ICT AND HRM

# ICT and HRM: Management Perceptions about the Changing Scenario

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ABSTRACT

Information and communication technology (ICT) has changed the business world work practices inclusive of human resource practices and policies. How do managers perceive the ICT impact on human resource practices is the focus of this research paper. By using qualitative research method the study focused on Textile Company of Pakistan. In-depth interview and focus group discussion with the members of organization were used as the data collection technique. On the basis of thematic analysis of the data and the literature reviewed grounded theory and model was developed that highlighted the impact of ICT on changing human resource practices and the change management process in the organization. The research demonstrated that Human Resource Department plays a major role in the functioning of the organization by coordinating the work of other departments and is working for the welfare of human resource. The changing human resource practices due to ICT are perceived as cost and time beneficent by the managers of organization and they add to the satisfaction of the workforce with their job and with their organization. The changes in work practices and adjustment of workforce with these changes was successfully implemented and ensured by the management through appropriate awareness and cooperation with the workforce. Managers believe that the enhanced impact of ICT on human resource practices will further improve the functioning of the organization.

Key words: ICT, Human Resource management, Change process.

# INTRODUCTION

Information and Communication Technology (ICT) at workplace are variously combining microelectronics, computer systems, and telecommunications, affecting not only the gathering and transmission of information, but also its use in decision making (Scott & Davis, 2007). ICT support the more rapid and accurate identification of problems and opportunities, increase the availability of relevant and timely information and, in this way, improve both the speed and quality of decision making (Huber, 1990).  The organizations of today (21st century) have database instead of spreadsheets, they have internet and intranet to connect and communicate in less time, soft wares like CAD, CAM, JIT etc have made the work of whole organization simpler and this list is not exhaustive. In fact the functioning of whole organization has been changed with the change in technology and way of doing things. Future prosperity is likely to hinge on the use of scientific and technical knowledge, the management of information and the provision of services. The future will depend more on brains than brawn (Barley, 1996).

Though the effect of ICT is obvious on the overall organization but in this research the focus will be on ICT related changes particularly associated with the Human Resource Management. HR personnel are the managers of the ultimate resource of the organization that is "human resource" the workforce. The impact of technology has enhanced the competitiveness of the HR department. "HR professionals today do not have as much one-on-one contact with employees as they once did. Today managers and employees want results and answers to their questions, not just meet and greet relationships that historically HR was known for". (Doran, 2003). In the year 2012, the organizations and their HR practices are almost changed and positively affected by ICT ranging from paperless office (Doran, 2003) (Wali, 2010), time attendance, databanks, automating work practices (Wali, 2010), Tele working (Baloh & Trkman, 2003) (Wali, 2010), transaction processing, reporting and tracking applications (Broderick & Boudreau, 1991), E-recruiting, using internet for staffing, employee development using internet (Baloh &Trkman, 2003) . This list has no end and future is towards expecting more changes making work easier and efficient.

Planning for the information and communication technology related changes at workplace includes many important decisions like taking the initiative of change or following the other successful ones in the market or else a mixture of these two. Organizations facing challenging business environments such as operating in dynamic markets often turn to successful 'others' as a source of information (Teece, Pisano & Shuen, 1997).  The use of ICT in business and Human resource management was initiated by the developed countries of the world and is being adopted throughout the world. Developing country like Pakistan is also not an exemption. Pakistani companies and businesses are opting for ICT in the Human resource practices and over all organization to improve their work efficiency but the situation here is not as

progressive as things were started late. Moreover there is problem of investment in technology due to low budgets. The biggest hindrance is the acceptability of change among the people. People are so bound and strict to the old things that they do not easily accept innovations and change but as change is essential for survival so it is being opted. Introducing and implementing ICT related changes in Human resource practices is more of a policy decision and a good time has been passes since the technological innovations in work practices, this research paper aims to have a overview of the functioning of ICT related innovations in Human resource practices and their impact on the overall organization. The organization that is selected for this research is Azgard 9, a textile company of Pakistan. The focus of the study will be more on the adjustment process of workforce with the ICT related changes in the HR practices and how the adjustment process is managed by getting a close insight of the views and perceptions of middle and line management of Azgard 9.

