction of Time, Cost and Visit (TCV) in E-Mutation

The TCV instrument can analyze public services from the perspective of citizens. Such evaluations allow the government to take corrective action to enhance the public service delivery by prioritizing citizen reviews. Moreover, citizens also discover discrepancies and errors in service delivery, which can improve accountability and transparency in public service provision and enhance citizen-government trust-building. Digitization of land services follows the method of simplifying the public services (SPS). The respondents were asked about any time changes required for E-Mutation completion. A sizeable number of respondents (76 per cent) opined that the duration of the E-Mutation has decreased. According to the survey data, the majority of citizens had similar observations. However, 24 per cent (**Fig. 6**) of the respondents opined that the required time for E-Mutation service has not been reduced. Some citizens needed to wait for longer than 28 days due to discrepancies in their deeds, missing documents, or existing disputes. The cost for an E-

Mutation application is fixed at 1170 taka by the government, including court fees, notice issuance, and record correction fees. According to the survey data, the majority of respondents (68 per cent) indicated that the cost of E-Mutation has been reduced, and they can complete the process by paying the fixed fees through the online payment. In contrast, among the respondents, 32 per cent (**Fig. 6**) stated that the cost of E-Mutation did not decrease. They had to pay extra money to process documents, such as photocopying and application processing fees, as they sought help from officials/entrepreneurs to complete online applications. There were cases where respondents lost their documents and paid extra for fetching /retrieving documents. Digitization of public services can ensure faster delivery of services by lessening citizens' visits to government offices. In the case of E-Mutation, they get a notification through SMS or email after application. Moreover, they can track their application using their date of birth, application ID, and area of the land. When respondents were asked about the reduced number of visits, a significant number of the

respondents gave positive responses. The field survey found that 82 per cent of the respondents opined that the E-Mutation has reduced their number of visits to the Upazila land offices. Conversely, 18 per cent (**Fig. 6**) of respondents argued that the number of visits did not lessen. Despite online applications and payment

systems for E-Mutation, they needed to visit the land offices multiple times. The probable reason was that they needed to be fully aware of the application process, the lacked mandatory documents, and interference from brokers.

Fig. 6: Perception about reduction of Time, Cost and Visit (TCV); (Source: Field Survey, 2023).

Transparency Enhancement through E-Mutation

Transparency in service delivery is essential for scaling up land-related services in Bangladesh. The online-based mutation application process has created opportunities for land offices to increase transparency and eventually build trust among citizens. The respondents were asked about the transparency of the E-Mutation. The following figure (**Fig. 7**) represents the respondents' perception regarding the transparency enhancement through the E-Mutation process. According to the survey data, 45 per cent of the respondents expressed that the E-Mutation would help to enhance transparency, and 24.2 per cent stated that they were

unaware of it. In addition, 30.8 per cent of respondents stated that E-Mutation would not enhance transparency in land offices (**Fig. 7**). In the E-Mutation process, several officials, such as ULAOs and surveyors, are involved in the checking, investigating and sketching maps. They have to update once they complete checking and investigation on the website and then proceed to the next step. Therefore, citizens can trace the stage of their application and query about any unwanted delay. It is evident from the survey data that citizens' perspectives on E-Mutation have made the investigation and verification process more transparent is affirmative.
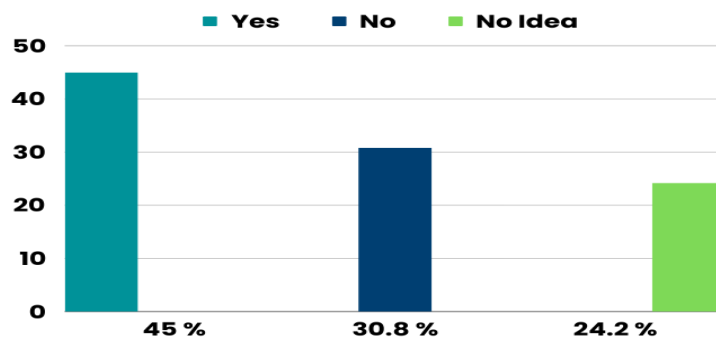

Fig. 7: Transparency enhancement through E-Mutation process; (Source: Field Survey, 2023).

