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Online Payment during Pre- and Post COVID-19 Scenarios: A Case Study of Electricity Bill Payment in Mizoram

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Abstract

The movements of E-governance in India have now gradually moved from computerization of government departments to promotion of digital technology to reach out to every citizen for their capability enhancement process in bringing better service delivery. This paper discusses in details with reference to the behaviour of electronic payment transactions for consumers before the pandemic and during the pandemic period of covid-19 with special reference to Aizawl City in Mizoram. The paper also discusses the challenges and opportunities of electronic payment in bringing better governance in public service delivery.

Keywords*: E-Governance, Digital India, Online Payment, COVID-19.*

E-Governance and Digital India

The present form of Governance employs electronic governance (or e-governance) as one of the solutions in the delivery of various information and public services. With the use of Information and Communication Technology (ICT), e-governance has completely brought transformation in citizens-government relationships globally. The primary concerns of the government had always been to ensure the accessibility and availability of information and public services with much less hassle. Under the e-governance reform government agencies use information technologies such as Wide Area Networks (WAN), Internet, World Wide Web and mobile computing to reach out to citizens, business and other arms of government. This helps to improve delivery of services to citizens, improve interface with business and industry, empowers citizens through access to knowledge and information and make the working of the government more effective and efficient. By doing so it attempts to achieve its overall objective to maximise efficiency, transparency, greater convenience, revenue growth and less corruption for promoting good governance through e-governance. According to Bagga et al., "e-governance is government-to- people and people-to-government connections

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whereby citizens obtain direct access to records, rules and information about entitlements that they need or want in their daily lives... It also runs into strong resistance since disintermediation methods eliminate middlemen and others whose livelihoods and incomes depend upon the relative inaccessibility of government documents."[†]

E-governance in India has also gradually evolved from computerization of government departments to promotion of digital technology to reach out to every citizen for their capability enhancement process in bringing better governance. This was seen through the Government of India announcement of the National e-Governance Plan (NeGP) in 2006 formulated by the Department of Electronics and Information Technology and Department of Administrative Reforms and Public Grievances. NeGP uses ICT attempts to bring citizen centric services as one of the thrust areas for the country's development and administrative reforms. Under the NeGP, Digital India is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. It aims to achieve a "Faceless, Paperless, Cashless" Indian society. To further accelerate this process, the Central Government has even announced package of incentives and measures for promotion of digital and cashless economy in the country like discount on buying petrol and train ticket by e-payment, etc[‡] to encourage people to adopt more for the e-governance process.

North East India has also adopted the digital India movement in its vision document of North East 2022 under the guidelines of this bigger national vision. It aims to consolidate all the disparate digital initiatives to restructure, refocus and fast track implementation in a synchronised manner. The vision for Digital North East sets the base to design specific implementation plans for each initiative and to provide a roadmap to transform and empower the lives of the common people in the North Eastern Region. Digital India programme aims to provide digital infrastructure as a core utility to every citizen. It is envisage that the Digital North East India to become an important partner in India's Trillion dollar digital opportunity[§]. In the National e-governance Service Delivery Assessment report announced in 2019 for the Northeast and Hill States category, Nagaland tops the list chart with Assam on the second and the position of Mizoram is in seventh position. This assessment report aims to push the government machinery towards his promise of 'minimum government, maximum governance.

E-Payment

This paper will focus on the move towards bringing a cashless economy through electronic-based transaction by promoting electronic payment (or e-payment) among the many digital applications that ICT has brought. Consumers of any services can now have a

[†]R.K. Bagga, Kenneth Keniston, and Rohit Raj Mathur (2005), *The State, IT and Development* (New Delhi: Sage, 2005), p31

[‡]http://cashlessindia.gov.in/package-for-promotion-of-digital-and-cashless-economy.html accessed on 27 September 2020

[§]https://www.meity.gov.in/DeitY_e-book/Book_digital_north_east_2022/index.html accessed on 28th September 2020

range of options to choose from when selecting a payment method to complete a transaction. A transaction is an agreement, communication, or movement carried out between separate entities or objects, often involving the exchange of items of value, such as information, goods, service and money. The Reserve Bank of India (RBI) Ombudsman scheme for digital transactions defines a 'Digital Transaction' as "Digital Transaction' means a payment transaction in a seamless system affected without the need for cash at least in one of the two legs, if not in both. This includes transactions made through digital / electronic modes wherein both the originator and the beneficiary use digital / electronic medium to send or receive money." [**] So an electronic payment or e-payment is defined as a platform used in making payments for goods/services purchased online through the use of internet (Roy & Sinha, 2014)[††]. The Information Technology (IT) Act 2000 provides the legal recognition for digital signatures in transactions carried out by means of electronic data interchange and other means of electronic communication, commonly referred to as electronic commerce. This policy was amended in the IT Policy (Amendment) Act of 2008 in which digital signatures are referred to as "electronic signatures."

