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**INFLUENCE OF HYBRID WORKING ARRANGEMENTS ON EMPLOYEE
PRODUCTIVITY IN THE COMMUNICATIONS AUTHORITY OF KENYA**

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123889



**A MASTERS DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS FOR THE DEGREE OF MASTER IN PUBLIC POLICY
AND MANAGEMENT AT STRATHMORE UNIVERSITY**

STRATHMORE SCHOOL OF BUSINESS

STRATHMORE UNIVERSITY

NAIROBI, KENYA

JULY 2023

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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ABSTRACT

Hybrid working arrangements, which combine physical and remote work, have become more prevalent in the global economy and during the Covid-19 pandemic. However, the effects of these arrangements on employee productivity could be clearer. This study examined how hybrid working arrangements influenced employees' productivity in the Communications Authority of Kenya (CA), a public entity regulating the communications sector. The study focused on four factors: human resource planning, ICT adoption, work-life balance, and work design. The study adopted a positivist research philosophy and utilized the descriptive and correlative research design. It used stratified sampling technique to select 153 respondents from a population of 248 CA employees across 20 departments. The data were collected through online and offline questionnaires and analysed using correlation and multiple regression analysis at a 0.05 significance level. The results strongly suggested that all four factors had positive and significant relationships with employee productivity. The study concluded that hybrid working arrangements could enhance employee productivity if supported by effective human resource planning, ICT adoption, work-life balance, and work design. The study recommended that CA develops and documents clear guidelines and standard operating procedures for hybrid working arrangements, adopts ICT in managing employees and workflow, observes appropriate deployment and working shifts, and adopts flexible work designs. The study was limited by its focus on one entity with advanced systems and its use of quantitative analysis only. Further research can be done on larger public corporations using qualitative methods to explore the underlying reasons for the findings.

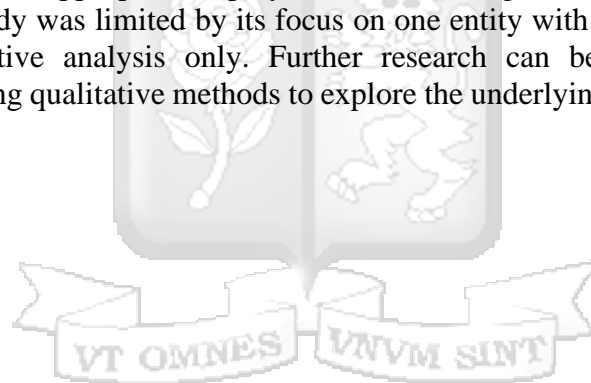


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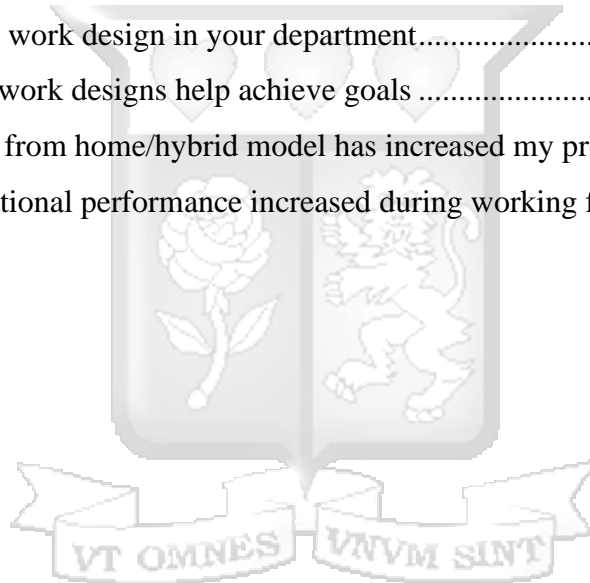
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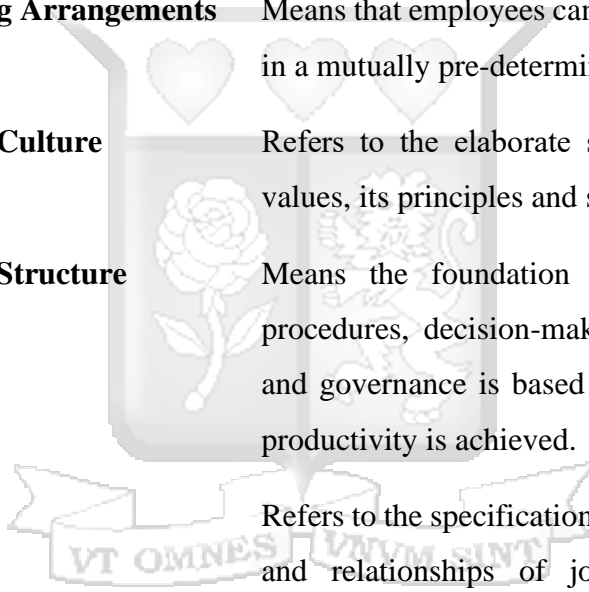
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LIST OF ACRONYMS AND ABBREVIATIONS

BI	Behavioral Intention
COVID-19	Coronavirus Disease 2019
HRM	Human Resource Management
HRP	Human Resources Planning
HWM	Hybrid work model
ICT	Information and Communication Technology
JCM	Job Characteristics Model
NACOSTI	National Commission for Science, Technology, and Innovation
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
RoBERTa	Robustly Optimized BERT
SCAC	State Corporations Advisory Committee
SPSS	Statistical Package for Social Scientist
TAM	Technology Acceptance Model
WFH	Working From Home
WLB	Work-Life Balance

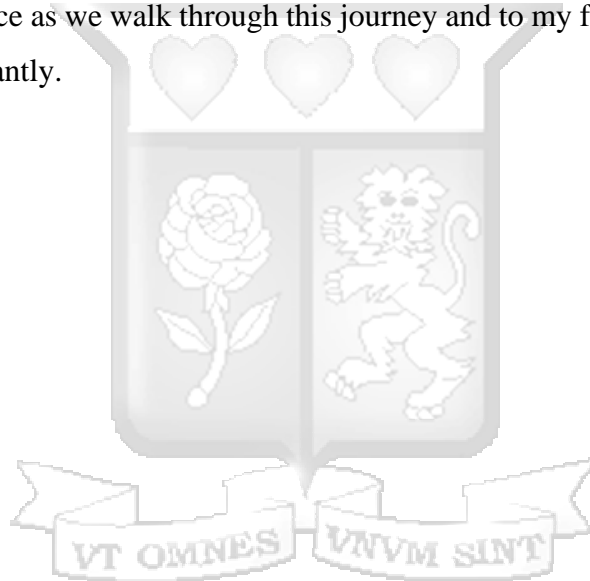
DEFINITION OF KEY WORDS



Employee productivity	It is defined as an assessment of value generated by an individual employee within a specific time period.
Human Resource Planning	Refers to the hiring, development and retention of employees in the achievement of organizational goals.
Hybrid Working Arrangements	Means that employees can work on-site or remotely in a mutually pre-determined schedule.
Organizational Culture	Refers to the elaborate set of a company's core values, its principles and symbols.
Organizational Structure	Means the foundation on which control over procedures, decision-making processes, authority, and governance is based to ensure that maximum productivity is achieved.
Work Design	Refers to the specification of the contents, methods, and relationships of jobs in order to satisfy technological and organizational requirements as well as the social and personal requirements of the job holder.
Work- Life Balance	The balance between work and private life.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter provides essential aspects of studying hybrid working arrangements and employee productivity. It presents the background to the study, then situates and articulates the statement of the problem, the objectives of the study and the relevant research questions. This chapter also presents scope and significance of the study.