*Research objectives:*

- To explore important functions of Human Resource department for the organizations.
- To excavate the perceptions of management staff regarding the overall impact of changes brought by ICT in the workplace
- To develop an understanding of the change management and adjustment process of workforce with the ICT related changes in the HR practices and policies
- To come up with a grounded theory on the basis of above met objectives

LİTERATURE REVİEW:

In 21$^{st}$ century as the trends are changing so is the impact of information and communication technology enhancing at the workplace. A lot of research has been done to determine the impact of information and communication technology for the business and service organizations. Some of the studies are reviewed in this section.

(Mathur ,2009) did financial analysis of ICT industry. He attempted to quantify the technical efficiency of the ICT (Information and Communication Technology) in 52 countries. The proportions of the productivity growth attributable to efficiency and technical change due to ICT were also quantified. The study found that the productivity growth in the ICT sector in developing and newly industrialized countries is slightly lower than the growth in developed and transition countries, suggesting the catching-up of developing and newly industrialized countries. The main limitation of this study was that the data collected from all the countries was not firm level data to determine how ICT affects the firm's performance but most of the data was country level data.

(Zwick, 2003) studied the impact of ICT investment on productivity for a large and representative German establishment panel data set. Those establishments without ICT capital were also included in the data set to compare the results with those having ICT capital. The data set of his study involved information on about 14000 German Establishments. The cross sectional regression analysis of the data indicated that ICT investment substantially increases the average productivity of German establishments. The limitations of the study was that the corresponding size of the ICT investment was not known, the only thing known was whether or not an establishment invested in ICT.

(Zafar, 2009), studied the e.HRM practices in State Bank of Pakistan. The purpose of his study was to determine at which level IT related changes are being adopted in the HR department and how they are contributing to the professional competence of HR department in Pakistan with focus on State Bank of Pakistan. The study identified that e.HRM practices are not yet fully visible in Pakistan; things will take time to improve. It was also found that employees are happy with technological changes in HRM as it is making their work easier. The major limitation of this study was that the researcher kept his more focus on already available literature which did not provide any evidence from Pakistan. No face to face interactions with the respondents took place that again limits the worth of the findings.

(Saleem, Qureshi, Mustafa, Anwer, Hijazi, 2011), study attempted to measure Impact of (ICT) on Organizational Productivity (Efficiency and Effectiveness); which leads to Organization Performance (ΔCost, ΔTime, and ΔQuality) using IRA (ICT role and adoption model).  Barriers in ICT Adoption and impact of IT Literate human capital on organizational productivity were also explored. The target population included computer professionals, administrative staff and faculty members of Higher Education Institutes from various geographic locations of Pakistan, including Islamabad, Lahore, Rawalpindi, Peshawar, and Multan, DG Khan and Faisalabad and some other cities. The study found significant relation of ICT adoption on the effectiveness; nonetheless ICT adoption is insignificant on efficiency; however the relationship between the two is positive. The barriers to adoption were found to be less evident. The study has some limitations too which include the sample is just from those members who were IT literate not from other areas. The quantitative analysis was just based on correlation analysis.

The present study focuses on bridging the gap in the reviewed literature. The study is at organizational level by focusing on one textile sector organization, Azgard 9 ltd Pakistan.

<div align="center">RESEARCH METHODS:</div>

The study aimed to dig out the Management perceptions about the changing scenario brought about by the influence of ICT on Human Resource practices keeping in view this fact the research method chosen was Qualitative research. The population of the study included all

the mangers working at middle and line management positions in textile companies of Pakistan and having an experience of not less than 3 years in the company. Purposive sampling was used for the research. The sampling technique was decided on the basis of research questions, objectives and convenience.  The managers who were working in Azgard9 (textile mill of Pakistan) for more than 3 years and who could provide the right view of the research queries were selected. Two major data collection techniques were used for this research that includes in-depth interviewing and focus group discussion. In-depth interviews of about an hour duration were conducted from total of 5 managers. Interviews were recorded with the due permission of the managers and were conducted in the light of an interview guide having open ended questions. Out of 5 in-depth interviews three were from managers of Human Resource Department as the study is more linked with the changing Human Resource practices. The other two in-depth interviews were conducted with the Factory Manager and Supply Chain Manager, they were selected as part of the sample as they were in more close interaction with the labour and staff who are actually affected by the changes brought about in the system. They were selected to dig out how Human resource practices and the changes in them affected the employees and their work behaviour.