Reducing Exploitation by Intermediaries/ Brokers

For smooth delivery of land services at Upazila land offices, it is crucial to lessen the presence and exploittation of intermediaries, brokers and touts. They took advantage of citizens' lack of awareness of the mutation process and mandatory documents. The inauguration of the E-Mutation has created an opportunity to

free citizens from harassment, extra payments, and lengthy processing due to brokers interference. The following figure represents the respondents' perception regarding mitigating intermediaries' exploitation through E-Mutation. Among the participants, 64 per cent responded that the E-Mutation initiative has lessened the intermediaries'/brokers' exploitation. In

addition, 24 per cent of respondents stated that middleman exploitation still exists (**Fig. 8**). A notable finding from the study is that 12 per cent of respondents opined that the interference of brokers had

increased due to the lack of the computer and digital literacy of citizens. Therefore, regarding the decline in middleman exploitation, some Upazila land offices are still left behind.
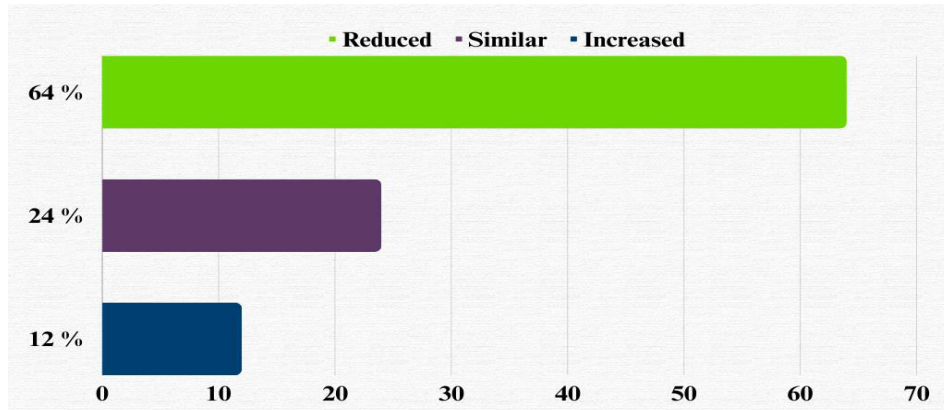

Fig. 8: Reducing exploitation by intermediaries/ brokers; (Source: Field Survey, 2023).

Combating Corruption through E-Mutation in Upazila Land Offices

The land management system of Bangladesh is complex, and corruption cases are comparatively higher than in the other sectors. Corruption in land management has caused financial losses and suffering for citizens. The monitoring system of the land offices is intricate due to a need for more human resources and a digital record-keeping system. The digitization of land services, specifically E-Mutation, would decrease the hassles, corruption, and mismanagement in the mutation process and update the record of the rights. Respondents' perspectives on the capability of the E-

Mutation to reduce corruption have been collected. The following figure represents the respondents' perception regarding whether E-Mutation will help reduce corruption. Among the respondents, 35.8 per cent responded that E-Mutation would help reduce corruption, and the 33.1 per cent were unsure about it. In addition, 35.8 per cent of the respondents expressed concerns that E-Mutation would not contribute to combating corruption in Upazila land offices as the citizens still depend on officials and middlemen for mutation applications and verification of documents (**Fig. 9**).
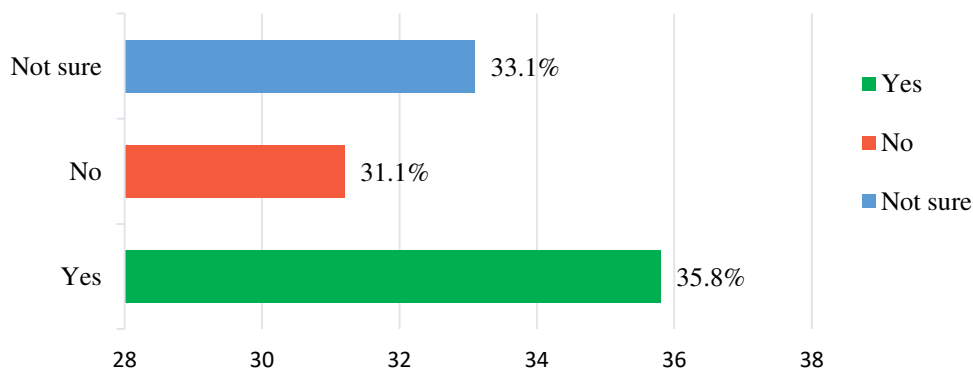

