AI Readiness Metrics in Public Sector Organizations: Zimbabwe Organizations Case Study Africa

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***Abstract*—This paper explores Zimbabwe's public sector AI readiness and preparedness. There is an urgent need to find out the drivers of preparedness since AI is becoming more mainstream in the hands of governments in an attempt to increase governance and service delivery. The methods that the authors use are a combination of mixed approaches that include quantitative surveys of different organizations operating in the public sector and qualitative interviews with some of the stakeholders in the area of focus. The key elements of AI preparation such as skills of the work force, organizational culture, data and technological infrastructure are defined and measured by authors in quantifiable terms. The results indicate that the degree of preparedness in the firms has considerable differences that can be attributed to a combination of diverse factors including the opportunity to train and resource allocation. The research paper provides the urgent need of the customized plans of optimizing the AI application in the state sector in Zimbabwe. In addition to equipping policymakers and government administrators with operational knowledge enabled to achieve innovation and enhance governance, this study may be applied to create successful implementation strategies of AI, since the study may offer an effective metrics framework. Finally, to make sure that the AI technology could be successfully adopted by the public sector organizations to promote the services delivery and communication with citizens, AI Metrics on public sectors as recommended by the authors.**

Keywords—AI readiness, Government, Measures, Technology acceptance, Governance

I. INTRODUCTION

Artificial intelligence (AI) technologies have been developed in a very short time, leading to significant transformations in many industries, including healthcare, banking, and education [1]. In today's rapidly evolving digital landscape, several key concepts shape the framework for successful implementation of artificial intelligence (AI) initiatives. The use of Artificial Intelligence (AI) can improve the quality of decision-making, operations, and delivering services to the public sector. AI readiness refers to an organization's preparedness to adopt AI technologies, encompassing factors such as infrastructure, workforce skills, and organizational culture. Government plays a crucial role in guiding AI deployment through policies, regulations, and support initiatives that foster innovation and ensure ethical standards. However, AI application in the governmental sector entities is not achievable without sufficient comprehension of the willingness of the organizations to embrace and deploy the technologies [2]. Measures involve metrics and benchmarks designed to assess the effectiveness and impact of AI applications, helping organizations evaluate their progress and areas for improvement. Technology acceptance reflects the willingness of users both employees and consumers to embrace AI technologies, heavily influenced by the perceived benefits and usability of such innovations. Lastly, governance encompasses the frameworks and processes that ensure accountability, transparency, and ethical use of AI, guiding decision-making and compliance with legal and regulatory requirements. Together, these terms provide a comprehensive understanding of the multifaceted approach needed for successful AI integration in various sectors. In Zimbabwe and in the majority of developing countries, there are certain difficulties in the application of AI in institutions, such as lack of financial resources, inadequate infrastructure, and different rates of technological literacy [3]. The investigation in this research will be focused on examining the signs of AI preparedness in the context of Zimbabwean state-owned companies and determining the main indicators that can be employed to accomplish a successful transition to AI-driven operations. The paper identify the framework and the requirements required to assess the preparedness of these companies by analyzing the existing AI operations of these firms. It also give a hint at the particular issues and opportunities that Zimbabwean organizations in the field of public sector face when embracing AI. Finally, by providing viable suggestions on how Zimbabwean organizations operating in the public sector can successfully adopt AI technology, this study help to add to the bigger discussion of AI readiness.

Artificial intelligence (AI) is changing the face of the populace government in terms of enhancing their efficiency in operations, decision-making, and service delivery [4]. The introduction of AI technologies may indicate a massive

change in Zimbabwe, where the issues of the public sector, including the insufficient resource base, bureaucratic burnout, and the lack of access to the services, persist. With the application of AI, the government of Zimbabwe can overcome these problems and eventually become more accountable and transparent in the government [5]. As a digitally oriented world, artificial intelligence (AI) is among the factors that can shape the way the functioning of the public sector organizations completely transforms [6]. Artificial intelligence (AI) technologies that can increase productivity, enhance quality of services, and make decisions based on data include such technologies as data analytics, machine learning, and natural language processing [7]. Introduction of AI can immensely increase the security of the population, administration, health, and study of the institutions of the public sector in Zimbabwe specifically [8]. Governments in more parts of the world are getting to know how AI can be used to improve services to citizens. In order to apply AI in the management of people, different countries already introduced national AI strategies, such as US, UK, and Singapore.