For the focus group discussion, line managers from production and supply chain process were selected who were filling the defined criteria. Total of 6 managers were selected and invited for the discussion to understand how changing human resource practices affected them and how they managed the change. It took almost one and half hour to complete the discussion. A discussion guide was previously designed to cover all the major aspects during the discussion.

After the data collection organizing the data is the first stage of data analysis. The data from the in-depth interviews and focus group discussion was transcribed making use of the recordings and the field notes. Transcriptions were read and reread to extract meaning out of them. Categories and themes were generated based on the evident patterns in the data. Internally convergent categories and themes were identified. Themes were streamlined with the objectives of the study.  This was more like a stage of data reduction as totally divergent views and irrelevant data was ignored.

Major categories identified under a theme were given a title (code) that gave the overview of the related data and helped in the interpretation stage.  All the data organized and reduced after coding was reviewed again and again to make sense out of it and develop linkages. The data was interpreted to reach at the conclusion.

## DATA ANALYSIS:

Data was analyzed in the light of defined themes that were previously aligned with the objectives of the study.

*Importance of HR department for organization:*

One of the objectives of study was to determine the importance of HR department for the organization and important functions it plays for the organization. The analysis of the data implied that HR staff plays the role of coordinating agents in the organization. They are the members of organization who are in direct interaction with the employees and other department's staff.  *"HR department is not working solely in fact this is the department that remains in interaction with the complete work force and all the departments more than any other department".*  The views of manager's from other departments supported this idea and role of HR staff as coordinators.

*"The basic role of HR department is to coordinate. We (HR staff) arrange meetings of the heads of all departments help them in solving their issues regarding human resource and train and teach them to effectively work for the goals and objectives of the organization by deciding on the mutual strategies. As, if the departments will not work in coordination it would not be possible to come up with an effective outcome that is the final product of export quality".*

The data collected enlightened that HR staff works more like employee counsellors. They are the ones who work for making employees perform well by solving their issues. HR staff considers the individual worth of an employee and accepts the employee as a complete individual entering the organization and becoming part of the work family not just 9 to 5 worker.

*"HR personnel are more like psychologist for the workforce so they can positively affect the performance of the employees which is very important. They try to solve the psychological issues of the employees. If a certain person is having problems with his her job and his supervisor is not listening to it, he/she will go to HR staff to have their problems and issues resolved or at least get a solution for that".*

The data from the interviews and focus group discussion showed that HR staff keeps interaction with the employees and keeps an eye on their performance and behaviour related issues and help employees resolve those issues that are becoming hurdles in their efficient performance.

*"HR department maintains the human side of the organization to help it work effectively and efficiently".*
There was clear evidence that employee's issues are resolved by HR staff and they are treated like member of the family by the HR staff to make the journey of individual as well as organization successful. *"HR staff works as counsellors in the organization by keeping all the employees on a track to achieve the organizational goals and not indulge in prioritizing their personal goals over the organizational goals".*

The data gave the impression that HR department also works as a welfare department for the workforce. HR staff keeps an eye on the internal issues related to employees and their rights. HR staff makes sure that all the employees are enjoying the basic benefits they deserve according to the requirements of country's Labour Law. HR is implemented to look into the benefits of the labor doing work, how they are being treated whether they are treated fairly or not, what are their welfare issues, what their working hours are and what is there over time schedule. It appeared out of the data that if there would not be any HR department and production would have been handling all the stuff, things could not be managed in the way they are being done.

HR department is basically a service department and *it works to facilitate the "Human Resource". For company where major production is exported and international buyers keep an eye on the company and make sure that they are following basic rules and regulation regarding labour which are all implemented and handled by HR department.* HR staff plays a role in motivating employees as well as giving organization satisfied workforce who ultimately contribute in overall well being of the organization.

 *Perceived impact of ICT related changes in the HR practices:*

The data collected elaborated how the HR practices and functions have been changed due to the impact of information and communication technology (ICT) at workplace. The data implied that management staff perceives the change in HR practices due to the impact of ICT as time efficient. The key concern of the managerial staff is time management. Managers have to perform a number of tasks in unlimited time. The respondent's views suggested that HR staff has to manage all the data related to employees and their entire service record, and that data is not only important for the HR staff but also for the managerial staff of other departments in the organization. It appeared that due to the impact of ICT at workplace now HR department has no need to maintain and update manual employee and their service records. Information and communication technology has changed the way things were previously done as now HR staff has automated employee data banks, automated attendance record, performance record of employees and all the relevant workforce data available at immediate access which has not only made the resource management easier but at the same time now company's audit is no more panic for the HR department. HR staff looks forward to put in effort at a more optimal level for the organization than just involving in manual record keeping like activities and this has become possible because of the impact of ICT.