Here the consumers use the internet banking for doing all the transaction. The introduction of e-payment system is to reduce the time consumed by the people for lining up in a long queue when paying their bills and make it more convenient for the consumer as well as to reduce the cost of the department. E-Payment system has also brought about efficiency, fraud reduction and innovativeness in the world payment system. E-payment system brings many electronic modes of payments through which financial institutions offer different e-payment opportunities and services to their customers such as the credit cards, debit cards, on-line banking and mobile banking. E-Payment is very convenient compared to traditional payment methods such as cash or cheque. Since customers can pay for goods or services online at any time of day or night, from any part of the world to transact. Nor do they have to wait for a cheque to clear the bank so they can access the funds they need to shop. E-Payment also eliminates the security risks that come with handling cash money. Overall the consumer who wants to avail e-payment needs to have a phone with internet connectivity support, bank account, Aadhaar and Debit or Credit Cards to do the e-payment transaction. The concept of mobile payment is subjected to the financial transactions executed through the mobile devices to provide services securely to the authorized users (Kauffman & Au, 2008)[‡‡]. Research also suggest that in developing countries, ICTs have largely been used to streamline labour-intensive bureaucratic transactions rather than in participatory or consultative efforts to promote democratic practices[§§].

[**] https://rbidocs.rbi.org.in/rdocs/Content/PDFs/OSDT31012019.pdf

[††]Roy, S., & Sinha, I. (2014) *Determinants of Customers' Acceptance of Electronic Payment System in Indian Banking sector-A study*; International Journal of Scientific and Engineering Research, 5(1), 177-187.

[‡‡]Kauffman, R., & Au, Y. A. (2008) *Understanding stakeholder issues for an emerging financial technology application.* Journal of Electronic Commerce Research and Applications (pp. 141-164).

[§§]Victor Bekkers and Vincent Homburg, "The Myths of E-Government: Looking Beyond the Assumptions of a New and Better Government," *The Information Society* 23 (2007): 373-382.

Usually every E-Payment method or service is designed to reach the widest possible audience, so it has an intuitively understandable user interface. In addition, in every service there is always the opportunity to submit a question to a support team, which often works 24x7. India like any other government across the globe has realized the importance of IT in bringing good governance is also catching the trend. Central Government and various State Governments have integrated their systems with standardised e-receipts and e-payments modules of RBI's e-Kuber system. Under the standardised e-payment model, which is based on ISO 20022 messaging formats, there is straight through-processing (STP) of electronic payment instructions, sent by State Governments through the interface with e-Kuber which facilitates electronic processing through the NEFT system for credit to beneficiary accounts with the destination banks. In India we have few studies on users' acceptability like Roy and Sinha, (2014) on customers' acceptance of electronic payment systems among bank customers in India. However the Government of India has been pushing for a cashless economy since its demonetization policy in November 2016. Initiatives such as United payments interface (UPI), Bharat interface for money (BHIM), RuPay cards, FASTags, introduction of interoperability on wallets, cash recyclers, or innovations by FinTech players like radio frequency identification (RFID) based fuelling apps, all-in-one quick response (QR) code for merchants and, QR-based cash withdrawals on ATMs; are all the tools for achieving its goals. To make this successful digital literacy of the consumers is also key to ensure ease in using the various digital payment modes being made available to the users and to transform India into a cashless economy.

COVID-19 Pandemic and Online Electric Bill Payment

The relevance of e-payment has become all the more relevant today due to the Global pandemic of coronavirus as people fear to handle physical cash due to the higher risk element of COVID-19 transmission. According to the National Payments Corporation of India (NPCI)[***] the digital payments sector in India during the peak lockdown witnessed a decline of 30 per cent in the transaction value primarily due to the impact on the travel, hospitality and retail sectors[†††].

Recent reports on the use of e-payment during the pandemic say that central government data reveals stark differences in the rate of adoption across states. While Andhra Pradesh, Haryana, Uttar Pradesh and Maharashtra recorded the highest number of transactions per person, the laggards include Chhattisgarh, Jammu & Kashmir as well as the North Eastern states of Mizoram, Manipur and Meghalaya[‡‡‡]. It also shows that Indians averaged about 3.85 digital transactions per person between July 2019 and July this year 2020 with Chandigarh leading at 38.4 transactions per person according to the Digidhan database maintained by the Ministry of Electronics and Information Technology (MeitY). It