The adoption of AI is not just a challenge-free process even in the underdeveloped nations like Zimbabwe [9]. Some of the structural problems affecting the public sector in Zimbabwe include the fact that the government lacks the right IT infrastructure in most of the government departments and as a result, the government finds it difficult to implement the current technology like artificial intelligence. The costs of AI technologies and the staff training needed cannot be affordable to the public sector organizations due to the budget limitations [10]. It also is typical that the employees do not possess substantial digital literacy level, and employing AI technologies may be problematic [11]. This may be the resistance to adoption and the ambiguity due to the unclear laws and regulation on the use of AI. The actions that evaluate the AI preparedness of these companies play a crucial role in ensuring successful AI transition. The metrics could provide an integrated system of quantifying a variety of preparedness factors, among which is the assessment of the current software and IT infrastructure [12]. Examining employee's competency and skills in the usage of AI technologies. Valuation of the organizational change attitude and innovation attitude. A closer examination of the existing systems that potentially lead to the implementation of AI or do not [13]. In order to give a rough estimate regarding the advancement of the Zimbabwean public sector organizations on the path of the AI integration, this study will generate a compelling cluster of indices peculiar to them. Even though AI has a potential to be useful, the reality is that the readiness of the organizations of the willing public in Zimbabwe to use AI technologies is an enormous gap in knowledge [14].

One of the factors that influence AI readiness that are not researched in this respect is technological infrastructure, data management practices and capabilities of the workforce. This blindness hinders proper planning and implementation of AI programs which will eventually result in failure [15]. The research goal is to develop a holistic metrics model of the preparedness of AI in the Zimbabwe public sector organizations. The study also defines the AI preparedness in the government agencies with references to the following key areas as infrastructure, data quality, and organizational culture. It will involve the fundamental areas of concern with regards to the readiness of AI such as the provision of support to the leadership, the technologies, and the competencies of the employees. The barriers and problems of AI technologies implementation which include the cultural resistance and training will also be discussed in the paper. Resting the findings on these assumptions, the paper offers recommendations that would lead to the organizations of the state becoming significantly more AI-ready and provide the opportunities to introduce AI programs successfully. The situation with the AI preparedness in the organization of the Zimbabwean population sector is an intricate field that is directly affected by the amount of determining factors such as the level of leadership, infrastructure, and data access [16]. Nonetheless, the unavailability of funds, shortage of technological facilities, and change resistance are identified as the most important obstacle and impediment such organizations have to overcome in a bid to effectively introduce AI technologies [17]. The employees should also be given urgent training and skills restructuring to facilitate the use of AI since a substantial percentage of the employees do not have the required skills to use AI tools to their advantage. These factors should be taken into consideration to make AI more prepared and effective part of the work of the public sector.

The research has significance to both the Zimbabwe organizational leaders and politicians and the discourse generally on third world countries readiness to AI. The awareness of the particular AI preparedness indicators may assist the governmental organizations in making superior decisions and allocating resources more efficiently and make control more efficient when they cross the digital transformation threshold [18]. We believe that our research would be useful in giving empowerment to Zimbabwe and other countries of this kind to apply AI to the common cause and build a more efficient and responsible national sector. The government enterprises will also require gauging the degree of preparedness in a bid to deploy AI technology successfully [19]. The awareness of the preparedness levels will assist the administrators and policymakers to identify the weak areas and points that should be developed to allow them to act more specifically. The research is a contribution to the body of AI readiness in the academic field, and it provides viable recommendations on how to accelerate the implementation of AI in the Zimbabwean government sector that will ultimately enhance citizen administration and service delivery [20].The paper is organized as follows, II is the literature review, III methodology, IV findings, V discussion, implication, limitation, recommendation and conclusions

II. Literature Review

The application of the AI to the sphere of the state-based organizations is not a recent phenomenon of the last several years, therefore, the governments are eager about the opportunities to streamline their functioning and to make their services more efficient to be provided. These businesses are ready to migrate to AI technologies, but the scope is not even, and it is related to a wide range of factors, including organizational culture, human capabilities, and technology infrastructure [21]. Some models have been suggested to establish the willingness of an organization to embrace AI. One of the models that have been widely applied in the quest to determine the variables that influence the use of technology is the Technology-Organization-Environment (TOE) model. The approach considers the aspects of

