

Smart cities: Structuring through “smart governments”

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ABSTRACT

With the progression in the Industry 4.0 and Society 5.0 landscape, it remains to be seen if the smart cities are able to realize their long-chartered aims and objectives. In this vein, given the complexity of the relationships and interactions with the key stakeholders, it would be worthwhile to plunge into an analysis of the manner in which the “smart governments” are needed to operate and function for public service delivery mechanisms. Smart cities are not a phenomenon unleashed by the private sector per se. The development and evolution of smart cities involves a collective effort of other stakeholders like the non-profit sector professionals, businesses, professionals, and other key actors in the smart cities’ ecosystem. Smart cities are the handiwork of the governments as well in the sense that they need to understand the need for invoking technology for provides public services. Such technological needs are to be maintained in terms of the resource allocation, arrangement of the requisite infrastructure, provision of timely modulation in the services and technological inputs in the cases of any bottlenecks, and so on. The present study seeks to provide an overview of the manner in which smart governments need to modulate themselves and run in order to provide smart public services. The study is original in the sense that hitherto all studies have focused on the smart cities and their characteristics to the utter neglect of the role of the smart governments- the present study seeks to plug this gap. The study is concluded with directions for further research and implications for the practitioners.

Keywords: Smart cities, Smart government, Public service delivery, Public service delivery

INTRODUCTION

Smart cities are a buzzword now and the same is reflecting of the need to refurbish the public administration amidst the confounding needs of the Industry 4.0 and Society 5.0. Smart cities are those wherein the role of information technology (IT) plays a critical role (Yin et al., 2015). For every service rendered by the public, private or non-profit sector, the role of information and communications technology (ICT) becomes important. Smart cities have been a recent origin and the academic interest has also increased in this domain over the recent years given the kind of progress in the ICT sector. The question arises: how does a smart city ecosystem looks like? As such, the ecosystem of a smart city involves the participation of every entity linked with the ICT pipeline (Kummitha & Crutzen, 2017). Thus, right from the junior most public official up to the senior most one and from the private sector top honcho to the janitor- everyone is linked with the

development and progress of a smart city. Other actors in the ecosystem are the entrepreneurs, nonprofit sector professionals, journalists and the like. Similarly, citizens are an intrinsic part of this ecosystem given that they are responsible for receiving and exchanging goods and services and are hence involved in the refurbishment of the value chain as far as the service delivery is concerned. Smart cities have emerged on account of the need to understand the dynamics of ICT and its importance in day to day life. It goes without saying that ICT has become a part of our life day in and day out. Smart cities have emerged in most of the countries across the world and governments have instituted policies for chalking out and monitoring the progress of smart cities. Concomitantly, academic research on smart cities needs to be structured in a way that the role of governments be appreciated in the making of the smart cities. Thus, whereas the extant research on smart cities has limited its scope on the understanding of the nature and characteristics of smart cities, the role of smart governments in the making of these smart cities has not been taken into account- the present studies this dimension. The remainder of this paper is structured as follows: following a brief on the nature and scope of smart cities, the conceptualization of smart governments is being done and analysis is made of the manner in which smart governments may be useful for tax administration as a hypothetical case study. The last leg of the research paper relates to the conclusions and discussions on further research pointers.

Background

Smart cities are those which have the state-of-the-art technologies to support their functioning as far as the public service delivery is concerned (Letaifa, 2015). Giant strides in the field of ICT have led to the smart cities' emergence and proliferation across time and space in most of the advanced regions of the world (Ismagilova et al., 2019). With the backing of ICT, services are being delivered to the people expeditiously with minimal delays. There is economy and efficiency in the service delivery as well. Both the private sector and the non-profit sector seek to tap the ICT for making goods and services. This implies that in a societal ecosystem comprising of different actors and stakeholders, the role of ICT assumes importance. Even the governments are rallying towards propelling their efforts for bringing about speedy delivery of public services to the citizens. Citizens are wary of the autocratic and hierarchical bureaucracies as also the corruption that used to impact the public service delivery in a negative manner. Governments are no more the ones that were in ivory towers without any concern for the citizens. Governments, in response to the evolution of smart cities, ought to become smart. So, here lies the question: what does one mean by smart governments? Smart governments are obviously those who are able to cater to the needs and requirements of citizens in terms of economy, effectiveness and efficiency in public service delivery. Apart from this, smart governments are also the ones which are responsible for the assurance to the citizens that they shall be provided quality goods and services. This means many things at the same time. For one, the smart governments ought to mention this in their manifesto or policy frameworks that they shall institute smart public services everywhere. Second, material and non-material resources shall be deployed for the smart governments' functioning. That implies that the budgetary allocations shall be made for the institutionalization and functioning of smart governments. Apart from these monetary stipulations, it is important that the non-monetary support in the form of manpower training, development and conditioning also needs to be factored into account. Requisite efforts need to be made to provide training and development to the personnel holding reins of the smart government initiatives. Psychological conditioning of the manpower