1.2 Background to the Study

The coronavirus disease (COVID-19) produced fundamental changes in work practices as the world tried to contain the spread of the virus. The requirements for social and physical distancing proved problematic for conventional employment models that emphasize the in-office environment (Trivedi & Patel, 2022). According to Junglas, Goel, Rehm, and Ives (2022) employee safety became a universally accepted work ethic in response to the dangers posed by the Covid-19. The COVID-19 pandemic was a turning point especially for businesses, with many changes impacting traditional practices (Beno, 2021). This led to a scenario where the traditional work model, which demands physical presence in office was altered and challenged. Before the pandemic, it was widely accepted that offices were critical in the battle for top personnel, a vibrant culture and high productivity levels. The race for prime urban real estate was fierce, and many companies opted for strategies aimed at fostering teamwork, such as open office layouts, co-working spaces, urban densification and hoteling (Putri & Amran, 2021).

During the pandemic, lockdowns and restriction of movements were imposed by several governments thus forcing employees to deliver their tasks while working from home with organizations embracing hybrid working arrangements. A hybrid work arrangement is a plan that incorporates a mixture of in-office and remote work in an employee's schedule (Griffis, 2021). The COVID-19 outbreak accelerated the need for embracing hybrid working arrangements. According to Özatay and Sak (2020) the pandemic removed many technological barriers leaving only those based on institutional culture of operation. This is because according to Matenga (2021), managers were previously reluctant to allow

their workers to work remotely with concerns on employee productivity and efficiency, technology use and employment law compliance.

The development of flexible work arrangements had already been the subject of growing research interest for some time prior to the COVID-19 pandemic (Shafi & Ren, 2020). According to Grzegorzczuk, Mariniello, Nurski, and Schraepen, (2021) remote work is not a new phenomenon. As modern technologies were developed, several US publications in 1971 predicted that all US employees would working from home by 1990 stated in their study Craipeau & Marot (1984). Statistics from US show that in 2019 about 7 percent of workers were working remotely and corresponding number for 2020 was 35 percent (Saad & Wigert, 2021). In EU 2019 about 6 per cent of the workforce worked from home and corresponding number for Estonia was about 7 per cent. In 2020 these numbers were 12 percent in EU and 13 percent for Estonia, (Eurostat, 2022). Before the pandemic, remote and hybrid working had been increasing gradually. Between January and December 2019, around 1 in 10 (12 percent) of the of the UK workforce had worked at least one day from home in the previous week and around 1 in 20 (5 percent) reported working mainly from home (Natasha & Abbi, 2022). The exact percentages of remote workers in the future are impossible to predict as it varies a lot by professions and companies.

Pre-pandemic normalcy remains elusive, but a new normal has settled in among workers accustomed to working from home, commuting less and enjoying improved wellbeing and flexibility (Williamson, Colley, & Foley, 2020). In the aftermath of the COVID-19 pandemic, workers still want deliver their tasks through hybrid work arrangements. Arrangements such as these offer workers a greater level of control, over where (location) and when (timing) their work tasks are performed, leading to a potential for improvements in flexibility, autonomy, and work–life balance (Hopkins, & Bardoel, 2023). Saad and Wigert, (2021) in their study indicated that nearly half of full-time employees in the U.S. (45%), including two-thirds of white-collar employees (67%), are still working from home to some degree. These workers who overwhelmingly do not want to return to the office believed that their employers largely foresee making remote work a permanent offering, at least on a hybrid basis.

Locally, rapid growth and adoption of ICT has seen increased online delivery of work not only in the private sector organizations, but also in the public sector organizations. This is evidenced by increase in coverage of the fourth generation (4G) network by 42.0 per cent to 25,191 transceivers in the country. Total fixed and wireless internet subscriptions increased by 11.7 per cent to 44.4 million subscriptions in 2020 while the number of licensed Internet Service Providers (ISPs) increased by 21.2 per cent to 366. Interestingly, the Fibre-to-home broadband subscriptions increased by 67.6 per cent to 340,271 while fibre-to-the office broadband subscriptions decreased by 8.6 per cent to 60,079 partly owing to COVID-19 mitigation measures that encouraged working from home (Economic Survey, 2021). This points out to a trend where employees have become familiar to working remotely, and splitting time between home and office. According to the Federation of Kenya Employers (2022), the disruptions brought about by the pandemic considerably affected work, workers and workplaces activities of many enterprises. But it has propelled employers to adopt strategies and for business continuity and productive and stable employment relations.

Some organizations are embracing flexible working systems in a bid to control the operational cost over the competitive edge in the market (Radło, and Tomeczek, 2022). Leaders and managers recognize the many benefits of remote work, along with the risk of losing top talent if remote work flexibility is taken away. The use of platforms such as Zoom, Microsoft Team among other options even after the pandemic, signifies the adoption of hybrid working models (Trivedi & Patel, 2022). Despite an interest in hybrid work, it remains unclear which employees want to remain working from home and who prefers to go back to the office as much as possible, and to what extent office design and the available home workspace influence their productivity. So far, research on where people prefer to do their work remains scarce and has not addressed yet how office and home workspace design will influence their productivity. Against this background, the study sought to establish the influence of hybrid working arrangements on employee productivity in the Communications Authority of Kenya.

1.2.1 Hybrid Working Arrangements

From 2008, governments worldwide have implemented new working arrangements, drastically altered job conditions and implemented redundancies and severance plans to save costs and enhance performances (Natrajan, Sanjeev, & Singh, 2019). This has led to embracing of new work delivery models such as the hybrid working model for the sake of efficiency and business continuity. As highlighted in the previous section, hybrid working arrangements, also known as hybrid work models or hybrid work arrangements, refer to a flexible work structure that combines remote work and on-site work in a blended approach. It allows employees to work from both a physical office or workplace and a remote location such as their home. This means that employees have flexibility to determine their own mix of remote and on-site work based on their individual circumstances and job responsibilities (Putri & Amran, 2021).

Hybrid working arrangements are largely the consequence of policies and practices brought in from the private sector and then incorporated into the public sector to ensure seamless delivery of products to the end-users (Radonić, Vukmirović, & Milosavljević, 2021). Global best practices in respect to this new working arrangement were firstly recorded among the ICT companies, which offered options for telework to their employees, empowering safety and flexibility through remote work policies and flexible working hours (Radonić, et. Al., 2021). According to Coann (2021), top companies such as Apple, Microsoft, Spotify, Twitter and Quora have embraced hybrid working arrangements to derive maximum value from their employees as well as satisfy their customer and stakeholder needs with companies like Zoom having developed a working technology that allows employees to work from any location. Shopify's CEO Tobi Lutke tweeted in May 2020 that the company will be "digital by default," taking on a remote-first hybrid setup. Lutke added that most employees will permanently work remotely but when available, employees can work in the company's offices in Canada and Ireland (Coann, 2021).

Locally, according to the Kenya Economic Survey (2021), uptake of most digital services increased as a result of measures put in place to contain the spread of COVID-19. Teleworking, online learning, online video streaming and e-commerce increased across

the country and as a result the uptake of digital tools went up significantly. The internet-based and bandwidth intensive activities increased demand for high quality connectivity while at the same time calling for digital reinforcement of a more inclusive approach to close the digital divide (Kenya Economic Survey, 2021). In Kenya, an average of 29 per cent of employees worked remotely during the pandemic (ILO & FKE, 2022). This impacted how organizations in the public sector interact with their clientele and escalated the need for hybrid working arrangements.