[***] NPCI is an umbrella organization set up by banks under guidance of the Reserve Bank of India and is de-facto responsible for all retail payments done in India.
[†††] NPCI payments database (accessed in June 2020)
[‡‡‡]https://economictimes.indiatimes.com/industry/banking/finance/e-payment-adoption-rates-vary-across-states/articleshow/77383170.cms?from=mdraccessed on 29 August 2020

tracks digital transactions across NPCI operated channels. A recent poll conducted at a forum jointly hosted by KPMG in India and ET Edge on the usage of digital payment during the lockdown revealed that 81% of the respondent uses more digital and less cash. This higher inclination suggests that with proper infrastructure there will be a high success of digital payment ecosystem in post Covid situations. The government during this pandemic encourages the use of e-payment for all the transactions for their basic essential services like electricity, LPG gas connection, water, etc for safety. In fact the facility of online electricity bill payment has been made available to every consumer in most of the Indian States. User's acceptance is a pivotal factor determining the success or failure of any information system project (Davis, 1993)[§§§]. Many studies on information technology report that users' attitudes and human factors are important aspects affecting the success of any information system (Davis, 1989, Burkhardt, 1994)[****]. This paper will make an attempt to highlight the behaviour of consumers towards e-payment for electricity bills in Aizawl.

Online Electric Bill Payment in Aizawl

During the coronavirus induced lockdown according to a report on an average, a meagre 4.8 per cent of consumers in Mizoram used online transaction to pay their electricity bill between March and June 2020[††††] despite the government encouraging online payment to ensure social distancing. There are a total of 2, 59,961 consumers or power connections in the state as of January 2020. The rate of online transactions has considerably increased after lockdown but it is still not up to the mark as consumers are yet to familiarise with digital payment (ibid).

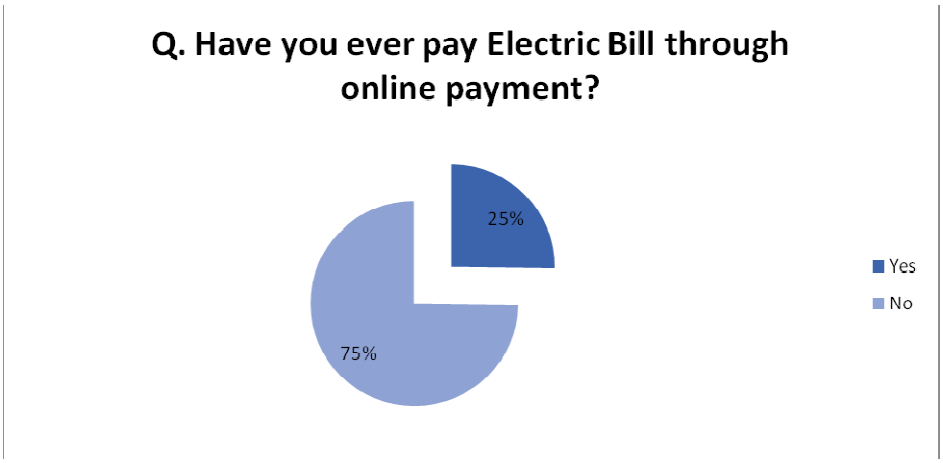
The Power and Electricity Department of Mizoram launched the electronic payment in 2006, but due to the lack of infrastructure facilities the portal for online payment was shut down in 2008. Besides this the department could not gain trust of the customer on online payment. During these two years only about 4/5 families were using online payment, through online payment the department received only about Rs. 10,000.00 per month. The department re-launches the online portal for the payment of electric bills through their website in March 2018. This re-launch had a positive response from the consumers that the amount of bills collected through online payment came to about Rs. 44 lakhs per month. Like every new technology when launched to the public, e-payment also took its own ways in Mizoram as well. In 2019 a small survey on the awareness, uses and challenges of e-payment through

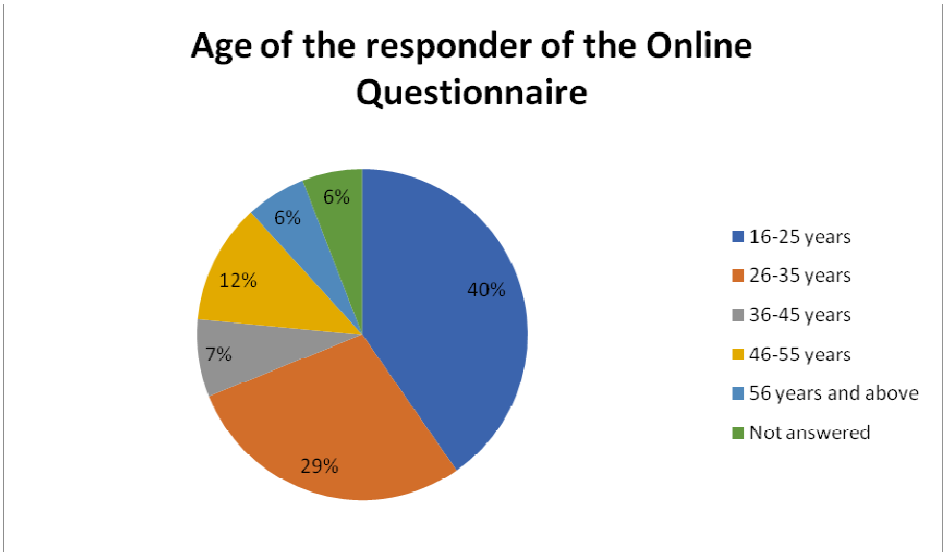
§§§ Davis, F. D. (1993). *User acceptance of information technology: System characteristics, user perception and behavioral impact.* International Journal of Man-Machine Studies, 38, 475–487