technology potential, organizational characteristics, and environmental issues as the aspects that shape the usage of the new technologies [22]. Research indicates that there are certain issues in the process of deploying AI technologies by the public sector companies. Among these difficulties, one can mention the lack of professional employees, a lack of finances and the existence of ineffective technological infrastructure [23]. Technical challenges, including outdated legacy systems, which are out of trend and a study of the banking sector, also make the application of AI in cybersecurity difficult [24]. The other thing that Khan and Rabbani (2020) state is the fact that the integration of AI into the environment of the public services is made complex due to organizational obstacles, including change resistance and training deficiency. The AI preparedness levels need to be established with the public sector organizations particularly in the emerging economies such as in Zimbabwe. They may be provided using measures to provide a systematic orientation assessment of different preparedness areas, including organizational culture, technological potential, and human resource preparedness [25]. The analysis of the areas helps the businesses define the spheres of weakness and develop certain steps to become more ready to embrace AI.

A. Theoretical Frameworks

Implementation of technologies of artificial intelligence (AI) within the government sector organizations, can be justified within a range of theories that explain on technology preparedness and adoption [26]. The Technology Acceptance Model (TAM) developed by Davis showed that two of the factors such as the perceived ease of use and perceived usefulness are the determinants of technology acceptance [27]. In the context of AI, it is expected that the citizens of the public sector will be persuaded that AI tools would enhance their performance in the workplace (usefulness), and that they would learn and use the tools with convenience (ease of use). This paradigm is critical in the manner to understand the impact that the feelings of AI can have on its application in the social institutions [28]. Unified Theory of Acceptance and Use of Technology (UTAUT) has recommended that Alyousef, expands on TAM and incorporates a number of factors, including social influence, enabling factors [29]. As explained in this theory, other factors that influence the use of technology are the social variables (e.g., peer pressure) and the organizational environment (e.g., availability of resources and training). UTAUT would assist the public sector organizations in Zimbabwe to establish what infrastructure and social dynamics should be in place to have an effective AI implementation.

The adoption of technology can be very easily conceptualized within the scope of Technology-Organization-Environment (TOE) framework [30]. It has three underlying dimensions, which are, infrastructure and technologies present throughout the company, internal factor, resources, culture and organizational structure and external factor, regulations and market forces requirements. This paradigm is especially applicable to the evaluation of the willingness to use AI in governmental organizations since it is concerned with the interaction between various variables that affect the use of technologies. Lastly, we have the Diffusion of Innovations (DOI) hypothesis which is an analysis of how, why, and pace of embracing innovative technology in a business [31]. The characteristics that determine the adoption rates are complexity, compatibility and relative advantage. Companies that adopt technology slowly have various types of people that are innovators, early adopters, early majority, late majority, and laggards. The better the knowledge of these variables, the more the public sector organizations will be able to find the ways of promoting the accelerated pace of adoption of AI technologies. Nonetheless, in this study the author of this research chooses TAM as the model because it can be embraced by the general organization in its attempt to adopt AI because it is easy to understand.

B. Metrics of AI Preparation in the Public Sectors.

The measures of AI readiness have some dimensions, such as people, strategy and policies, processes, technology, and the environment of the organization. The de-composition of these metrics by the literature are: People; the capability of an organization highly relies on the skills and competencies of the workforce. It is imperative to rely on the continuous training and development programs to enhance the skills of employees in terms of the utilization of AI technologies. The employee's attitude and perception towards AI are important in regard to readiness. To implement AI, companies are supposed to develop a culture of change and innovation. Strategy and Policies; the top management must be so committed to the successful implementation of AI. The management must be proactive in supporting AI projects and it should allocate funds. In order to enhance ethical behavior and compliance with regulations, it is important to formulate explicit policies and AI use guidelines to enhance the organization readiness. Processes; the successful change management strategies can be adopted to work around the barriers and make it to a successful transformation to AI technologies. This is through open communication and interaction with the stakeholders. The creation of a common knowledge and the optimization of resources between and among various departments and external partners can be promoted to facilitate the preparation of AI since the latter is a priority of the highest order. Technology; the technological infrastructure available must be identified by evaluating them through some maturity models (e.g., Technology Maturity Model, TAM) to determine how suitable it is in facilitating AI efforts. This includes software and data management systems, and hardware. The most appropriate data to be used in training the AI models are inexpensive and readily available. One of the priorities in organizations should be data governance in order to ensure that data remains intact and available. Organization and Environment; organization maturity the overall maturity of the organization in terms of processes, culture and technology can provide information on the level of the organization being ready to adopt AI. With the help of government and industry sponsorship, an organization stands a high chance of being significantly influenced into going AI. External stakeholders can be engaged in economic interaction to introduce additional resources and skills. On the whole, a sophisticated solution, which would consider these indicators, would add much to the readiness of an organization to implement AI since it will be capable of using AI technologies to enhance its work.