In light of the respondents views there is strong evidence  that  *all the changes (due to ICT) are not only time efficient but also cost efficient. It is about one time investment and then proper use of it can bring profits and proficient work practices. Investing in data automation and ERP at organizational level helps in keeping and updating the record of all employees, production and*

*related activities. The work of all departments is coordinated and shared to put all the efforts in achieving the goals of the overall organization and not the departments or individuals.*

The changes in the HR practices brought about by the impact of ICT added to the satisfaction and motivation of the workforce. Management's views support this notion that due to immediate access to employee data, their performance evaluation and wage plan on the basis of that data and a close and just check on the employee contribution to the organization have affected the employee attitudes positively, they are more satisfied and motivated than they were before the impact of ICT which is beneficial for the organization as a whole. *Employees are satisfied with this system as they get a record of how many hours they work, how many times they have done over time and what is their production contribution so that they will give their best to follow all the rules to get better appreciation from their supervisor. Finally enjoying wages they have put effort for.*

*ICT related changes in the work practices were not just because everyone else is doing so around us but there was rationale in this vast level investment.* That rationale was serving not only the organization but at the same time benefitting the individuals (employees) of the organization who are more satisfied with the work processes.

*Change management and adjustment process of workforce with the ICT related changes in the HR practices:*

The point of concern was that when the changes in work practices were brought about at workplace how they affected the individual and group behaviour and how employee reacted to these changes and most of all how management managed this change process and made it implement successfully. Respondent's views highlighted that external and internal factors affecting change and its outcome do have influence on the overall change management and adjustment to change process.

It is quite obvious that whenever there is any decision about the change in work practices or a change is brought about at work place, the implementation is not that trouble-free. The data implied that middle and line management normaly feel like change decisions are imposed on them. As one of the respondents expressed; "*to be very honest, if you ask about upper management they really do not care about the thing that whether those affected by the change are comfortable with or are aware of its reasons and circumstances. They are those who just make the decision and implement that, it is not their headache to deal with how that change is managed at lower level.*"

One interesting fact that appeared out of the data was that the type of change affects the overall change management process. It matters that how the change is going to affect the work force and their work practices. In the particular case of ICT related changes in the Human

resource practices, the change was not directly affecting the way jobs were performed. *If we talk about just ICT related changes in Human resource practices so there is just the involvement of technology in the previously done processes. There isn't anything like, some one's rights are affected or their benefits are reduced.* On the other hand if the changing work practices completely change the way jobs are performed and things are carried out then managing change process becomes even more difficult. Employment status that include the position of the employee in the organization and the time he/she has spent in the organization do influence the way change will be managed and how people will react to that change.

