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Assessing the Impact of Artificial Intelligence Technology in Public Services

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ABSTRACT

This paper critically and wholly looked at the contribution of Artificial intelligence in the public sector. It seeks to identify how the use of Artificial Intelligence both in private and public sector can enhance output and change the mentality of government and public servants. It employed functional theoretical and conceptual frameworks applied in other context around the world especially the Europe, with a unique attempt to assess the efficiency and effectiveness of AI in their public servant. Many governments are looking for The recommended characteristics of the framework are based on current knowledge of the factors that influence AI adoption and take into account the need to complement organizational changes in order to maximized impact.

Keywords: ***Public service, Artificial Intelligent, technology, administration***

INTRODUCTION

Armingaud (2017), sees artificial Intelligence (AI) as an attempt to bring effectiveness into the government and public services. Employing AI to the arms of government, efficiency and efficacy will be achieved so that all formations will be dealt with accuracy. By adopting Artificial Intelligence all aspects of government will run smoothly which include providing effective public services, government procurement, security to government, health, effective employment services and of course, with the way government interacts with broader audience. Since government deals with society, through the use of AI it will successfully drive the societal needs of the general populace to a greater height. (Baldwin et al., 2006).

The use of Artificial Intelligence by most governments around the globe helps in so many ways which include control to information flow, efficacy in the application of communication and technologies and deliver unaffected service to government. Those who find it difficult to use AI in their sectors still run the organization in a more traditional way which will eventually leads to grave anomaly. From the foregone, it can be deduced that the use of AI in Public service in consonance with the new technologies has been in existence and this aims to improve service delivery and effectiveness which will eventually bring trust between government and citizens. There have been questions on whether governments are investing on information and communication technology for smooth running of its affairs in the past decades. The fact remains that little efforts are being made in that regard so the use of AI should be a prerequisite to assess public administration and other similar public service executions. Although it is relevant if not essential, the use of AI is indisputably necessary in government (Rababah, 2018).

Recent studies on AI has shown that most governments ignore the use of ICT and AI and mainly focused on technology. Another aspect that was also overlooked was the interaction between government and humans within the organization. One underline factor is data management and this will be easily achieved through the use of AI (Built & Review, 2010); (Schmidt et al. 2022).

Delivering AI technologies to government functionaries is essential and will restore confidence, trust and desire of individuals on government. Best services if there is real trust between government and its employees and that is the aim

of AI. To achieve the impact of Artificial Intelligence, application of basic ICT is a prerequisite. So the potential hurdles that is historically attached to ICT should be disregarded.

Numerous scholars are of the opinion that empirical studies and methodologies should be used to sufficiently understand the impact of AI (Engstrom& Ho, 2020). As a driving force, therefore, this study aims to examine and present the central features of AI in order to build a conceptual framework that is in tandem with public service and eventually triggers potential research.

Research Gap: Many international organizations' analytical analysis reflected similar. The majority of research look at Approach may lead and usage, while only a minority look at how the technologies are used and applied. The goal of this study is to close the gap by determining the responsibilities and constraints of integrating Ai in public service administration.

Objectives Of The Study: The paper proposes to provide the conversation by examining the organizational assessment of AI adoption and deployment of Ai in the community service, and the current effective administration techniques for addressing such encounters. The following are the objectives:

- To investigate the methods being used to govern the administrative evaluation of AI implementation and adoption in the government sector.
- To evaluate importance of AI in public service this is a machine-based system.
- To appraise the major operational constraints of information and communication technologies in the government agencies.

RESEARCH METHOD

The study proceeds from hypothesis to proof gathering employing data and analytics, secondary source of data was collected and used.

Conceptual framework employed to assess the impact of AI in public Service

Artificial Intelligent in the public sphere: The use of artificial intelligence is now prevalent. States, nations and continents around the world have engaged in the use of AI. In Europe, for instance, individuals and economies both developed and developing have developed interest in the use of AI. This will add value to their sectors. Conversely, however, the meaning of AI is changing across the globe and this has affected the way policymakers and academics see it. It is difficult to define. Although it is part of technology, these group of people are skeptical to accept it (Yigitcanlar et. Al., 2020). With numerous advantages attached to it, governments are advising private companies to gain from the benefits of AI. The use of AI seems to advance commercial transactions and service delivery. This is possible where governments are comfortable with the use of it. Some of the advantages of AI is that it brings simplicity to the execution of policies and transactions. A recent examination of some literature that were published from 2000 to 2019 indicated that 1142 studies out of 1438 literature focused on the application of AI in private sector than government sector and this may be the reason why most governments fail in their development policies (Wirtz, et al. 2019). There were attempts to test the use of AI technologies. For example this study was able to identify eighty five (85) instances in the use of AI to process natural language and this may lead to the adoption of more approaches in that respect any time soon.