C. Lower Worldview and Case Studies.

Most of the literature that is presently being published concerns rich nations, but the amount of research on AI preparedness in poor nations is on the rise [32]. Studies, such as have demonstrated that in the example of Zimbabwe and

other African nations, they encounter special infrastructure as well as policy-specific, which makes it hard to reach a positive success in the usage of AI technologies. These regional dynamics should be understood to arrive at particular measurements that reflect the peculiarities of the organization of the public sector in Zimbabwe [33]. The emphasis on the survey of the signs of AI preparedness has gained more and more popularity over the past few years, especially concerning the sphere of the public sector [34]. The majority of the spheres such as the public sector possess AI preparation frameworks that have been determined by various researchers. This paradigm shows that the culture of innovation and cooperation should be introduced into the public organizations to be better ready to accept AI. The organization culture, the involvement of stakeholders, and investment in the training programs were found to be one of the main preparedness criteria found during the study [35].

The researchers isolated such high standards as the level of public confidence, legal systems, and technological resources on the basis of the mixed-method approach. Based on the findings, the elements of measurements that are embraced in developing countries such as Zimbabwe, include locality and issues. One of the reviews was carried out but the analysis was the AI preparedness in the area of healthcare, which is much similar to the area of governance of the population [36]. The measures of interoperability and data access and ethics were defined in the study. The acquired knowledge on the study can be broadly utilized by the larger population in broader applications emphasizing the importance of moral structures and data regulation in the training of AI. The research by Sousa was related to studying the field of AI preparation in various fields, including healthcare, education, and government [37]. Although the research was particularly thorough in terms of the issues of the sector, it also established similarities in the preparation actions which involved corporate culture, training requirements, and technology adoption. The comparison research at hand can be relevant in developing an overall metrics system of the Zimbabwean public sector. There are many variations of structures and assessments, which constitute the collection of the study devoted to AI preparedness metrics in the domain of the public sector [38]. The measurements applied in the various studies are the same though one can observe that the measurements can be contextualized to underdeveloped countries like Zimbabwe. According to the results of the observations made above, a tailor-made metrics framework would be made to gauge the readiness of the Zimbabwean institutions of the government regarding AI [39].

D. Research Gap

Though the trend of implementing the concept of artificial intelligence (AI) to the functioning of the public sector is growing, some major gaps in the literature are still present, especially in terms of developing nations like Zimbabwe [40]. Such missing points need to be detected to inform the future studies and practical activities to improve AI readiness. The majority of the available literature on AI adoption focuses on the developed countries since they have a better technological base and capacities. The number of studies that focus on the particular opportunities and challenges of organizations in the public sector in developing nations and specifically in Africa is short. This disparity restricts our knowledge about the contextual impact of these regions on the AI preparedness [41]. Although there have been several technological readiness assessment frameworks, few measures are specially developed to measure the AI readiness of the business in the public sector [42]. Existing models often ignore the particularities of the AI technology and the unique circumstances of functioning the Zimbabwean institutions of the public sector are situated in. This void explains why an elaborate set of measurements should be formulated to address the requirements and circumstances in the region.

The factors like employee attitudes, lack of readiness to change, and the contribution of the leadership in implementing the environment in which innovation may blossom are not well understood within the situation of AI readiness [43]. Perception of such aspects of cultures are involved in effective AI projects. The majority of cross-sectional studies of AI adoption provide an idea of the existing practices and attitudes [44]. Longitudinal studies (what happens over time in the adoption of AI) are needed in order to have a more accurate view of the evolving situation of readiness and the drivers that lead to successful deployment. The literature has not addressed in detail the interrelation between regulatory and policy frameworks to either support or impede the use of AI. These dynamics are essential to come up with effective plans of AI preparedness in Zimbabwe where the dynamics of governance and policy organization can have a significant impact on technological adoption [45]. Although there is general adoption of AI in several studies, there is not a particular study of sectors within the general population in terms of the Zimbabwe governance, healthcare and education. The introduction of AI may introduce personal opportunities and challenges in every direction and special research is required to facilitate sector-specific enterprises. To develop the sphere of AI preparedness in organizations of the public sphere, several gaps in the research are to be closed [46]. The proposed study seeks to contribute to the growth of valuable information that can be adopted to effectively introduce the AI technology to the process of government administration that will ultimately guarantee the improvement of the services offered and the efficiency of the work performed, by concentrating on the details of the scenario in Zimbabwe and creating certain actions.