The data from interviews and transcriptions implied that mostly labour force does not resist to changes in the work practices and convincing them is also easier. As they are the people who are illiterate and when made to understand they accept things easily. The years of employment also matter, mostly young generation easily accept and adapt to the changes while those working since years feel reluctant to follow the new rules and obligation that makes the change process difficult to manage.
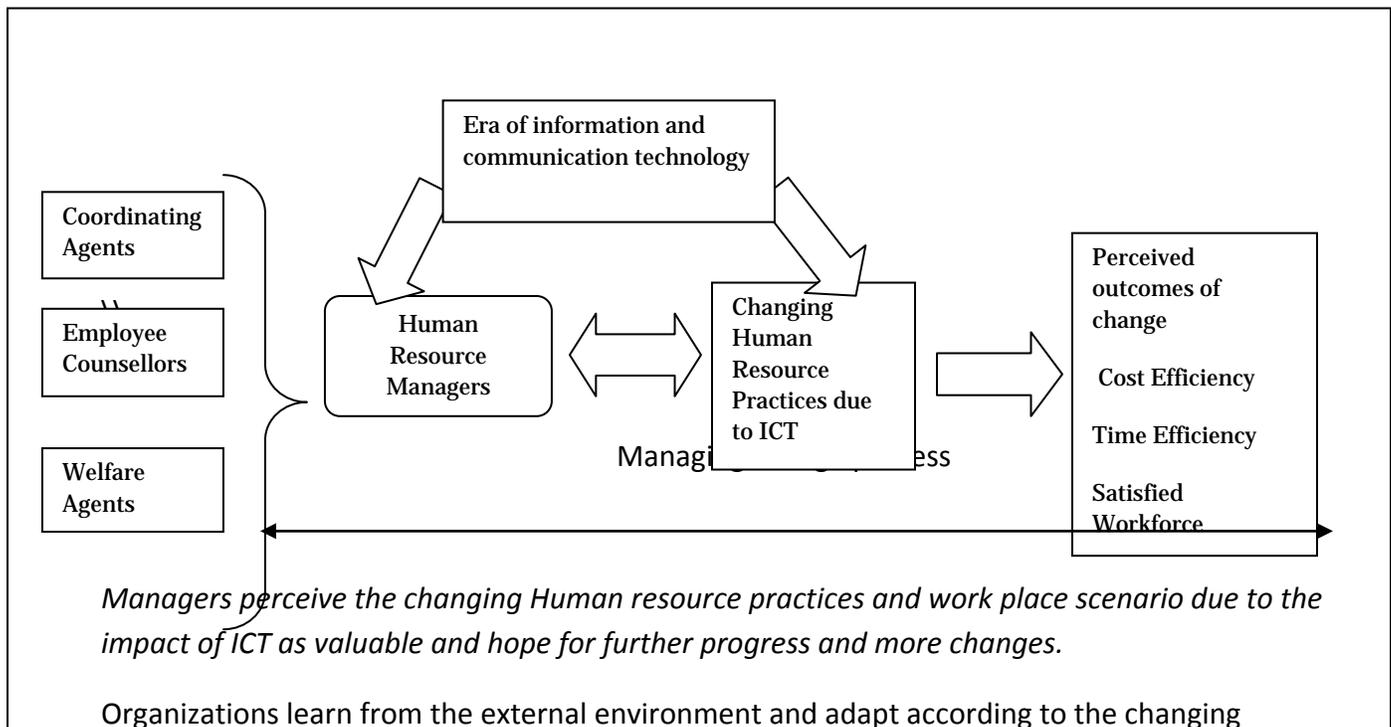
External environment conditions have a marked affect on the change management and the adjustment to change process. Industry and labour market conditions have most evident say in the change process at workplace. If the labour market is to wide and industry conditions are not too good then employees accept the change decisions easily as they know that there are very few employment opportunities available and with that textile industry conditions in Pakistan are not very good.  So *"Agar ap nakhry krn ge to you will be kicked out from the organization".*

Employee-Management cooperation makes the change management process an easy endeavour. Employees normally resist to the changes at workplace due to the fear of unknown. By making workforce comfortable with the changes and let them learn to use and adapt to the changes management can play a valuable role. The views of the respondents emphasized that reasons and logic behind change should be clearly communicated among the employees.

Depending on the overall change management process it appeared that the managing change process is not like choosing among the two extremes that is forces implementation of change that is about imposing the changes or either at the other extreme that is employee-management cooperation. The process seems more suitable if it is observed on a continuum where at one extreme is forced implementation and at the other is management-employee cooperation.  Some things need to be enforced in order to keep a check and with that listening to employee problems, making them comfortable with the change and becoming the part of change process turns it to an overall accomplishment for the organization and helps in achieving the benefits planned.

The study can be elaborated by the following model developed hereby

Figure1. Model



| Era of information and communication technology |
| Coordinating Agents |
| Employee Counsellors |
| Welfare Agents |
| Human Resource Managers |
| Changing Human Resource Practices due to ICT |

Managing the process

| Perceived outcomes of change |
|  Cost Efficiency |
| Time Efficiency |
| Satisfied Workforce |

*Managers perceive the changing Human resource practices and work place scenario due to the impact of ICT as valuable and hope for further progress and more changes.*

Organizations learn from the external environment and adapt according to the changing scenarios. With the increasing impact of information and communication technology around the world Human Resource practices are being influenced and changed and these changes are perceived as cost and time efficient as well as improve the satisfaction of workforce.  It depends on management how they manage the change process taking place in the work place and successful implementation is owed to the effective role played by the management.