According to (Griffis, 2021), each company develops a hybrid model based on the needs of the company and the needs of the individual employee. Information and Communication Technology (ICT) adoption and human resource planning policies are key factors that facilitate hybrid working arrangements. Additionally, employee perception towards embracing the same for work-life balance as well as work design makes hybrid working arrangements possible. A growing body of literature indicates that teleworking and flexible working hours might remain the preferred working practice even after the COVID-19 pandemic abates (Contreras, Baykal & Abid, 2020). It is believed that creating a flexible and family-friendly workplace (having flexible work hours or offering remote work) can help to improve the well-being of the workforce (Feeney & Stritch, 2019). The study therefore, looked into the hybrid working models and how they contributed to the employee productivity. The key facilitators of hybrid working studied included human resource planning policies, ICT adoption, perceived work-life balance and work design. These were studied in the context of their effect on employee productivity. The factors of hybrid working model human resource planning policies, ICT adoption, perceived work-life balance and work design are discussed below.

1.2.1.1 Human Resource Planning

Human Resource Planning refers to the process of systematically forecasting an organization's future workforce needs and developing strategies to meet those needs. It involves assessing and analyzing the current and future requirements of the organization in terms of its human resources, and then devising plans and initiatives to acquire, develop, and retain the right talent to achieve organizational objectives (Griffis, 2021). According to Drabek, Lorincova and Jarorcokova (2017), human capital is among the key

organizational strengths. Developing this resource is key to attaining organizational goals and as such, they have to develop the team's necessary skills, knowledge, and competencies (Mwanje, 2010). Guided by this need and compounded by the frequent changes in the organizational environment, many organizations need strategies and initiatives that are meant to bring improvements in employee performance (Bafaneli & Setibi, 2015).

According to McDowell (2006), the organizational environment entails the external and internal factors influencing its performance. External factors are those factors that the firm has no direct control over but they play a key role in shaping an organization's internal policies which could be political, economic, social or technological (Al-Tit, 2017). On the other hand, internal organizational factors may be defined as organizational policies, organizational culture, organizational training, organizational learning and organizational leadership that exist within institutions that creates an enabling environment for successful implementation of programmes (Maschke & Knyphausen, 2012).

Human resource planning helps organizations to manage transfers, posting and succession policies effectively (Human resource Article, 2012). This is attributed to the fact that human resource planning ensures hiring, development and retention of employees is geared towards achievement of organizational goals. This involves analysis of the current workforce and how it aligns with future employment and by planning for the future, human resources create action plans to satisfy organizational goals.

Human resource planning is largely determined by organizational culture which refers to the elaborate set of a company's core values, its principles and symbols. These are shared across the corporation and have an effect on how a firm carries out its business and operations (Ireland, Hoskisson, & Hitt, 2016). Phillips, Gully, and Castellano (2014) identified organizational culture as shared norms that gave guidance to employees' attitudes and behavior and influenced how they perceived and reacted to the environment. Additionally, human resource planning is guided by an organization's structure. An organizational structure is the foundation on which control over procedures, decision-making processes, authority, and governance is based to ensure that maximum productivity is achieved. A well-structured organization has provision for a number of

working models like flexi time, hybrid models, working in shifts to allow for better productivity among employees (Grzegorzcyk, Mariniello, Nurski, & Schraepen, 2021). Oyewobi, Windapo, and Rotimi (2013) indicate that task allocation, coordination, work arrangement, and centralization are key to improving organizational performance. To ensure that an organization's strategy implementation succeeds, there are several critical aspects that must be taken into consideration, such as gaining the support of senior management, understanding employee perception on key issues, bringing new engagement at all tiers, having a well-articulated policy to ensure responsibility at all level of the organizational framework, and putting together a capable team to enact it all (Chetty, Friedman, Hendren, Stepner, & The Opportunity Insights Team, 2020). Human resource planning puts in place structures that allow for various working models such as hybrid working by putting in place the right policies and guidelines. The study probed to find out the link between employee productivity and the hybrid working model at CA. The use of ICT systems within the CA to support the hybrid models necessitated studying the Authority so as to get clarity of the productivity of the model. The study specifically examined the aspects of human resource planning in the context of definition of roles and task delivery methods. Further, the study explored how training and career development, employee motivation and mentorship, staff deployment and task alignment impacted employee productivity in the context of hybrid working models.

1.2.1.2 ICT Adoption

Information and Communication Technology (ICT) is a key enabler of the hybrid working model. Its adoption refers to the process of incorporating ICT tools, systems, and practices into an organization's operations, processes and strategies. This involves the implementation and utilization of various ICT resources, including hardware, software, networks, and digital platforms, to enhance efficiency, productivity, communication, and decision-making within the organization (Deloitte, 2020). The advent of technology has presented enormous opportunities and, at the same time, challenges faced by organizations by reshaping the relationships between consumers, businesses, suppliers, and in some cases, entire industries (Kabuba, 2014). Since hybrid working arrangement

is an information technology enabled practice, it allows employees to choose work location as business activities can be performed beyond the confines of traditional offices (Chung and Van der Lippe, 2018). Kurnia, Choudrie, Mahbubur, and Alzougool (2015), in analyzing technology adoption, indicated that environmental pressure, organization readiness, industry factors, and technologies' availability are critical to the adoption process. Wunderlich, Grobler, Zimmermann, and Vennix (2014) indicate that various issues contribute to adopting new technology services. These factors could be technological, environmental, social, organization, and economical.

Before the pandemic, the preferred mode of communication was email and face-to-face communication. When the pandemic started, workplaces switched to Zoom video calls and instant messaging so as to collaborate on company projects (Yang, Kim, & Hong, 2021). They allowed people to communicate in real-time, improving the workflow (Elrhim and Elsayed, 2020). This led to the rise in popularity of platforms such as Slack and Microsoft Teams (Woz, 2022). These platforms allow organizations to streamline work from different teams and individuals, host more effective video meetings and chatrooms organized by topic and keep everyone in the workforce informed. Applications like Microsoft Office 365 and Google Workspace allow companies to recreate their work environment in a virtual space (Narayanamurthy & Tortorella, 2021).

According to Woz (2022), online working platforms have over time been updated with different features to match the hybrid work model. For instance, video call software comes with video filters to help participants look better during meetings. They also feature captions and transcription to capture the text of the video call to review later (Woz, 2022). Lastly, they have better encryption to avoid security issues (Aceto, Persico, & Pescapé, 2019). Cloud-based technology makes hybrid work possible by addressing some of its critical challenges such as cybersecurity, physical security, and limited access to important files. Now, one only needs an internet connection and a device to go to work and the available information-sharing platforms allow workers in different locations to work together seamlessly (Woz, 2022).

According to Allen, Golden, and Shockley (2015) employees typically rely heavily on technology to communicate and collaborate with internal and external stakeholders; they work primarily from home/designated location for a period of time, from a few hours to nearly fulltime. Using technology to interact with others as needed to complete work tasks while away from the central work place is often referred to as telecommuting (Allen *et al.*, 2015). Telecommuting is often used interchangeably with the terms telework, remote work, distributed work, virtual work, flexplace, ICT-mobile work, and distance work, flexible work among other terms. The current study sought to explore the effect of ICT adoption on employee productivity. This was done through exploring the how ICT facilitates communication and collaboration as well as its effect on enhancing operational efficiency and costs. Further, it was explored how ICT training and induction and organizational investment in ICT infrastructure impacts individual employee productivity.

1.2.1.3 Work- Life Balance

The balance between work and private life is a strong mediator between flexible work arrangements and job satisfaction. The driving factors which improve the productivity of employees include opportunities in career, corporate responsibility, health of employee, reputation of the company, pay, practices of human resource, intrinsic motivation, saving for retirement, resources, balance of work-life, work duties, senior leadership recognition among others (Mishra, Boynton, & Mishra, 2014). The provision of appropriate, flexible solutions in the organization is important in order to increase employee satisfaction, commitment, improvement of their performance, and thus increase of productivity (Aziz-Ur-Rehman & Siddiqui, 2019). Flexible business hours like flexible part time, shift work, compressed work hours and job sharing are often used to help employees in balancing their family and work life (Kipkoech, 2018). This arrangement gives employees more control over their time, helps them achieve work-life balance and gives them ability to schedule work during their most productive hours.

