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Towards Achieving Electronic Human Resource Management: Challenges Facing Public Enterprises in Adopting Technology

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ABSTRACT

This study examined the challenges that are faced by South African public enterprises in implementing digitalization in the Human Resource Management (HRM) department. A qualitative research approach was used with data obtained using structured interviews from a public enterprise, and Human Resource Practitioners were used to conduct interviews in this study. Purposive non-probability sampling was applied in engaging 15 participants in a public corporation and data was analyzed using thematic analysis. The study revealed that HRM departments do not entirely make use of technology in their operations. The inability to use technology is due to a lack of in-house digital training, and the organization's inability to quickly swiftly respond to environmental changes due to bureaucratic structure. It was therefore recommended that public entities embark on extensive employee digital training and implementation of effective internal digital systems for organizational effectiveness.

INTRODUCTION

Coupled with globalization and demographic changes, digital technologies have radically altered the way we live, work, conduct business, and communicate (Thite 2022). In response to external environmental changes and demands, the Human Resource function has slowly but steadily evolved from labor welfare to personnel administration to strategic HR and now to digital or smart HR (Bondarouk, Ruel, and Parry 2017). However, digital implementation in public corporations is very slow leading to inefficiencies which is a concern as these entities have the mandate to support economic development. According to OECD (2017), gas and electricity, telecoms, transportation, and other utility sectors account for 51% of all SOEs with finance being the largest individual sector, accounting for 26% of SOEs by value. These entities' assets were valued at \$13 trillion in the year 2000 and ballooned to \$45 trillion in 2018, accounting for about half of the global GDP (International Monetary Fund, 2020).

SOEs are therefore vital entities seen as custodians, saviors, and protectors of the welfare of the state and means of delivering services to the masses (Ngubane, 2017).

Despite the popularity that these entities have, mainly from politicians, SOEs, particularly in African countries deteriorated into havens of nepotism, corruption, favoritism, backwardness, and centers of unemployment (World Bank, 2014). State-owned companies over the years have been susceptible to, among other pitfalls, inefficiency, creation of monopolies, siphoning of public funds, political interference, and public sector dominance in the economy (Chilunjika & Mutizwa, 2019; Lin, Lu, Zhang, & Zheng, 2020). The importance of state-owned enterprises and their role and rate of adopting technology is debatable. On one hand, SOEs are seen as drivers of innovation and innovative policies, given their capacity to stretch beyond the objective of profit maximization and maximization of social welfare. Due to their sheer size, SOEs are bound to enjoy economies of scale

that smaller private companies are not well resourced to achieve (Tonurist & Karo, 2016). It is logical to see SOEs as having the impetus to become centers of technological innovation given their dominance in certain industries with little or no competition and a large base of customers. To increase profit margins, many firms have explored different types or ways to innovate (Chen, 2017). Technical innovation is related to the primary work activity of an organization, producing changes in its operating systems (Damanpour and Aravind, 2012).

SOEs are under increasing pressure to adopt new technologies. This pressure is coming from a variety of sources, including shareholders, customers, and governments. State-owned companies are forced to adapt due to external pressures from macroeconomic shifts in global foreign trade policies, global workforce rebalancing, supply chain disruptions from environmental disasters, and staff reductions (Wang, 2010). Most recently, the Covid-19 pandemic forced many companies to adopt technologies that could enable staff to work from home. Despite this perpetual pressure, SOEs often face challenges when it comes to adopting new technologies. These constraints can be categorized into operational issues, technical issues, human issues, and financial issues (Magutu, & Lelei, 2010). Similarly, Sun, and Medaglia, (2019) grouped these into social challenges; economic challenges; ethical challenges; political, legal, and policy-related challenges; organizational and managerial challenges; and data challenges. Knowledge of the factors inhibiting the adoption of technology by SOEs is pivotal in mapping a road map for these entities to be transformed into centers of innovativeness and technological advancement.