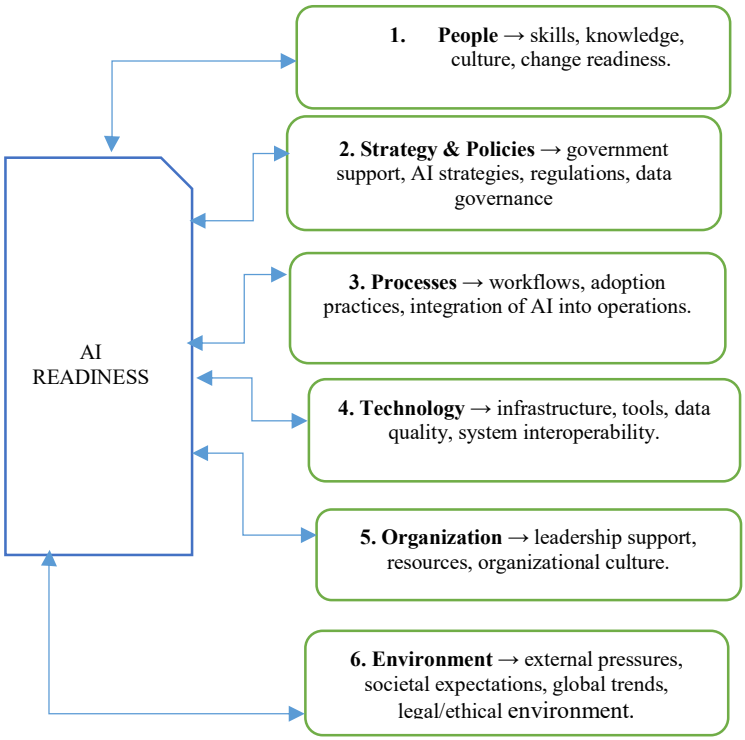

Fig. 2. AI READINESS FOR PUBLIC ORGANIZATIONS

III. METHODOLOGY

The analysis of AI readiness in Zimbabwean governmental sector organizations incorporated both qualitative and quantitative methodologies in a mixed approach to come with a complete picture. Technology acceptance model (TAM) is a model argues that the acceptance of technology is mainly determined by two variables including perceived usefulness and perceived ease of use, which was adopted in this study as it is effective in determining the adoption of technology in government sectors.

A. Design of Research

The qualitative component held in-depth interviews with the stakeholders (data scientists, IT managers and government representatives) to get to know more about their attitudes to the challenges and the readiness of AI. Organized employee focus groups to get to know more about the training needs and business culture. Reviewed policy reports and policy documents to understand the background of the organization. The Quantitative Aspect made a designed questionnaire to assess opinions on AI preparedness, availability of infrastructure, and training shortages among an expanded sample of workers in the public sector. Applied statistical methods to analyze a survey data to identify trends and relationships.

B. Population and sampling

The population of interest was workers in the Zimbabwean public sector specifically those working on technology and AI projects. Government directories and other pertinent resources were used to develop a sampling frame, and stratified random sampling was applied to make sure that various organization sizes, locations and types were represented. At least 30 organizations of the public sector were targeted in order to get statistical significance. The inclusion criteria were based on organizations that have a technology mandate and active AI initiatives whereas organizations that have limited data access or whose primary activities are only directed at providing public services were excluded. Apologized differences in AI readiness among departments, synthesizing qualitative and quantitative data to support the results of analysis and improve it. This approach represents a more refined approach to capturing the statistics and experience of AI readiness.

C. Data Gathering Techniques

Surveys were administered (on-line and off-line) to a large group of public sector workers by use of structured questionnaires to determine their attitudes, infrastructure, and support of AI projects. Semi-structured interviewed key stakeholders regarding AI projects, challenges and data quality. Organized focus groups with the personnel of different departments to discuss training needs and adoption of technology. Case studies of AI activities were identified through stakeholder interviews and document analysis and analyzed in terms of their success and challenges.