Fig. 9: Combating corruption through e-mutation; (Source: Field Survey, 2023).

Key Factors in Combating Corruption through E-Mutation

Corruption in land administration is one of the challenges in the land service delivery the GoB has been addressing for years. The figure below (**Fig. 10**) shows the respondents' opinions regarding the critical factors for combating corruption through E-Mutation.

Among the respondents, 27.3 per cent stated that the reduction of the TCV significantly impacts corruption mitigation in Upazila land offices. From the respondents' perspective, the decreased time, cost, and visits indicated that E-Mutation applications are resolved faster with no extra payments; therefore, there are fewer chances for corruption in land offices regarding

E-Mutation. Among the participants, 20.2 per cent opined that E-Mutation had enhanced transparency in the mutation process through timely notifications, online payment, and the provision of application IDs for tracking the progress of mutation. Awareness and digital literacy were considered significant factors by 17.3 percent of the respondents. The Ministry of Land's website has explicit instructions for applying E-Mutation. The 'Citizen Land Service 24/7' dedicated

helpline number assists citizens with information and quick solutions, thus increasing awareness. Digital literacy allows citizens to apply online what restricts officials and intermediaries from asking for bribes and harassment. Among the respondents, 13.8 per cent emphasized advanced technology for land offices to keep updated records, and 10.2 per cent stated that lessening the number of intermediaries involved was an influential factor in mitigating corruption (**Fig. 10**).
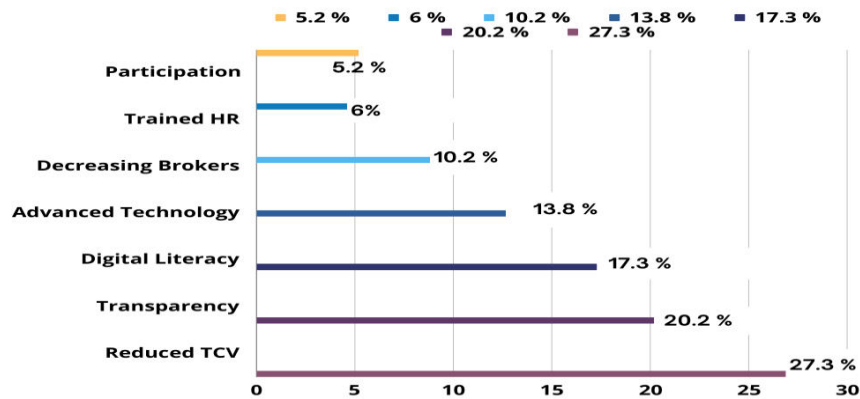

Fig. 10: Key factors in combating corruption through E-Mutation; (Source: Field Survey, 2023).

Satisfaction Level with the E-Mutation Service Delivery Process

The figure below shows the respondents' opinions regarding the satisfaction level with the E-Mutation service delivery process. Among the respondents, a subsequent number (53.1 per cent) stated they were somewhat satisfied, and 16.9 per cent said they were satisfied. In addition, 10.8 per cent of respondents opined that they were very satisfied. The online application and payment system enabled them to complete mutation within fewer visits and a shorter period of