Discussion:

The study found that management perceived the impact of ICT on human resource practices as positive.  The findings of the study were found consistent with the previous studies. It was unveiled that due to the impact of ICT the changes that were brought about in the human resource practices were time and cost efficient changes that were supported by the study of (Saleem, Qureshi, Mustafa, Anwer, Hijazi, 2011). Management believed that the impact of ICT has made the availability of information timely and accurate that makes decision making quicker and wastage of time is minimum as found by the study of (Huber, 1990).

Most of the studies were based on the financial impact of the ICT on the business practices, in depth exploration of management perceptions about change and through focus

group discussion was not found in literature reviewed. While the focus of this study was not on financial values but on how management perceive the change process and how they understood the need and requirement of this change.

Managers expressed the opinion that the developing country like Pakistan is still far behind in the adoption of ICT in the HRM practices and still lot more needs to be changed as world has progressed a way ahead, these opinions were supported by the study conducted in the State Bank of Pakistan. (Zafar, 2009). Respondents threw light on the fact that as the world is progressing and importance of IT and technological innovations is increasing for the business organizations so almost all the organizations are opting for these kind of changes in work practices. It was also highlighted that textile industry of Pakistan is suffering due to energy crisis in the country which is one of the reason of less impact of ICT related changes in the work practices.

The study found that how Human Resource practices have been changed keeping in view the bang of ICT in this technological era. Now the work of Human Resource managers was not limited to operational activities and manual file keeping but they can make more rapid and quick decision and work for the welfare of the employees of the organization and these findings were same as that of the study of (Doran, 2003).

While elaborating the process of changing Human Resource practices due to information and communication technology managers expressed that the need for change and adopting the change in work practices is always a rationale based decision by the organization and management. Though every profitable and successful company around may be opting ICT in their work and HR practices but it is not about mimetic influence. Organizations do learn from their environment and successful others in the environment (Teece, Pisano & Shuen, 1997) but final decision and implementation is after keeping in view the resources and requirements of the organization. The study identified that though adopting ICT related changes in human resource practices proved to be an advantage for the organization but it was not competitive advantage as it was not what only they were doing, this was something interesting dug out by this study while the literature findings did not highlight this aspect.

The study revealed the change management process pertaining to the case of ICT related changes in the Human Resource practices and it was found that due to changing HR practices employees did not show evident resistance or reluctance in adopting the changes that was supported by the literature (Saleem, Qureshi, Mustafa, Anwer, Hijazi, 2011). All it depended on how the change was managed by the management and how they played their role in making workforce comfortable with the changes at workplace. This aspect was also not highlighted by the previous studies.

Conclusions:

The analysis of the data demonstrated that managers perceive the overall impact of ICT on human resource practices as positive and it is benefitting not only the functioning of Human Resource department but of the overall organization. The study explained the process and effect of change from a different perspective and by doing so this study bridged the gap in the previous research. The way mangers perceive and understand the change brought about by the impact of information and communication technology is very important as ultimate success of an organization is not just about financial values but also how quickly the organizations understand the need of change and adapt to the changes.

The analysis done for this study demonstrated that with the changing trends of work and increasing impact of information and communication technology it has become unavoidable for the organizations to opt for ICT in their work practices. The study identified the Human Resource practices that are changed due to the impact of ICT in Azgard9. Previously HR staff was mostly used in manual file keeping and data entry activities as it used to take a lot of time but due to ICT human resource practices have been changed and these changes were found to be cost and time efficient by the study more over it was found that due to changes the employees were more satisfied. Significance of management's cooperation and their role played in the change management process was highlighted. It all depends on type of change and how that change is going to affect the employees at workplace that decides the implementation process and its complexities. By delineating the rationale of change and helping the workforce tackle with the change, can help making the change management process a success.

Recommendations:

The data for this study was collected from a single textile company of Pakistan the findings can be more generalize able if sample was more wide or by doing comparison with any multi-national to determine the difference in the changed human resource practices due to ICT as this will help in determining the other factors affecting the decision of adopting information and communication technology related changes.

More over this study was focused on demonstrating the perception of Managers about the changing scenario. Future studies can contribute in exploring this area by having an in-depth view of the labour and lower staff perception that how they understand the overall process of change and the impact of change on their work.

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