**** Davis, F. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology,* MIS Quarterly, 13 (3), 319-340.
Burkhardt, M. E. (1994). *Social interaction effects following a technological change: A longitudinal investigation.* Academy of Management Journal, 37 (4), 869-898.

†††† https://nenow.in/north-east-news/mizoram/only-4-8-of-power-consumers-use-online-transaction-during-lockdown-in-mizoram.html accessed on 31st august 2020

questionnaire of 119 peoples done in 2019 before lockdown from the Aizawl was conducted[‡‡‡‡]. These were the results of the survey:





(Source: R Lallawnsanga (2019) MA Project Report 'A survey on Online Electric Bill in Aizawl City" Department of Public Administration, Mizoram University)

From the above two figures it is very clear that those who have the knowledge to access the Online Questionnaire are mostly below the age of 35 years, also it is clear that only 25.21% from 119 people have the knowledge to use Electronic Payment for paying electric bills. Among the 119 respondents of Questionnaire, 69 persons gave the answer that they are not aware of the online payment; also they did not even know the existence of the online portal for paying bills.

When it comes to the opinion on why they prefer the cash-based transaction the answers were mainly from the security concerns, lack of ICT knowledge and infrastructure in

‡‡‡‡ This questionnaire survey was done by R Lallawnsanga, for his Master's project report in the department of Public Administration Mizoram University.

Aizawl. Electronic payment systems require large amounts of information from end users or make transactions more difficult by using complex elaborated websites interfaces. In the case of Mizoram, many people prefer cash payment than E-Payment due to lack of trust in sharing their personal data for financial transactions. Consumers feel that online payment systems are an easy target for stealing money and personal information. In fact, electronic payments have a long history of fraud, misuse and low reliability as well as it is a new system without established positive reputation. Even educated people prefer traditional ways of shopping instead of online shopping. Consumers feel that without adequate ICT knowledge on how to use it, despite all these benefits associated with e-payment, the fear of security breach remains the most concern of individuals, organizations and experts in the field of information system.

The most prominent and significant reason why they are not using online payment is that many community based organisations like Young Mizo Association, Kristian Thalai Pawl etc are collecting bills in their own locality with some minimum charges to make profit or gain some money for the organization. Many of the consumers still prefer to pay their bills in this traditional way as it still serves the purpose and helps the community at the same time.

Conclusion

E-Payment can be said to be still at the initial stages of introduction and there are many barriers to the successful implementation of it, such as infrastructure problems, reliable connectivity, digital divide between urban and the rural areas, lack of awareness and lack of e-readiness among the people. This can be observed in the city of Aizawl which many of the consumers are still not aware of Electronic Payment, people are having difficulties in handling and operating the gadgets or services, there is still a need to generate and create awareness among the people to teach them how to use the services for development. To bring the success of North East digital India the government has to push the level of e-Government Readiness Index of the region higher. While the government has made significant progress on many government programs like pay digitally to citizens, of salaries, Pensions, and direct benefits transfer, etc. We have also a success story of Centralised Utility Approval System as an e-governance initiative in Uttarakhand Power Corporation Ltd. This facilitates new electricity connections to its consumers in a transparent manner. The concept is based on the delivery of integrated utility services virtually at the doorstep of electricity consumers, using ICT as the enabler, in an efficient, transparent and cost-effective manner[§§§§]. Having said all these, cash is not expected to disappear anytime in the near future. However the present pandemic has given an opportunity to promote digital payment and look for its future possibility and feasibility of e-payment and digital governance.

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[§§§§] Jayanta Sinha Dy General Manager (IT) Uttarakhand Power Corporation Ltd (UPCL) Dehradun (Uttarakhand) Consumer-centric approach to E-Governance in Electrical Utilities: UPCL Case Study, pdf