time. The tracking system has allowed them to get information about the progress of their application, saved their frequent visits to land offices, and allowed avoid the broker's interference. Furthermore, 13.8 per cent of the respondents remained neutral regarding this question. On the other hand, only 5.4 per cent showed dissatisfaction with the overall E-Mutation process as it was more complicated, costly, and took longer for them to update ownership at the record of rights (**Fig. 11**).
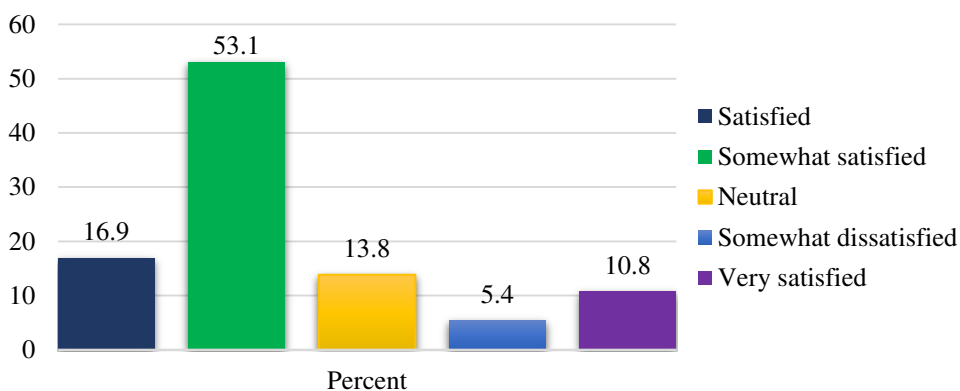

Fig. 11: Satisfaction level with E-Mutation service delivery; (Source: Field Survey, 2023).

Challenges Faced by Citizens in E-Mutation

The E-Mutation initiative was inaugurated under land digitization nationwide to transform the age-old land

service through the land offices. Bangladesh's land administration system faces many challenges, including delayed service delivery, disputes, fraud by the

brokers, and corruption: bribes, inaccurate surveys and record keeping, and misuse of the power. Land disputes are common in Bangladesh due to several issues, such as inaccurate land records and the complexity of the land laws. Moreover, digital literacy, difficulties in getting scanned copies (Record of the Rights/Khatian/ the Survey Record), the nuisance of brokers/intermediaries, lack of trained officials, and lack of technical support are creating barriers to effective land service delivery to the citizens. Participants' views on the prevailing barriers at the Upazila land offices are illustrated in the following figure (**Fig. 12**). 52 per cent of the service recipient's underpinned de-

lays in document verification and surveys as the major challenge of E-Mutation. Citizens' lack of the digital literacy is identified as the second most crucial obstacle. As E-Mutation is entirely online based, including the payment system, digital literacy has immense the significance for a successful mutation. Another shortcoming is the presence of intermediaries/ brokers at the compounds of land offices, as stated by 10 per cent (**Fig. 12**) of respondents. They grab the opportunity to demand extra fees from citizens unaware of the E-Mutation process and unable to apply online.
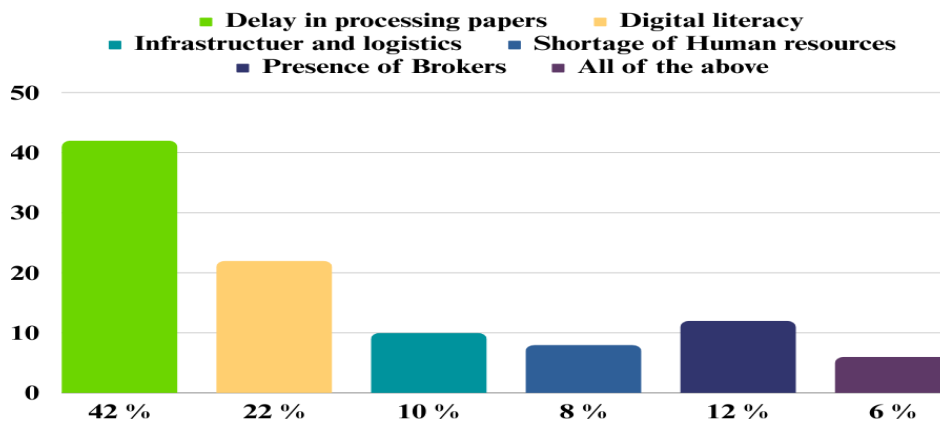

Fig. 12: Challenges faced by citizens in E-Mutation; (Source: Field Survey).