To the employer, flexible working schedules enable them to recruit and maintain high performance employees who have other life commitments and provides an opportunity for more efficient use of resources such as work stations, computers and office space.

Flexible working arrangements play a key role in facilitating employee productivity and boosting public service delivery (Kipkoech, 2018). Manzoor (2011) asserts that a highly-motivated workforce is more likely to follow through with task execution and hence better performance. According to Buchanan and Huczynski (2007), a motivated workforce has high levels of satisfaction and performance, leading to achievement, recognition, responsibility, advancement and growth.

Companies that offer flexible work practices find themselves at the top of the job applicants' lists and give the most talented employees a reason to stay with the company (Saad & Wigert, 2021). According to Saad & Wigert, (2021), employee's commitment grows when employees spend part of their time working remotely and part of it working together with their colleagues. In this respect, work-life balance was studied in the context of stress management, interaction between work and family, career satisfaction and remote work management to explore its effect on employee productivity in the Communications Authority of Kenya.

1.2.1.4 Work Design

The design of any work determines whether the job can be delivered through the hybrid work model or not. Work design refers to the specification of the contents, methods, and relationships of jobs to satisfy technological and organizational requirements as well as the social and personal requirements of the job holder (Armstrong, 2014). It refers to the function of specifying the work activities of an individual or group in an organizational setting. Its objective is to develop work assignments that meet the organization's and the technology requirements and satisfy the jobholder's personal and individual requirements (Hussain, 2018). Hussain (2018) defines job design as the function of arranging tasks, duties and responsibilities into an organizational unit of work to accomplish the organization's primary goal and objectives. He further noted that work design consists of efficiency elements and behavioral elements. Efficiency elements include division of labor, standardization and specialization. Behavioral elements include skill variety, task identity, task significance, autonomy and feedback. The working explanation for the study purpose is that job design is seen as the way to organize the contents, methods and

relationship of jobs to achieve an organization's goals and objectives as well as job holders' satisfaction.

Ambrose (2013) found that work design is having the right methods and requirements to effectively deliver an assignment. Job design is the creation of tasks and work settings for specific tools. Job design gives a direction and opportunities for the process to transform inputs to outputs and it also takes into consideration the human factors as well as organizational factors which are of very much importance in the achievement of desired performance. When organizations give employees a chance to get involved with the job design they become more motivated to take active part in the achievement of organizational goals and as a result performance of employees increases which positively impacts the outcomes.

Davis (2005) holds that job design and redesign is more likely to improve performance when the changes in job contents are sufficiently non-trivial to be perceptible to the workers, typically in terms of greater self-regulation, diversity, meaningfulness, challenge, and social responsibility; and when the changes in job contents are part of a more pervasive programme of improved working policies and practices, which include elements of adequate pay and job security, proper resources and working conditions, increased mutual influence by people at all levels, and constructive labour management relations.

Work design, or the content and organization of one's work tasks, activities, relationships, and responsibilities, has been linked to almost every end goal that is of concern in an organization safety, performance, and innovation (Dierdorff & Morgeson, 2013). Work design also matters for individuals; it affects their sense of meaning, their health, and their development. On the global front, the importance of work design is exemplified by the International Labor Organization's Decent Work Agenda, which focuses not just on obtaining work for all but on ensuring quality work that provides "better prospects for personal development and freedom for people to express their concerns, organize and participate in the decisions that affect their lives" (De Menezes, & Kelliher, 2017). The goal of job design is simplifying, enriching, enlarging, or otherwise changing jobs to make the efforts of each employee fit together better with jobs performed by other employees.

This analysis showed a gap in how job autonomy, feedback and characteristics as well as work context impacts productivity when hybrid work arrangements are in place.

1.2.1 **Employee Productivity**

Employee productivity is the output to input ratio and the production process's accompanying efficiency (Gratton, 2021). Sultana, Irum, Ahmed, and Mehmood (2012) described productivity as the ability to achieve certain tasks according to predetermined or specified accuracy standards, completeness, cost, and speed. The productivity of the public sector has faced challenges both worldwide and in Kenya (Ndubai, 2016). Public sector employee productivity enhancement initiatives in Kenya can be traced back to Sessional Paper No 10 of 1965 on "African Socialism and its Application to Planning in Kenya" which positioned social justice, political equality and human dignity as key aspects major reforms in the public service (Mwangangi, 2021). This paper largely guided corporate governance and public service reforms in subsequent years. Its major efforts were reflected in the Ndegwa Commission Report 1970-71 which focused on Public Service Structure and Remuneration, the Waruhiu Committee Report 1979-80 which focused Civil Service Review, the Munene Committee Report 1997 which focused on review of the Terms and Conditions of Service for the Civil Service and the Kipkulei Commission Report 1998-99 which addressed harmonization of terms and conditions service for public servants (Kang'ethe, 1994). Efforts to improve productivity in the public sector, were further boosted by introduction of Performance Contracting (PC) in the Government Financial Year (FY) 2005/06 (Luke & Thoronjo, 2021).

The PC system was part of the Economic Recovery Programme (ERP) for Wealth and Employment Creation (2003 – 2008) whose main objective was to resuscitate the economy and reduce cost of doing business. Performance contracting was made mandatory for all the public sector organizations including the Communications Authority of Kenya with an aim to improve public sector productivity. Employee performance entails the successful accomplishment of tasks by employees in reference to the standard set and measured to previously set satisfactory criteria whereas employing existing resources competently and meritoriously (Warsame, 2017). Performance contracts are developed in line with set guidelines at institutional levels and cascaded to all public

service employees by linking specific deliverables and targets to annual work plans and the staff performance appraisal tools. The performance can be measured monthly, quarterly, semi-annually or annually to be able to provide improvement of identified segment in the business (Dessler, 2008). This means that employees are periodically involved on individual productivity issues on mutually pre-determined terms. Operational performance measurement can be accomplished by regularly engaging employees through appraisals (Anyango, Wanjau, & Mageto, 2012). Performance contracting ensures employee engagement and helps boost employee productivity through consultative target-setting, performance measurement and implementation of a rewards/sanctions system. Employees are more likely to go the additional mile to help the company meet its objectives when they are fully involved in decision-making that are directly relevant to their day-to-day tasks (Sahoo & Mishra, 2018).

Bottcher and Neuhaus (2015), established that improving the firm's productivity involves, reducing procurement costs, reducing overhead costs, reducing production costs, optimizing production, optimizing distribution, optimizing information technology and reducing product complexity. Kang, Zhao, Li and Horst (2016) indicated that operational performance metrics include customer satisfaction index, employee satisfaction index, and productivity as it relates to revenue generation. Panwar, Jain, Rathore, Nepal, and Lyons (2018) assessed on-time delivery of goods and products, product quality, response time, cost reduction and capacity utilization as operational performance indicators. The combination and development of an employee's talents and motives in the pursuance of the organization's goals provide both personal satisfaction to the employee and ultimately results in increased performance of the organization (Broadhurst, 2012). As the success of an organization relies mainly on the productivity of its employees, therefore, employee productivity has become an important objective for businesses (Sharma & Sharma, 2014).