D. Data Analysis Techniques

The methods of data analysis were developed in a holistic manner of evaluating AI preparedness. In case of quantitative data, statistical measures were obtained based on descriptive statistics to present the parameters of demographic factors and AI preparation. The inferential statistics such as correlation analysis and regression analysis were applied to investigate the relations between variables that affect AI readiness, and chi-square tests and t-tests were used to evaluate the association of variables that are categorical and means comparison across groups, respectively. Meanwhile, thematic analysis and document reviews (a part of the qualitative data analysis) revealed recurring themes relating to AI preparedness through systematic coding of focus group and interview responses. This combination of the results of both types of data provides a comprehensive consideration of the level of AI readiness and makes it possible to act on the findings and improve AI potentials in the sphere of the Zimbabwean public sector.

IV. FINDINGS AND DISCUSSION

The present research paper contains both quantitative and qualitative results regarding the readiness of AI within the Zimbabwean public sector organizations. Findings will be organized in terms of demographics, indicators of AI readiness, and training requirements, and will be supported by stories that combine the findings of surveys, interviews, and focus groups.

A. Quantitative Results

TABLE I. DEMOGRAPHIC PROFILE OF SURVEY RESPONDENTS (N = 200)

Demographic Factor	Category	Percentage (%)
Gender	Male	60
	Female	40
Age Group	18–30	25
	31–45	50
	46 and above	25
Organization Type	Ministry	40
	Local Government	35
	State Agency	25

The demographic profile shows that most respondents (60%) were male, which aligns with the gender imbalance often observed in technology-related fields in Zimbabwe. The majority (50%) were in the 31–45 age group, indicating that middle-career professionals form the largest share of participants, a group often tasked with implementing and overseeing new technologies. Ministries (40%) and local governments (35%) were the most represented organizations, highlighting the central and local government's crucial role in AI adoption. These demographics reflect a workforce positioned between youthful adaptability and experienced leadership, which may influence perceptions of AI readiness.

TABLE II. AI READINESS INDICATORS IN PUBLIC SECTOR ORGANIZATIONS

Readiness Dimension	High Readiness (%)	Moderate Readiness (%)	Low Readiness (%)
Infrastructure	70	20	10

Data Quality & Availability	55	30	15
Skills & Training	40	30	30
Leadership Support	65	25	10
Cultural Readiness	50	30	20

Quantitative findings Table 2 suggest that infrastructure (70%) and leadership support (65%) are areas of relatively high readiness. However, qualitative interviews revealed that while basic infrastructure exists, advanced AI tools and computational resources remain scarce, limiting practical application. Data quality (55%) was a moderate concern, with focus group participants citing fragmented data systems and inconsistent reporting formats. Training and skills (only 40% high readiness) emerged as one of the most critical gaps, with participants stressing a lack of AI expertise among staff. Cultural readiness (50%) was mixed: interviews revealed staff fears about job displacement and resistance to new systems. This integration of qualitative and quantitative data underscores that while leadership is supportive, the actual workforce skills and cultural alignment lag behind.

TABLE III. IDENTIFIED TRAINING NEEDS IN PUBLIC SECTOR ORGANIZATIONS

Training Area	**Percentage (%)**
AI Skills Development	30
Data Management	25
Policy & Ethics	20
Cybersecurity	15
Change Management	10

Training needs analysis shows that AI skills development (30%) and data management (25%) are the most pressing requirements. This is consistent with interview findings, where IT managers highlighted the urgent need for capacity building in machine learning and data handling. Policy and ethics (20%) also emerged strongly, reflecting concerns about AI governance, bias, and accountability in the public sector. Interestingly, cybersecurity (15%) was less emphasized quantitatively, but in focus groups, participants stressed its growing importance given the sensitivity of public sector data. Change management (10%) was least prioritized, despite qualitative evidence showing that resistance to change is a major barrier. This mismatch suggests that while employees may undervalue change management training, leaders recognize its importance for overcoming cultural resistance to AI adoption.

B. Qualitative Results

TABLE IV. THEMATIC ANALYSIS OF QUALITATIVE RESULTS (INTERVIEWS & FOCUS GROUPS)

Theme	Key Insights from Respondents	Supporting Evidence
Barriers to AI Adoption	Resistance to change, fear of job loss, and mistrust of automated systems.	"Some employees believe AI will replace their jobs, so they are reluctant to engage."
Data Challenges	Fragmented data systems, lack of standardized formats, and poor data governance.	"We have data, but it is scattered and inconsistent, making it hard to build models."
Leadership Support	Leaders recognize AI's importance and encourage innovation, but investment is limited.	"Our director pushes for AI projects, but funding remains a challenge."
Training & Skills Gaps	Limited technical expertise in AI, with high demand for training in data analytics and ML.	"We need more training — most of us have never worked with AI tools before."
Opportunities	AI seen as improving service delivery, efficiency, and policy planning if properly supported.	"If we adopt AI, services like health and education can reach more people efficiently."