Employees in state-owned companies can become resistant to change, as they are used to the current way of doing things. This resistance can make it difficult to implement new technologies. In many cases, state-owned companies are resistant to change because they are reluctant to embrace new technologies that may be disruptive to their existing business models. Resistance to change can manifest in several forms that can be covert (passive resistance) or overt (active resistance). Magutu and Lelei (2010), cited a lack of technological expertise, inadequate staffing, skills shortages, lack of leadership, lack of training, and resistance to change

as some of the human-related challenges in adopting new technology. Resistance to change has been identified as one of the contributors that cause organizations to fail to implement change (Kotter and Cohen, 2002). In a study conducted by Sun and Medaglia, (2019), on the challenges of SOEs in adopting artificial intelligence (AI) technology, it was discovered that the adoption process was hampered by human resource (HR) level factors. These include the shortage of skilled personnel and the purported threats of the possible replacement of the labor force by AI technology and resistance to data sharing. There were also reports of skills shortages within SOEs (Magutu & Lelei, 2010; Sun & Medaglia, 2019). The challenge of skills shortage in SOEs can be considered artificial, given that management and employees are appointed on political merit. According to Ngubani (2017), effective communication can be used as a tool or an enabler of managing change, in this instance, involving technological adoption by SOEs.

Magutu and Lelei (2010) in their study of the challenges of the adoption of information systems in SOEs discovered that some technical factors affect SOEs during the process of adopting the technology. SOEs in some instances have no suitable structures for the new technology, absence of IT and other technology standards, poor information systems, challenges in Data conversion, and incompatible systems. SOEs may also experience technological compatibility issues which refer to the ability of technological systems to communicate, interact, and share data across networks and between software (Lekara, 2019). The existing policies, systems, contracts, standardization, and personnel issues should be designed in a way that is compatible with the technological systems that an organization desires to adopt. This compatibility should be addressed and factored in early on in the planning process. Given that SOEs are not profit-driven (Chilunjika & Mutizwa, 2019), this may act as a disincentive for these entities to promote the adoption of new technologies.

Many SOEs, specifically in developing countries are known for their loss-making tendencies and for burdening the taxpayer (Chilunjika & Mutizwa, 2019; Bowman, 2020). This inability of some SOEs to self-sustain financially poses a risk to the ability of these

entities to adopt new technology. SOEs experience challenges associated with corruptive practices such as fraud, embezzlement, bribery, and extortion, which result in the funneling, diversion, and misappropriation of funds otherwise intended for re-investment into the business. It is established that when management in SOEs is perceived to be corrupt this will make it difficult for these entities to become fully transparent and financially accountable to the public (Wadesango, Nhubu, & Satande, 2021). According to the IMF (2022), SOEs fail to perform efficiently in the process of delivering to their public reflecting that the government's policy mandates often lack appropriate funding and transparency. This translated directly or indirectly into, government budgets and balance sheets deficits. Financial struggles experienced by SOEs have far-reaching consequences on the ability of these government entities to keep themselves up to date with technological developments in their respective industries.

The performance and strategic planning of SOEs are strongly influenced by the government and in countries where there is political instability, the continuity of these entities is negatively impacted. Ogohi (2014) noted that whenever there is a change in government, this unexpectedly affects the performance and operations of SOEs as some governments may focus primarily on policies that will enhance the survival of their political parties. For many SOEs, the government has full ownership, therefore has complete oversight of their operations, and can intervene at any time to preserve either the survival of the regime or public interests. This external influence, unfortunately, affects SOEs negatively, more so regarding strategic decisions such as rolling out new technologies (Dimgba, 2011).

In many countries, SOEs are often managed, at times remotely by party leaders, ministers, and politically connected individuals who pose a huge risk to the survival of the company due to their influence and position (Bajpai & Myers, 2020). In addition, there is a lack of transparency in the process of assessing, shortlisting, and selecting candidates through independent institutions, exposing the SOEs to politicized outcomes. When these entities, have priorities, such as adopting new technology, this may not materialize, for example,

when politicians want certain services to be provided to their voters for free during times of elections. Bajpai & Myers, (2020) further advanced that the board of directors for SOEs constitutes individuals that are politically connected and have little or no obligation to execute the director's duty of care. The adoption of new technology in SOEs may not occur if it does not yield short-term benefits to the politically connected elites.