Employee productivity usually depends on their staff members' positive behaviour and abilities to meet the employee performance goals and objectives set out by management (Kramer & Kramer, 2020). According to Sharma and Sharma (2014), employee productivity is based on the amount of time that an employee is physically present at his/her job, besides the extent to which he/she is "mentally present" or efficiently working

during the presence at the job. This implies that employee productivity is reflected through efficient task performance and the subsequent job satisfaction, efficiency and effectiveness. Thus, productivity is a performance measure encompassing both efficiency and effectiveness (Buuri, 2015). One of the common approaches to increase employee productivity includes linking rewards to the amount and quality of performance via different types of incentives (Kawara, 2014). In this regard, Brown (2012) suggested that employee productivity can be maximized when there is a reasonable balance, thus, employees would have adequate control, authority, and feel empowered to make the most effective decisions.

According to Trivedi and Patel (2022), employee productivity rises with a hybrid work approach. This is attributed to workers having flexibility to work when and where they feel more productive. Additionally, workers can get more done since they are not spending time or energy traveling (Trivedi & Patel, 2022). Despite this conclusion, hybrid work model is not appropriate for employee productivity in some industries due to existing human resource policies, level of ICT adoption, buy-in by employees and work design. This means the productivity aspect brought about by hybrid working model might change from industry to industry and from one organization to the next depending on the factors listed above. The focus of this study was the Communications Authority of Kenya which is the country's ICT regulator.

This study will utilize the balanced score card to measure employee productivity. The balanced scorecard has, since its creation by Kaplan and Norton in 1992, gained traction to become the idealized approach to the measurement of holistic performance (Kaplan & Norton, 2007). Kaplan and Norton suggest measuring an organization's performance around financial, customer, internal processes, and learning and growth to provide a balance between short- and long-term objectives, financial and non-financial measures, and external and internal performance indicators. The scorecard also balances the results the organization wants to achieve (typically the financial and customer perspectives) with the drivers of those results (typically the internal processes and the learning and growth perspectives) (Inamdar and Kaplan 2002).

1.2.3 The Communications Authority of Kenya

The Communications Authority of Kenya (CA) is the regulatory state corporation for the ICT sector in Kenya as established by the Kenya Information and Communication Act (KICA) of 1998. The Authority is responsible for facilitating development of the ICT sector which includes telecommunications, postal and courier services, broadcasting, multimedia as well as electronic transactions and electronic commerce. The Authority is also responsible for managing the country's frequency spectrum, numbering and domain names resources; managing and administering the Universal Service Fund (USF); facilitating the management of the national cyber security, as well as protecting the interests of all users of ICT services (CA Annual Report, 2022).

The CA is governed by a Board of Directors constituting of a Chairperson appointed by the President, three (3) Principal Secretaries responsible for matters relating to broadcast, electronic, print and all other types of media, Finance and Internal Security as well as Seven (7) persons appointed by the Cabinet Secretary responsible for ICT (KICA, 1998). Section 11(2) of KICA provides for the position of the Director General, who is the Chief Executive Officer of the Authority and an ex-officio Member of the Board and is responsible for day-to-day management of the Authority. The Authority has a total of 20 Departments headed by Directors with a total 248 staff at its headquarters in Nairobi and regional offices in Kisumu, Nyeri, Mombasa and Nyeri (CA Annual Report, 2022).

The CA played a key role following the declaration of Covid-19 as a global pandemic and confirmation of the first COVID-19 case in Kenya on 13th March 2020. As the Government established the National Emergency Response Committee under Executive Order No. 2 of 2020 to curb the spread of COVID-19, the CA was tasked with chairing and hosting the ICT Advisory Committee through Gazette Notice No. 3236 of 21st April 2020. The Authority, through this committee coordinated ICT specific responses to the effects of the COVID-19 pandemic and beyond. The transformative impact of ICTs in response to the Covid-19 Pandemic enabled the practice of working from home which in turn accelerated the demand for hybrid work models in the post-covid society.

According to the CA Annual Report for the FY 2021/22, the authority adopted working from home model during the lock-down and later advanced to hybrid working model.

Despite operations running normally with the hybrid model, there was need to explore if employee's productivity has increased or reduced as a result of adopting this model of service delivery. In a bid to enhance seamless service delivery amongst its employees, the Authority has in place an enterprise resource planning system that enables human resource planning and paperless work design, (CA Annual Report, 2022). The use of ICT systems within the CA to support the hybrid models also necessitated studying the Authority so as to get clarity of the productivity of the model. This formed the basis of choosing the ICT regulator as the unit of observation for this study. The sector which the CA operates in is highly automated and digitized (CA Annual Report, 2022). This means that the Authority has already embraced hybrid working arrangements with this study sought to understand how the factors of such arrangements affect employee productivity in the institution. The CA was chosen because there has not been a study that done in the institution since the adoption of hybrid working model and thus the need to seek clarity on whether the model was having negative or positive impacts on productivity of employees. The employee productivity issues examined included hybrid-work performance, job efficiency, performance feedback as well as individual and organizational performance.

1.3 Statement of the Problem

The COVID-19 pandemic forced many companies to adjust their workplace models, switching from office-based environments to online operations, e-commerce and shared economy models (Elrhim & Elsayed, 2020). According to a survey conducted by Deloitte in November 2020, up to 4 million people in Australia (31% of the workforce) and 50 million across the ASEAN-6 countries could shift to working remotely over a multi-year time horizon. Further, according to this survey, 77% of workers wanted more flexibility in how and where they work while 65% of workers believe their productivity has increased since they began working remotely. This is supported by an observation by Spurk and Straub (2020) that the effects of the COVID-19 pandemic changed employees' level of motivations and commitment, job satisfaction, interest, and challenged the management of work-life balance.

Studies have been done in a bid to explore the influence of hybrid working arrangement in relation to productivity and performance. Van der Lippe and Lippenyl (2019) studied

11,011 co-workers in nine European countries. This study explored how working from home (WFH) was linked to the team performance. The study found that team performance employees increases when their colleagues are not working from home. The greater the percentage of co-workers working from home, the worse the team performance (van der Lippe & Lippenyl 2019). Further, managers rate team productivity higher when co-workers WFH no more than one day per week. Hence underlining the indication that managers want to monitor employees, and they have further opportunities to do such when employees work less from home (Van Dyne, Kossek, & Lobel, 2007).

In Sub-Saharan Africa, Harunavamwe and Kanengoni (2023) assessed the impact of technostress creators, work–family conflict and perceived organizational support on work engagement on employees operating within the virtual and hybrid work settings in a University in South Africa. The idea was to redefine the antecedents of work engagement in work settings characterized by excessive technology and work–family conflict. The study showed that despite the presence perceived organizational support, technostress creators and work–family conflict issues increase demands and thus influences work engagement negatively. The results noted that, in hybrid and virtual work settings, managers can drive employee engagement by focusing on designing more favorable work–life balance (WLB) policies, providing adequate information communication technology (ICT) support, fostering aspects of positive technology and defining the boundaries between work life and family time (Harunavamwe & Kanengoni, 2023). This study is closely related to the variables of human resource planning (WLB policies), ICT adoption and work life balance. However, the study did not explore the impact of work design on work engagement.

To better understand the effects of Covid-19 and the future plans of enterprises, the Federation of Kenyan Employers (FKE) commissioned a survey of 125 registered enterprises in Kenya in June 2021. The survey covered a wide cross-section of enterprises in many sectors, with 24 per cent of respondents from industry, 70 per cent from services and 6 per cent from agriculture. The findings showed that though many enterprises in Kenya adopted remote work, only 2 per cent were fully remote. For the vast majority of enterprises, operations continued with a mix of in-person and remote work modalities.

Those that have not adopted the hybrid or fully remote models cited their failure to have been driven by considerations such as work design (48 percent), human resource strategies (27 percent), lack of employee buy-in due to work life balance (2 percent) and costs related ICT adoption (6 percent). About 18 percent of enterprises noted that they had changed their hiring criteria to include new workers such as remote employees. Change of hiring criterion to factor in this category of workers could have dramatic implications for policy, the economy, and lifestyles, affecting everything from real estate to where people chose to live. However, these changes will be muted by the fact that many businesses have not adopted remote working models and plan to continue operating with a significant in-person component to their business (ILO & FKE, 2022).