According to the triangulated results, the background of simple infrastructural set-ups and readiness is reflected by the Zimbabwean public sector organizations, but their willingness is undermined by the incompetence in the data management, low skills, and culture. The quantitative survey confirms the fact of physical gaps, in the form of inadequate developed infrastructure and drastic lack of training, and the qualitative interview opens another side of human specificity of fears of losing work, mistrust of AI, a lack of real skills. The fact that these issues are at the stage of policies can be explained by examining the documents in which the ambitious strategies are considered but they are not funded and implemented. This totality may be seen as AI preparedness being at ground level and vulnerable level but has to be addressed collectively in infrastructural, training, governance and cultural adjustment, in the perspective of stepping onto the aspiration and productive exercise.

V. DISCUSSION

The case of AI preparedness in the institutions of the state sector in Zimbabwe is a complex one as can be seen by the results of the research. Quantitative data demonstrate that the preparedness in infrastructure (70%), as well as leadership support (65%), are high, however, the qualitative data indicate that there are significant limitations. Although the basic infrastructure is available, there are feasible challenges related to the implementation because of the inaccessibility of advanced AI and computational tools and resources. The quality of the data (55) is moderate preparation with the negative aspects of fragmented systems and inconsistency, which predetermines the unified data governance as an essential requirement. It is also interesting that the lack of skills and training (40 percent) is a key weakness; the majority of the respondents frequently mentioned the absence of awareness about AI technologies

and explained that it is a high time to consider particular capacity-building measures. The qualitative feedback will reveal that there are strong concerns regarding the risk of losing the job and resistance to change, which are the primary symptoms of cultural resistance at 50%. This kind of cultural inclination to be cynical of AI can be a pain in the neck to the potential benefits that it can bring in the form of enhancing service provision and overall business efficiency. Although leadership is appreciating the usefulness of AI, the difference between the rhetoric support and the resources is quite large which means that it raises the alarming issue of insufficiency of strategic resources to convert the vision into practice. The triangulation of evidence demonstrates a very impressive tendency: despite the prior organization of the AI adoption, the problems of data management, professional skills, and cultural orientations do not allow the formation. These issues should be addressed as a whole. Infrastructure and capacity building and a friendly culture will assist the public sector organizations to transition the aspiration to the practical uses of AI technologies. As the Zimbabwean population segment manages to overcome all these multifaceted problems, there is a need to take a more harmonious manner of connecting the resources, training, and cultural transformation, which will facilitate the achievement of the transformational potential of AI in providing the services of the state.

A. Implications

One can single out several practical uses of the measures aimed to identify the AI preparedness in the Zimbabwean public sector business ventures. These insights can be utilized by organizations intending to integrate AI technologies in their strategic operations, policies and implementation to succeed. The initial factor is supposed to be an organization with regard to investing in the state of the art technology infrastructure that will facilitate the use of AI. It involves the process of buying the necessary software programs, renovating the hardware systems, and stabilizing the data management systems [47]. The organizations should be able to find the particular infrastructure needs as well and invest in them as part of a strategic plan. The quality of the data production presents the need to improve the data governance systems. The organizations should be able to guarantee the accuracy, convenience, and structure of data to aid in installing and training AI. It is required by the data management rules that minimize the incidences of data silos by making the data collection processes standard and interoperable across the departments [48]. The identified skills gap should be resolved to ensure that AI adoption is successful. The training initiatives should focus on the data management and the change management, as well as the powers of AI. Together with educational organizations and training, it is possible that the organizations will be able to establish workshops and certification programs to enhance the level of knowledge of the staff regarding AI technologies [49]. The attitude towards support which is shown by the leadership is positive and reflects the relevance of the engaged leadership in supporting the innovativeness culture. The leaders ought to be active in communicating the benefits of AI and involve the members of staff in the transition [50].