Adoption of new technology is also difficult for sectors that deal with rapidly changing technology where such technologies are constantly and swiftly updated due to their nature, making existing technologies obsolete. These rapidly changing technologies are influenced by existing systems, timeframes, standardization, fiscal concerns, and organizational and individual technology expertise (Lekara, 2019). For SOEs, this challenge is compounded by the bureaucratic nature of decision-making, which often involves a long and dragged approval process from the government. The concept of SOEs is enshrined within the socialist ideology which seeks to annihilate the dominance of capitalism in the economy (Chilunjika & Mutizwa, 2019). A study by Dlamini, Zogli, and Muzanenhamo (2021) discovered that SOEs are mainly using manual systems which cause delays in the delivery of services. Firms that innovate can improve their performance, remain competitive, and deliver value for their stakeholders (Karabulut, 2015). Innovation is often seen as the new channel through which performance can be improved across several industries (Maghsoudi et al., 2016), including parastatals. Therefore, this study analyses the factors that hinder the implementation of technology in public enterprises, specifically, in the Human Resource Management department.

METHODS

This study was done using a qualitative research method and data was collected using structured interviews. A case study for the research was a selected South African state agency located in Pretoria. Non-probability sampling method was applied, and purposive sampling was adopted. Wagner, Kawulich, and Garner (2012) stated that with purposive sampling, the researcher relies on their own experience, previous research, and ingenuity to find the participants in such a manner

that they can be considered to be representative of the population. Fifteen Human Resource professionals were used in this study and in-depth interviews were used to gather data. The data were analyzed using thematic analysis.

RESULTS AND DISCUSSION

The researcher interviewed 15 individuals who were willing to participate in this study. The duration of each interview session was between 25 to 30 minutes. The interviews were conducted in the company premises on appointments. Substantial responses indicate the causes of the lack of technology in public enterprise. This was confirmed by the following sub-themes and responses:

Theme 1: Understaffed and Red Tape

It was revealed that the public entity does not have enough employees in the department. This seems to limit employee capability to meet deadlines and the lack of technology is contributing to employee frustration due to work overload. In addition, this may lead to employee burnout and dissatisfaction among employees in an organization. It is very possible that if the organization was using technology, it would have been able to minimize the effects of understaffing. The bureaucratic nature of public enterprises contributes heavily to the lack of technology as there are too many levels involved in the process.

A respondent noted that: We are short staffed which is a major problem, as a result, there is a lot of job overlapping which leads to personnel doing staff, not their role but I mean we are staff so we work as a team that wants to deliver, we get job overloaded and exhausted as we have to meet the deadlines and I feel there are too many red tapes around it.

Another respondent strongly explained the effects of work overload due to manual systems: I think technology is great because it reduces workload, when applications are sent they need to be captured manually which is cumbersome, but with technology, it automatically kicks out candidates who do not meet the requirement and it produces the report. Technology is very key so we need to embrace it.

This is in line with Grobler et al.'s (2012) argument that electronic HRM does not only lead to improved services and cost reduction but also to the goal of achieving organizational competitiveness.

Theme 2: Lack of Technological Commitment

Data revealed that public enterprises seem to be comfortable with the traditional ways of conducting business. This is an expected result knowing that public organizations have bureaucratic structures which have a low level of flexibility which leads to the lack of compatibility of the actual structure to the innovative strategy. This may be due to the monopolistic nature of other public entities as they do not face too much competition. Moreover, rigid policies may act as a barrier to innovation and affect citizens who rely on quality services from such companies.

A respondent noted that: I think is critical with technology moving fast nowadays we need to keep abreast with technology otherwise will remain behind and it will be a dead zone it is critical for us to keep up with the technology changes and then implement them so unfortunately is something that is not a critical matter at our space, I wish it could be taken seriously.