The key drawbacks of remote work are the amalgamation of remote work with the organizational structure and strategy and the remote workers motivation and control (Chapman & Thamrin, 2020). Felstead and Henseke (2017) report that remote work may cause difficulty for employees to sequester the world of work from other features of life when both worlds collide and imbricate. Forcibly, people are now working from home and with flexible working arrangements, resulting in increased daily working hours and distractions due to family obligations (Boshkoska & Jankulovski 2020). During the start of the coronavirus pandemic in March 2020 millions of employees moved into remote work arrangements using video conferences extensively. Subsequently, employees started to report feelings of exhaustion caused by web meetings with terms like “Zoom Fatigue” and “Zoom Exhaustion” becoming well known, (Parker, et al., 2020). According to Parker, et al., (2020) zoom fatigue and exhaustion occurred because brains have to work much harder while interacting with other people through the screen due to potential distractions.

Gibbs, Mengel and Siemroth (2021) note that blurred line between personal and professional life is a challenge as there is no geographic division between work and personal space. Ideally, home is a place where employees relax, feel safe and have security. As far as remote work is concerned, employees can easily forget the work and not meet work deadlines. Furthermore, Janza (2020) mentions that some remote workers have indicated that they are never ‘off the job’. This means they feel a compulsion to

always check emails or get ‘just one last thing done’. In other words, some remote workers might not find it easy to knock off and relax whilst others might continue working. Similarly, flexible work practices are considered somewhat challenging in the sense of employee management (Janza, 2020). This called for a need to examine the effect of the factors of hybrid working arrangement on employee productivity. According to the CA Annual Report (2021) the organization adopted the hybrid working model as a mitigation measure to curb the spread of COVID-19. This was facilitated by adoption ICT systems manage activities and revising of human resource planning policy to guide hybrid working. Additionally, there was model buy-in by CA staff due to perceived work-life balance as well as redesigning of activities to enable virtual delivery of tasks (CA Annual Report, 2021). Despite the decrease of COVID -19 and normalcy programs coming to normalcy, the hybrid model was still retained within the organization with complete automation of some functions such as departmental, management and board meetings, capacity building initiatives and licensing management processes. Evidence suggests that remote and hybrid working can have both positive and negative impacts on employee productivity (Natasha & Abbi, 2022). The study explored whether the factors of hybrid working arrangements positively or negatively affect the productivity of individual employees in the Communications Authority of Kenya. This study reviewed ICT adoption, human resource planning practices, perceived work-life balance and work design to bring out a multi-tiered approach at both organizational and individual level to explain the relationship between flexible work practices and organizational performance.

1.4 Research Objectives

The main objective of this study was to establish the influence hybrid working arrangements on employee productivity in the Communications Authority of Kenya.

1.4.1 Specific objectives

- i. To examine the effect ICT Adoption on employee productivity in the Communications Authority of Kenya.
- ii. To find out the influence of Human Resource Planning on employee productivity in the Communications Authority of Kenya.
- iii. To assess the influence of Perceived Work-life Balance on employee productivity in the Communications Authority of Kenya.

- iv. To find out the influence of work design on employee productivity in the Communications Authority of Kenya.

1.4.2 Research Questions

- i. What is the effect of ICT Adoption on employee productivity in the Communications Authority of Kenya?
- ii. What is the influence of Human Resource Planning on employee productivity in the Communications Authority of Kenya?
- iii. What is influence of Perceived Work-life Balance on employee productivity in the Communications Authority of Kenya?
- iv. What is the influence of work design on employee productivity in the Communications Authority of Kenya?

1.5 Scope of the Study

This study sought to determine the influence of hybrid working arrangements on employee productivity in the Communications Authority of Kenya. The study focused on how ICT adoption, work-life balance, human resource planning and work design affected employee productivity in this state corporation. This research was built on Border Theory and the Technology Acceptance Model to assess how the constructs of the two theories are manipulated by the factors of hybrid working arrangements in the context of employee productivity. This study adopted a positivist research philosophy and applied a descriptive research design to examine the research problem. In terms of geographical scope, the study was domiciled in Nairobi, Kisumu, Mombasa, Nyeri and Uasin Gishu Counties in Kenya. The study targeted all the 20 Departments in the Authority with views drawn from the senior, middle and lower management levels as well as support staff. The study used a stratified sampling technique to determine the study sample and used a questionnaire to collect primary data from the respondents. The study took four months to complete.

1.6 Significance of the Study

1.6.1 Government

This study findings will be key to the government by providing more knowledge of the impact of hybrid work schedules on employee productivity. The findings and recommendations of this study will benefit the top management, human resources

department, planning department, ICT department as well as the technical departments in the Communications Authority of Kenya. The findings informed human resource practices, ICT adoption, work life balance and work design models in the implementation of hybrid working models. This was particularly important as the organization adapts to competitively address the changing face of the workplace for millennials and other subsequent generations. This is greatest inspiration for conducting this study.

Policymakers in Kenya will benefit from the findings of this study when formulating new policies aimed at improving public sector efficiency and meeting the needs of today's contemporary customers while also assuring the effective provision of public services. If required, new policies will be implemented at both the institutional and national levels as a result of this. This will particularly be important in designing human resource planning policies that guide on implementation of hybrid work models.

1.6.2 Scholars

Scholars can use this research to further understand the future of work and what current employees seek and may continue to seek from their careers and places of work to boost productivity. The study findings have contributed to the larger pool of knowledge body on the subject matter on hybrid working models and employee productivity. Scholars will use this study to explain the current status on effect of the hybrid working models on employee productivity in the post-covid 19 pandemic period.

1.7 Chapter Summary

This chapter assessed the background to the study's, highlights four factors of hybrid working arrangements which include human resource planning, ICT adoption, work-life balance and work design. The chapter further discusses the concept of employee productivity and provide highlights on the focus institution, the Communications Authority of Kenya. In this chapter, the problem statement, the study objectives as well as the related research questions will be articulated then its concluded by discussing the study's scope and significance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on the factors of hybrid working arrangements in relation to how they affect employee productivity. Specifically, it presents a theoretical review, an empirical review of the literature, identified research gaps and the conceptual framework.

2.2 Theoretical Review

The theoretical foundation for this study is Border Theory and Technology Acceptance Model. These theories guided the study in examining the influence of hybrid working arrangements on employee productivity with the dominant theory being border theory.

2.2.1 Border Theory

This study has utilized the border theory to find out the impact of human resource planning, perceived work-life balance and work design on employee productivity. The border management discourse has developed around the conceptual work - life balance propositions made at the turn of the century by border theory (Clark, 2000). Border theory and boundary theory share the belief that individuals assume different roles in different life domains that are circumscribed by a system of borders. Border theory further suggests that accomplishing a diverse range of activities requires the active enactment of the limits that divide life domains. The notion of domains is rooted in Lewin's (1951) life space concept. A life space is conceptualized as the product of patterns of interaction between the individual's characteristics, the immediate environment and the situational circumstances. As such, domains can be considered as spaces of life in which activities are bundled in terms of purpose, interest and responsibility in accordance with an individual's aims and objectives (Clark, 2000).

The border theory emphasizes that work and personal life are two different interactive domains. People can have diverse associations within these domains based on how they feel, what kind of values are most important to them, what kind of behavior and rules they follow, and what kind of thought patterns they have. Border theory accentuates that people are border-crossers who manage these different domains to acquire a balance between the

domains (Karassvidou & Glaveli, 2015). The theory focuses on the domains and building bridges between them and how they should be managed to have a desired balance between them (Karassvidou & Glaveli, 2015). A balance signifies as having minimum role conflict and good functioning within work and home domains. It is in this respect that this theory has been used to assess the influence of perceived work-life balance on employee productivity in the CA.