Theoretical Projected Method on control of AI:

The theoretical framework employed in this study is empirical in nature and based on some existing researches that were carried out with similar objectives. They sought to measure the sway of ICT in running government affairs. Since ICT and AI are going hand-in-hand, there is the need to have a clear way to have indicators that they both improve efficiency in government and private sectors (Hasan et al., 2020).

It has been observed that the use of technology can make great impact to change the process and structure of set up, for this reason, the actual impact of technology can be felt or assessed by the organisation where it is used. But one has to bear in mind the location characteristics, and culture of citizens at the disposal of that organisation. It looks convincing that when new things are presented into organization, there is bound to be change in behaviour so also the introduction of new technology may impact on the attitude of the public servants (Wischmeyer & Rademacher, 2019)

There is strong need for the creation of a framework that will determine and influence the use of AI in government functionaries and affairs, especially the use of Algorithm research which is mostly practical and empirical based in nature. So the use of AI in critical investigation is realistic (Kiron & Schrage, 2019).

Artificial Intelligent Enablers in Government: The use of AI in government organizations can transform the organizations into digital world where infrastructures and organisational resources can be bundled together into a single whole and this will eventually minimised the cost of running the organization.

Infrastructure for Information Technology: The need of having a strong technical infrastructure to aid AI research is frequently mentioned. This infrastructure is necessary in order to collect, arrange, organise and store the huge amount of data that AI needs in an attempt to learn. AI is always integrated into current IT systems and never used in isolation, necessitating the use of both hardware and software (Tahiru & Agbesi, 2021). For this reason, governments should increase their bandwidth in order to increase the capacity of their hardware networks and database. Similarly, this will improve the current research policy approaches which is in consonance with common assumptions on the impact of AI in government use of technologies and data storage analysis (Mikalef et al. 2019).

Development and Deployment Operations: When AI was described as indispensable to organizations, many organizations were compelled to integrate it as part of its organizational resources. This brought about high demand in people with technical know-how to manage AI, especially those with expertise. The demand in AI experts has made a rise in pay for them. Although it was criticize for being a source of reducing manpower, they are still needed to man the technologies and reduce the need for high expenses within the organization. The use of AI will accelerate the functionality of public service organizations to equal private sectors (Wirtz et al. 2019).

***Development of Digitalized Government*:** Since AI is somewhat hyper-technology, there is the need for huge number of data sets. This will allow easy link and data process. Going by this, all governments need to migrate from traditional method of operation to more advanced method which is the use of AI in particular, ICT and other e-resources (Serey, et al., 2021). The use of AI will compel the creation of new mindsets and it will pave way for the creation of new technology that simplify the smooth running of governance (Ross, 2020). As suggested by Schmidt et al. (2020) that traditional governments should embrace the ICT experience in their daily schedules so that the attitude of its public servants and skills will change.

In the Digital Age Society: Since intelligence deals with a large amount data, first there should be the data which may be used as a data bank. Most of the data usually sourced t through social and commercial activity. In the year 2020, for instance, 25% of the data gathered around the globe was stored on digital media (Mureki, 2019). The world is set to resurface to a global village through the use of newer technologies. The world has transformed whereby commercial and social activities are done online so organizations need to be careful with the way they handle their data on how it is acquired and retained. The use of online platforms will ease in the way data is integrated in a range of industries (study, 2020). The higher the advancement information is sourced the more sophisticated a country become in the new world order. The use of modern technologies, especially AI, will bolster countries partnership and ultimately breed data-driven breakthroughs and it will allow both public and private organisation to share data or common interest and even to gain access to a more sensitive information or data (Alsheibani et al. 20220 Tahiru & Agbesi, 2021).

Different Artificial Intelligence (AI) development & their execution:
Notwithstanding the various types of technology used around the world, one must identify the best AI for a given situation and to quantify and assess its advantage and disadvantage.AI in particular is growing field of interest. Some AI technologies owing to the fact that they are not up-to-date to suit the current situation they are considered obsolete, especially in the developing world, to some extent they are no longer called AI technologies. Although not all government department can be applied some key areas of government can be applied in order to obtain desired result for instance, sector like health, Agricultural and Aviation to mention just a few require the application of AI than any other sector because they contain high number of sensitive information (Ruzsa, 2019).

The enabling factor is operational issue: Despite widespread appreciation for ICTs' promise and investments in digitizing government processes and quality of public services, there is barely little information known about the pros and cons of these recently invented technology to citizens and society. A related issue has recently been observed for AI expenditures, "productivity dilemma" from the late 1980s, in which he famously declared that despite significant investments in ICTs, information capture comparatively small performance benefits. Considering major investments and interest from corporations, government, and research, economic gains have only been evaluated occasionally (Bianchini, n.d.);(Wirtz et al., 2019). Most people have the believe that integration I c t to run government will definitely reduce cost and improve productivity but the fear still remain that competence in the use of I C T is always a stumbling block especially to first time users it will be especially much troubling since there is general tendency that

simple progress and make little achievement or impact the use of AI, still requires more evidence on its impact on small medium and macro systems of these economy (myint&Aung, 2019. Serey et al., 2021)

The concept of public value has received a lot of attention in the study of the effects of ICT in administration (Serey et al., 2021). Identifying the value of technology to individuals is one of the most important components of implementing ICT into government agencies. The word "public value" refers to a broad concept that considers people's expectations of government and state services (Study, 2020).