Another response confirmed this: We are mainly still in old age because we are applying the traditional approach in the sense that every advertised post needs to be responded to by writing a letter and attaching the certificate which becomes a huge bundle of documents and is manually and after the closing date everything needs to be captured manually into a spreadsheet which labor intensive, then is the selection panel which done manually and time-consuming.

Marler and Parry (2016) provided that in organizations where the administrative function is dominant, there is a need to build an efficient administrative infrastructure, namely tracking job requisitions, managing employee payroll, benefits programs, and employment equity compliance.

Theme 3: Fear of Digital Systems

Data revealed that employees still have a fear of moving to digitalization. This may be due to the existence of many baby boomers in public entities, who may have not yet embraced digitalization. Employees and their organizations have different views and acceptance levels of digitalization as highlighted by Shea et al, (2014) the assessment for organizational readiness to innovate or change is considered a multilevel construct capable of being conducted at an individual or organizational level. The results also show that the organization once made a little effort to bring some form of

digitalization and the effort may have been thwarted by the lack of organizational commitment to create awareness of the importance of technology to its employees.

A respondent noted that: We have an ORACLE system with function recruitment but we not using it, we tried with the IT positions but still, it went to the manual way of doing things, so I think people are scared to adopt the technology. Another respondent noted that: it is a pity because the system is there and some of the recruitment could be done in-house.

Theme 4: Lack of Employee Training

Following the above theme, it is also showing that employees do not have adequate digital training to effectively use existing forms of digitalization in the organization. There seem to be problems with resources for the effective implementation of technology. This means that the organization may be experiencing a deficiency in the provision of physical resources, human resources, and ensuring the right information and technology. Public organizations are financed from the state budget, which repeatedly faced difficulties in realizing higher levels of income, as a result of high level of informality.

A respondent below made a very strong explanation: We don't cope because we have the system but we are not familiar with it, that is why we outsource. Another respondent confirmed the need to learn new systems below: the time is now and especially coming from covid-19 we need to learn new methods of working and the easier one is communicating through technology even interviews themselves can be done virtually and fast-tracked and when now when we talk about being agile this is one of the things was agility is needed.

Thite, Kavanagh, and Johnson (2012) argued that due to technological advancements, the time for administrative tasks is decreasing, thereby allowing Human Resource professionals to deal with more complex strategic activities. This entails that the Human Resources department, through executive support, needs to rethink the way HR is organized and delivers its services to the organization.

CONCLUSION

Data revealed that the organization under study lacks the capacity to implement technology. This may be due to a lack of finance as a result of a lack

of managerial support to obtain relevant systems for organizational effectiveness. The public entity does not have enough employees in the HRM department. This seems to limit employee capability to meet deadlines and the unavailability of technology is contributing to employee frustration because of work overload. If the organization was using technology, it would have been able to minimize the effects of understaffing such as work overload. The bureaucratic structure contributes immensely to the lack of technology as there are too many levels involved in decision-making. Data revealed that public enterprises seem to be comfortable with the traditional ways of conducting business; this may be due to the monopolistic nature of other public entities as they do not face too much competition from private sector organizations. The technophobia aspect has been revealed as a source of the lack of digitalization in public enterprise. This may be due to the existence of baby boomers in many public entities. Data revealed that the entity made some effort to implement digitalization but lacks commitment to training its employees. Consequently, employees do not have adequate knowledge to effectively use existing technology in the organization to benefit the organization.

It is therefore recommended that the organization involve its stakeholders in system analysis and technology needs. This helps management to get input from stakeholders, especially employees, and suppliers of goods and services. The public entity needs to minimize bureaucracies during the implementation of technology which is a major reason for slow implementation of digital systems. Enhancement of planning and coordination of adopting new technology is necessary. This reduces levels of demotivation among stakeholders who participate in digital implementation programs. Capacity building by training the users and building the necessary technological infrastructure is of paramount importance. When users, especially employees do not know how to use new systems, it disregards the need to have technology in the organization.

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