Undoubtedly, the primary facilitator for hybrid working arrangements is the human resource planning practices adopted by an organization. The objective of human resource planning is to bring about an intelligible and realistic understanding in the minds of management that the organization adapts to technological, social, political, economic and environmental changes more rapidly and effectively according to the needs of time and situation (Wanjala, Wamocha, & Nasongo, 2022). Further to individual, it affords opportunities for growth and development of his skills, talent, personal capacities as a human being are utilized fully both to the advantage of organization. In this respect, the border theory has also been used to assess the influence of Human Resource Planning on employee productivity in the Communications Authority of Kenya.

Public organizations in the developing world are habitually faced with recurring performance constraints such as absenteeism, lateness, redundancy, lowly paid and unmotivated and satisfied public servants leading to delayed and poor service delivery (Songstad, Lindkvist, Moland, Chimhutu, & Blystad, 2012). In Kenya, public service is defined by rigid bureaucratic hierarchical organizational structures which negatively impacts efficiency in service delivery. Job design has been suggested as a way to improve service delivery efficiency or attainment of organizational goals while increasing employee productivity (Salau, Adeniji, & Oyewunmi, 2014). It satisfies employees' psychological and social needs and will therefore improve job satisfaction (Hackman and Oldham, 1976). The border theory exploited the enactment of the limits that divide life domains, in the context of work design to find out the influence of work design on employee productivity in the Communications Authority of Kenya.

In critiquing of the border theory, Shaw (2021) argues that the theory relies on strengths of permeability, flexibility and blending. Permeability means that elements can enter other

domains to some degree. For example, a dedicated office space creates borders between work and home but the border has permeability because family members can enter the space and interrupt the work. Flexibility on the other hand means the borders' ability to expand and contract depending on the requirements of the domains. For example, people having the opportunity to work remotely makes the physical border flexible. The flexibility of the boundaries is seen in the policies like flextime, job-sharing, part-time work and telecommuting (Cowan & Hoffman, 2007). In having described the boundaries according to permeability and flexibility, Clark (2000) asserts that the boundaries could be strong (impermeable and inflexible) to weak (flexible and blended), suggesting that the individuals accordingly can be characterized as 'border crossers' and 'border keepers'. This essentially suggests that the border theory is not very specific and allows blending. Blending means a mix of both flexibility and permeability occurring at the border. When blending happens the borderland cannot be called work or home domain because both work and personal life are intertwined. This formed the greatest limitation of this theory. This is because as conceptualized, the border theory differentiates blocks of space and time in its most basic form, each block is covered by frames and can be attributed to differing roles in one's life environment (Tammy, Euna, & Laurenz, 2014). In this study, the weakness on permeability was overcome by the exploring how the existing human resource policies protect the hybrid working model from permeability through setting clear boundaries. Additionally, the border management discourse has developed around the concept work – life balance thus helping overcome the limitation of permeability, flexibility and blending through creating a harmonious balance.

2.2.2 Technology Acceptance Model

The Technology Acceptance Model (TAM), developed by Fred Davis in 1989, will be used to assess the effect of ICT Adoption on employee productivity. According to Lopez-Leon, Forero, and Ruiz-Díaz (2020), hybrid working arrangements technologies enable the essential aspects such as communication, collaboration and organization. The advancement of technologies enables practices such as working from home, and the never-ending growth of these technologies would mean that in the future, working from home will be easier, more accessible, and more effective (Allen, Golden, & Shockley 2015). TAM is used to test users' acceptance of new technology. The model basically

tries to estimate and clarify users' acceptance of information technology (Davis & Venkatesh, 1996). It states the procedure and the time that users embrace and consume a new technology.

Davis (1989) adopted Fishbein and Ajzen's Theory of Reasoned Action and proposed Technology Acceptance Model for defining users' behavioral intention. The behavioral intention was established by Ajzen and Fishbein (1980) as a measure to predict the possibility whether a person would perform the intended behavior. Behavioral intention (BI) is affected by perceived usefulness (PU) and perceived ease of use (PEOU) in this model. Research indicates that PU and PEOU have an effect on behavioral intention, on the other hand, some researchers state that PEOU has more effect on PU than the effect on behavioral intention (Keil et al., 1995). Davis (1989) stated that attitude toward use (A) and perceived usefulness (PU) control the behavioral intention (BI). PU and PEOU have an effect on A in TAM.

TAM explains the relationship between technology usage and BI. In other words, TAM claims that users' BI to use a system affects technology usage. This model shows that PU influences BI and attitude towards usage. Moreover, PU is a strong determinant for user satisfaction. Researchers state that users would be more satisfied when the system improves their performance (Calisir & Calisir, 2004). Venkatesh and Davis (2000) claim that PU is a significant factor for TAM. PU has a direct effect on BI and PEU. likewise, PEOU is another significant factor in TAM. This factor is related to users' perception of technology. It could be said that users' ease of use perceptions influences computer usage if they have been trained before. On the other hand, it is claimed that training is not associated with ease of use but with usefulness.

Consistent with extant research, this study argues that when employees work from home, their perceptions of using new technology will influence their decision to use it. Since the TAM literature posits that PEOU and PU are two important determinants of actual use, we expect that employees who find technology useful and easy to use will be more likely to use it. Research shows that growing remote working engenders technological changes in organizations exposed to it, and technological changes result in more people's

technology usage and the introduction of new opportunities (greater flexibility and reactivity) and challenges (increased complexity and changing customer preferences).

The critique of this theory has been that TAM model cannot fully explain the reason behind the acceptance and use of technology in the business environment. The TAM is inadequate to address the nexus between technology and the actual adoption and use of technology (Ajibade, 2018). Findings show weaknesses of TAM to explain users' behavior (Hai & Kazmi, 2015; Lim, Osman, Salahuddin, Romle, & Abdullah, 2016). It was further argued that the TAM model could not sufficiently predict the acceptance of information communication technology (ICT) while another model was solicited to predict acceptance of technology (Hojjati & Khodakarami, 2016). This model is insufficient to explain users' adoption and use of new technology especially in the context of e-government (Chandio, Burfat, Abro, & Naqvi, 2017). It is for this reason that the study looked at adoption of ICT in the organization at an individual level so as to overcome the perceived weaknesses of TAM. This theory helped in examining the effect of ICT Adoption on employee productivity in the Communications Authority of Kenya.

2.3 Empirical Review

This section specifically focuses on the various studies that have been conducted in line with the themes of the study. The review of the studies will help in identifying the multiple gaps that this research will be seeking to solve.

2.3.1 Hybrid Working Arrangements and Employee Productivity

Trivedi and Patel (2022) analyzed the public sentiments (positive, negative, and neutral) on a hybrid work model using Twitter API and the Robustly Optimized BERT Pre-Training Approach (RoBERTa). Out of one thousand tweets containing the term “hybrid work”, 37 (4.2%), 305 (33.3%), and 658 (62.5%) tweets were classified as negative, neutral, and positive, respectively. They also compared the public sentiments about hybrid work with those of remote work. The RoBERTa classified 8(1.6%), 436 (85.9 %), and 62 (12.5%) tweets as negative, neutral, and positive, respectively. The results showed that the majority of individuals showed favorable sentiment toward the hybrid work arrangement. The study findings also demonstrated that hybrid work can improve employee productivity. Whereas this study focused on the general sentiment towards

hybrid work arrangements in a bid to seek public opinion, the current study is more specific to the factors that enable hybrid working model including human resource planning, ICT adoption, work-life balance and work design.