needs to be done so that they are intrinsically motivated for spearheading the smart government initiatives. Likewise, incentives and rewards should be given to the manpower responsible for leading the smart government initiatives so that the extrinsic motivation remains sustained. Apart from this, governments need to ensure that the requisite technological infrastructure is in place for the functioning of smart governments. Implicitly, the smart governments need to appreciate that while providing public services, the ICT infrastructure of the locales closely associated with the service provision are well in place. An important aspect of smart governments should relate to the fact that all the smart governments must ensure that there is a feedback and control mechanism in place. Thus, the institutionalization of feedback and control mechanism in the public service delivery chain would lead to the timely corrective measures being taken into consideration. Finally, smart governments shall ensure that the citizen feedback is taken on a timely basis so that any corrections and improvisation in the public service delivery are being taken into consideration.

Case study of tax collection

Smart cities in developing countries (Bengaluru in India or the proposed NEOM in the Kingdom of Saudi Arabia) have been spearheading public service delivery mechanisms across the length and breadth of services. In this context, it is worthwhile to appreciate how the smart governments may refurbish their tax collection mechanisms in smart cities. Tax collection from the citizens is important for the public works to run and operate optimally as also to ensure the fact that the taxes collected from the citizens is done as per their income. Usually, taxes are collected from a certain section of society and the others are left out. In the context of the smart governments, it is important that taxes be collected from all and in a timely basis without any embezzlement incidents. This implies, furthermore, that the security and privacy of the tax payers is maintained at all times. Second, the tax payers must be assured that while scrutinizing the payments made by them in terms of the right amount being paid by them, they are not being grilled unnecessarily to obviate the tensions and stress of the citizens.

We propose that smart governments in the context of the revenue departments be refurbished such that tax payers are able to submit their dues on a timely and accurate basis. Revenue department needs to institute blockchain and artificial intelligence (AI) for ensuring that taxes are collected periodically. First off, taxes may be collected at any point of time in a year. As long as the payment is done accurately and completely, it does not matter the time and date when the payment is made. Second, the banking and financial institutions need to be made a part of this ecosystem so that the blockchain and AI technologies are able to tap the citizens' payment securely. Third, the revenue department must ensure that AI and NLP technologies are in place to provide advice and timely succor to their grievances in the times of any grievances or lack of clarity regarding any tax rule or regulation. Finally, it is worthwhile to appreciate the need for having the deployment of Internet of Things (IoT) for easing the tax payment and collection from the end of consumers and revenue department respectively.

Conclusion

Using a micro case study on revenue collection, it was driven home how and why the smart governments function. Smart cities are already in vogue in many countries across the world and in this context, the important of smart governments becomes crucial. Smart governments are those

which are responsible for bringing about transparency in administration apart from realizing the 3 E's of public administration: economy, efficiency and effectiveness (Pereira et al., 2018). Smart governments deploy sophisticated technologies like AI, blockchain, IoT, etc. as far as public service delivery is concerned. It is anticipated that smart governments would go a long way in improvising the public service delivery formats as also the fact that products would be innovated and also the services. Smart governments help in forging trust with the citizens as well.

The present study has academic and practitioner implications. Whereas it needs to be conceded that the present study was limited in the sense that only a micro case study was provided to support the key arguments, further research is warranted for an empirical validation. Second, further research is required for understanding the role of stakeholders involved in the smart cities' value chain. Further research may be considered to appreciate the differences between the smart cities of the developed and developing countries and best practices may be identified so that the lessons may be drawn for the latter. Finally, the role and implications of emerging technologies like robotics and metaverse are required to be investigated in further research regarding their efficacy in making the governments "smart".

As practitioners, it is important that they realise the need to have the requisite vision and objectives laid down clearly. Second, it is important that the resource capabilities be in place while conceiving of developing themselves as smart practitioners. Also, it is important that the citizens be trained well in terms of the service delivery so that they are well versed with the technicalities and issues involved while interfacing with the smart governments. Finally, the policy makers need to appreciate that there is a need for understanding why the smart governments are necessary for economic growth.

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