Improvements in public administration: Machine intelligence (AI) incorporation in government agencies seems to have the potential to transform existing management systems. Information and communication technologies, particularly AI, can improve managerial process productivity by minimizing administrative costs, process constraints, and customer service queues, as well as encouraging good communications, partnership, and teamwork within the organisation but with other governmental entities (Hbr, 2019).) the following point are some of the indication used to evaluate the impact and use of AI in public organisation:

- There should be efficiency, quality and efficacy
- The cost for running internal service is reduced.
- Operations towards governance is optimized sustained, and efficient
- There is standardization in administration
- Effective teamwork is maintained which give room to communication and understanding across government agencies
- The level of transparency will be increased
- Since human agents are reduced in the system, fairness honesty and equality will be upheld. The administrative process will be maintained which gives importance to government delivery of services to general populace

Enhancing government utilities: Enhancing government utilities the use of AI is considered as a tool that adds value to public service but this value depends on the efficacy of services rendered (Alsedral, 2018), the use of AI in particular not to dwell on I C T will possibly improve performance, quantity and affordability of governance so the following may be considered as measures to government services and development:

1: individual may record upgraded service, engagement and transparency.
2: Effective and improved efficiency
3: Enhanced community involvement
4: Government services will be more equitable

Enhanced Public Value: Enhanced Society Value focuses on public authorities' opportunity to boost people's overall social benefit including well by achieving the results in areas such as peace, stability, finances, healthcare, education, the ecosystem, as well as others. The use of ICTs in government institutions has been suggested as a way to enhance people's choices well-being. (Brynjolfsson & McAfee, 2017). Another method is used to determine whether Intelligence helps to Humanitarian Value is to evaluate its impact on several of standard measures, such as.

• Increased government confidence
• Reduced public impressions of public service delivery
• Governments' capacity to interact with societal concerns has become more and more reliable.

Individuals have just a better understanding of government functioning.
• Improved social standing
• Good community healthcare
• Confidence and fundamental fellow human have enhanced.
• Economic growth has strengthened.
• Financial situation has improved.
• Improvement of economic hardship
• Environmental laws have been upgraded.
• Enhanced school performance

Future research relevance of the framework: AI technologies have the ability to help individuals and communities to have reciprocal relationship knowing how supervised learning techniques function is extremely difficult, specifically for programming, raising concerns about responsibility, responsibility, and trust. When AI systems make decisions based

on previous data, they run the danger of becoming biased (Talwar & Koury, 2017). Previous attitudes of users may be represented in old data sets that users are ignorant of it.

One of the grave concern in the use of AI is how to maintain privacy since most of our I C T devices access internet with so much vulnerabilities. Accessibility to our devices transpires without the knowledge of its user violation to individual and organisation privacy will be of utmost concern and also the fear or concern that the AI sets to replace man power in most organisation endeavor. (Ronanki& Davenport, 2018). Intelligence concerns with the ways how individuals and organisation are transform especially it deal with the collection procession of data information improved government decision as a result in the digital era this could help boost systematic comparison for effective administration .

The shortage of public respect has been recognized as a roadblock to e-Government development; however it is more likely to be more important for AI technologies. Citizens' acceptance is even more important in this case, both throughout the production, adoption, and recovery of automating public services. Gladsaxe(Andrejczuk, 2018).

RECOMMENDATIONS

The following may be considered as the recommendations for future researchers:

- Training and workshops based on the findings should be implemented in all government and public sectors so that everyone understands how AI operates in various fields.
- Because AI has reduced job-related stress, there is widespread support for its deployment in every industry.
- Humans need to be conversant with technology and computer knowledge.
- There is a requirement for both the government and the public sector should invest more in AI implementation.

CONCLUSIONS

Artificial intelligence has been establish in most government and private sector, but still many public and private institutions have embarked on researching it but there are fear and concerns about the unforeseen implication that are detriment to smooth running of government but there is the need to fully investigate based on scientific enquiry as to how Artificial intelligence really impact the economy and governance. The consequences of Intelligence are projected to be excellent in overall since it allows governments to improve their productivity, profitability, and adaptability to issues important. But at the other side, there are concerns about unintended implications when governments embrace intelligent automation. (Alla, 2020). Further research should be carried out on intelligence and governance through empirical and real world assessment to uncover how AI operates in socio-economic domains (shahim, 2019). This study sets to suggest that the framework adopted in this research should be used to exmine the different scenarios employed by the government to carryout intelligence research programmes as adopted by the European commissions.

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