The cultural preparedness is also not a success with the introduction of AI. The companies too should strive to ensure that the environment of experimentation, collective efforts and flexibility to new technology is possible. The AI concepts and resolutions may be tested by the employees on the projects that may encourage innovative thinking, such as on hackathons or innovation laboratories [51]. The AI preparedness measurements should be reviewed on a regular basis so that the progress could be traced and emerging challenges identified. In order to maintain the ongoing assessment of the AI projects and to design the key performance indicators (KPIs) of the AI preparedness, the organizations are urged to incorporate the procedure of the assessment of the AI projects in the continuous assessment and make frequent assessment to be able to make the strategic adjustments and decisions. The pragmatic suggestions of the AI preparedness measures have the potential to travel far in ensuring that the governmental organizations in Zimbabwe adopt and make use of AI technologies. By focusing on infrastructure, data quality, training, leadership engagement, cultural readiness, and ongoing monitoring, organizations can create a favorable environment to make the most out of the potential that AI has to offer to result in better services and operational efficiency.

B. Limitations

Although this study yields informative data, several limitations can affect the findings because it is based on the preparedness of AI in the Zimbabwean enterprises of the public sector [52]. The sample that was used in this study might be too small and this might limit the level to which the results can be generalized. The findings would not be reflective of the larger picture in case the sample is not representative enough regarding the diversity of the entities of the public sector of other types and locations. Smaller or more homogenous samples are open to biasing and do not represent the whole population of the public sector. This is due to the fact that self-recorded information of interviews and surveys are subject to biases because individuals may give an answer that is more acceptable in the society than what they think. It can result in an inadequate reporting of the challenges and the issues in which the organizations present, as well as in the overstatement of the level of AI preparedness. Since AI technologies turn out to evolve rapidly, the received outcomes may become obsolete as soon as some other tools and methods are developed [53]. The study findings are not so long-term implementable as an organization may be forced to constantly scrutinize their readiness and adjust to new technology.

The study might not be able to reflect the particular cultural and contextual dynamics such as government stability, economic conditions and social opinion of technology that affect the AI preparedness in Zimbabwe. These are some areas that might not be addressed sufficiently within the research but they might have massive implications in the AI implementation programs. The study is also mainly related to how individuals will see the AI preparedness, and not the effects of actual deployment. Important as the perceptions were, it could not be a matter of full reflection of the efficacy or effectiveness of the AI projects when they are implemented. The piece of work represents one point in time preparedness of AI and might not necessarily take into account the possible future advancement of the organizational priorities, technological evolution, or legislations [54]. The constraint decreases the chances of researching trends or trend in AI preparedness in organizations of the public sector. Being conscious of these limitations is the only way to obtain correct interpretation of the results and comprehension of the context within which they were obtained. To overcome these weaknesses, the

comparison of prospective data must involve the use of mixed data sources, larger and more varied samples, and longitudinal studies in order to document the evolving position of AI preparedness in the ranks of the public sector institutions.

C. Recommendation and Future Research.

The outcomes of the study indicate that there are various spheres that require to be investigated further. Research also needs to be undertaken in the long run in order to monitor the alterations in the preparedness of AI and the effects of the applied strategies on the performance of organizations [55]. In particular, to unveil unique opportunities and challenges, it is advisable to investigate the problem of AI readiness in particular industries, such as healthcare, education, and transport [56]. The actual outcomes of AI applications in the public sector organizations would have to be considered to estimate the efficacy and the return on investment [57]. Furthermore, one should give slightly more attention to the contextual and cultural contexts affecting AI adoption, specifically, the impact of the local attitudes to technology and its impact on preparedness. An examination of the importance of government policies in aiding or hindering the integration of AI within the government sector can somewhat provide us with an impression of the structures that can be adopted to facilitate the acquisition of AI.

VI. Conclusion

This study was an evaluation of the level of AI preparedness in the Zimbabwean state bodies and certain interesting conclusions can be made. Although the level of technology infrastructure is high, the majority of firms lack the advanced technology to launch AI successfully. It has proved to be a challenge to a large portion of the companies because of the issues of data accessibility and data quality which are essential in training AI models. The skills gap is one of the most important issues that require the development of certain educational programs because many employees lack the knowledge in the area of AI and data management. The majority of the respondents mentioned that the leadership made a positive atmosphere to enable innovation by being highly supportive in AI projects. Application of AI is a problem to the organizations because organizations have to address the employee anxieties on how AI can affect their employment and their job security as depicted through varying views of cultural preparedness. The results are worth mentioning because it is a thorough analysis of the level of AI readiness of the public sector with its advantages and disadvantages. One has to address these issues in order to deploy AI technologies to improve the efficiency of operations and service delivery to the society.

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