From the above discussion, the citizens who visited the Upazila land offices are mostly aware that they can apply for the E-Mutation and the required documents. This finding complies with study conducted by Chowdhury, (2019). However, according to the findings of Akter, (2023) citizens' awareness has to be increased for an effective E-Mutation system. Another notable finding of the study is that digital literacy is crucial for the e-mutation, and citizens and service providers need to acquire more technical and ICT-based knowledge, as Akter, (2023) suggested. Saif and Hawlader, (2018) have stated the necessity for computer-based knowledge and awareness regarding the procedure of mutations. One noteworthy finding about the impact of E-Mutation from the perspective of citizens was the reduced time, cost, and visits. Interestingly, similar results have been confirmed in the research conducted by Saif and Hawlader, 2018; Chowdhury, 2019; Hasan and Gourab, 2023. Hasan and Gourab, (2023) opined that one of the significant factors in enhancing citizens' satisfaction with E-Mutation is that it has lessened the interference of brokers in land offices. The same opinion has been found the citizens of this study, as 64 per cent (**Fig. 8**)

agreed that the E-Mutation has reduced the exploitation of the intermediaries. On the contrary, according to the findings from the work of the Akter, (2023) citizens still get trapped by intermediaries due to their inadequate knowledge of online applications and payment systems. Sakib *et al.* (2022) stated that in Bangladesh, one of the prominent challenges of the land sector is corruption, which has to be lessened to ensure better land services to citizens. Among the respondents of this study, the 35.8 per cent (**Fig. 9**) opined that E-Mutation has a positive impact on reducing corruption. Akter, (2022) has discussed that digitization in land administration enabled opportunities to ensure the transparency and the build trust among citizens, which is essential to the mitigate corruption. Regarding corruption in the land services, respondents opined that the mediators' presence from the Upazila land office compounds has to be the restrained. Additionally, the technological and logistics support has to be enhanced, and the digital literacy of both citizens and officials has to be increased through training. Overall, feedback mechanisms have to be ensured in the land offices.

CONCLUSION:

Digitization of public services has enabled citizens' access to information and services, making service delivery more open, accountable, inclusive and effecttive. In Bangladesh, the land mutation is a crucial function of the Upazila land offices for updating the change of ownership in the Record of Rights. The introduction of the E-Mutation system in land administration has immense significance in reducing the time, cost and number of the citizens' visits to land offices. The study's findings revealed citizens' perspectives on the impact of E-Mutation. The required time, the cost, and visit for the mutation have been reduced at Upazila level. However, despite the evident benefits outlined in this study, respondents need digital literacy to use the digital system. As transparency has been enhanced due to online applications, payment and tracking systems, respondents opined that E-Mutation could contribute to reducing corrupttion in land offices.

However, there are still some obstacles; the primary challenges appeared to be the processing of papers, insufficient digital literacy, and shortage of human resources at Upazila level. Additionally, the study identified another concern: the presence of middlemen or brokers raises the chances of corruption. A further mixed-method study with a larger sample size on evaluating the E-Mutation at the Upazila land offices could be beneficial. While implementing land E-Mutation systems has the potential to reduce corrupttion significantly, its effectiveness is limited by the several challenges that should be the addressed. This study suggests the following recommendations:

Firstly, E-mutation process stakeholders, such as the citizens, entrepreneurs of UDCs, and officials of land offices, should achieve a sufficient level of digital literacy by completing relevant training. The provision of such training would raise awareness of the processes and enable citizens to complete land E-Mutation without hassle. Secondly, the investigations, record-keeping, and the dispute resolution processes should be transparent to citizens to avoid miscommunication and corruption. Thirdly, communication and coordination between the ministries and departments are required to resolve ownership-related disputes. Finally, there is a need for a feedback mechanism to improve the service providers' accountability and transparency and restrict middleman exploitation and corruption.

CONFLICTS OF INTEREST:

The author is declaring that there is no conflict of interest regarding this study, the authorship, or publication of this article.

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