Yang, Kim and Hong (2021) sought to understand how knowledge workers working from home during COVID-19 changed their views on physical work environments and working-from-home practices. This study conducted a survey targeting workers in the USA recruited via Amazon Mechanical Turk. A total of 1,651 responses were collected and 648 responses were used for the analysis. The perceived work-life balance improved during the pandemic compared to before, while the balance of physical boundaries between the workplace and home decreased. Workplace flexibility, environmental conditions of home offices and organizational supports are positively associated with productivity, satisfaction with working from home and work-life balance during the pandemic. The findings of the study indicated that the respondents were able to have a work-life balance with the hybrid model and achieved employee productivity.

A cross-sectional descriptive study conducted by Mendoza, Asio, Abarintos, & Paguio, (2022) assessed the readiness of 219 faculties and 69 staff in a Gordon College in Philippine for alternative work arrangements in terms of access to transportation, their health condition, information technology resources, connectivity, and their preferences in terms of alternative work arrangements. Results show that most respondents use public transportation to work and a minor percentage have medical conditions that make them susceptible to the COVID-19 virus. The top information technology (I.T) resources available to the respondents at home are smartphones/iPhones, laptops, and printers. Most have intermittent internet connectivity, with DSL/Fiber Connectivity and mobile data the most common types. Finally, the majority believe they can work from home, given the nature of their duties. However, more respondents prefer a hybrid work arrangement to a full-time work-from-home placement as this would improve their productivity. The study findings indicated that the respondents had a good work-life balance, preferring the hybrid model and the contribution of the study being adding into employee productivity.

Harunavamwe and Kanengoni (2023) assessed the impact of technostress creators, work–

family conflict and perceived organizational support on work engagement on employees operating within the virtual and hybrid work settings in a University in South Africa. The idea was to redefine the antecedents of work engagement in work settings characterized by excessive technology and work–family conflict. The study applied a quantitative research framework. Data was gathered from 302 academics and support staff employees through a self-reporting questionnaire and was analyzed using variance-based structural equation modelling. The study showed that despite the presence perceived organizational support, technostress creators and work–family conflict issues increase demands and thus influences work engagement negatively. The results noted that, in hybrid and virtual work settings, managers can drive employee engagement by focusing on designing more favorable work–life balance (WLB) policies, providing adequate information communication technology (ICT) support, fostering aspects of positive technology and defining the boundaries between work life and family time (Harunavamwe & Kanengoni, 2023). This study is closely related to the variables of human resource planning (WLB policies), ICT adoption and work life balance. However, the study did not explore the impact of work design on work engagement. Additionally, the current study explored beyond work engagement by focusing on employee productivity. Work engagement is a crucial motivational construct that results in a number of positive organizational outcomes such as employee productivity (Harunavamwe & Kanengoni, 2023).

Opuko and Munjuri (2017) examined the effect of flexible work practices on job performance at an international courier delivery services company operating in Kenya. A descriptive research design was used with data collected using questionnaires from all the 90 employees of the company in Kenya based in Nairobi and Mombasa offices. The study showed a strong and positive correlation between flexible work practices and job performance. The eight independent variables including Compressed Working Hours, Teleworking/Telecommuting, Job Sharing, Home working, Flexitime/Flexible Working Hours, Sabbaticals/Career Breaks, Mobile Working, Shift Work explain 98.7% of the changes in the job performance in the company. The variables of flexible work practices were found to have a significant impact on job performance. The study concluded that Flexible Work Practices have a strong positive effect on job performance. While this study majorly focused on hybrid work arrangements in the context of mode of delivery and type

of model (job performance), the current study reviewed hybrid work arrangements in the context of ICT adoption, human resource planning, work life balance and work design.

2.3.2 ICT Adoption and Employee Productivity

According to Junglas, Goel, Rehm, and Ives (2022), technology driven organizational transformation heightened during the COVID-19 pandemic is gaining momentum, as employees increasingly invest in technology for work. Referred to as IT consumerization, employees use their smartphones, notebooks and tablets in the workplace, accompanied by a growing toolbox of applications. Google Apps and Dropbox are just a few consumer tools that employees use to get their work done, and in doing so, often bypass the authority of the IT department and the organization. Employees' investment in consumer IT and its accompanying applications has been suggested as related to innovation and productivity gains, but there has been no empirical validation of such a beneficial relationship (Junglas, et al., 2022).

Lakhwani, Dastane, Satar, and Johari (2020) investigated the technology adoption on organization productivity in leading IT companies in Malaysia. An explanatory research design with a quantitative research method was used and data collected using a self-administered questionnaire using online as well as an offline survey. The sample consisted of 300 IT managers and senior-level executives selected using snowball sampling. The research findings demonstrated that technological change and IT infrastructure positively and significantly impact the organisation's productivity while IT knowledge management has significant but negative impact on organizational productivity of IT companies in Malaysia. Whereas this study focused on technology adoption effect at an organizational productivity level, the current study focused on ICT adoption on an individual employee level.

Tusiimemukama (2019) examined the relationship between technology adoption, employee engagement and how they contribute to job performance in Uganda beverage companies. The study utilized a quantitative approach and adopted a cross sectional survey design. Data was collected from 240 respondents and analyzed using SPSS. The study found out that there was a significant positive relationship between technology adoption and perceived job performance. The researcher recommends that further

research should be carried on technology adoption, employee engagement and perceived job performance because the model utilized for this study explained only 17.4% of these variables. The research gap arises from this large percentage of the unexplained variance thus suggesting the need for additional research incorporating potential unmeasured variables. This is why the current study examined employee productivity within the context of ICT adoption, human resource planning, work life balance and work design. Muiruri (2021) sought to determine the effect of technological innovations on the performance of accounting firms, a case study of the Big Four accounting firms in Kenya. The study concluded that the adoption of computerized auditing techniques positively impacts the performance of the big four accounting firms in Kenya. Generalized audit software has led to faster analysis of big data and improved insights for forensic audits. Consequently, this enabled big four accounting firms to improve recovery of fraud proceeds for their clients, contributing to better client relations. The adoption of accounting internet technologies positively impacts the performance of the big four accounting firms in Kenya by improving employee productivity. While this study was limited to study in accounting firms which are basically multinationals with a focus on better client relations, the current study explored a national ICT Regulator which has different management structures and ICT adoption framework. The difference in these organizations arose from the fact that public sector organizations such as the CA have a typical 0800 hours– 1700 hours work schedule largely based on physical presence. It is still a new concept that public sector organization’s employees can deliver their tasks under different work delivery models such as hybrid working model.

2.3.3 Human Resource Planning and Employee Productivity

Globalization, competition, information technology, innovations, new market and consumer trends, together with other emerging issues affect the supply of labour. Consequently, there is need for professional Human Resources Planning (HRP) practices. This is essential for future human planning demand and supply forecasting to ensure organizations maintain optimal staffing levels. HRP is that process of ensuring the organization has adequate employees with the right competences deployed or placed according to their expertise (Gilley & Maycunich, 2000). Katua (2014) inferred that, HRP strategies can enhance performance of a firm. According to their findings, the scholars

recommended that firms ought to develop and document strategies for HRP with the object of enhancing both employee and organizational performance. The fundamental importance of human resource planning practices to the organization's performance has been underscored; yet the same has hardly been studied in the context of regulatory state corporation such as the CA. The findings from the current study in CA significantly associates human resource planning with the employee productivity.

Ngwa, Adeleke, Agbaeze, Ghasi, and, Imhanrenialena (2019) assessed the effect of human resource planning on employee performance of selected banks in Cameroon. Data was obtained through questionnaires, and SPSS was utilised for the analysis. The study finds positive relationship between HR planning and employee performance. However, benefits and selection have the largest effect on employee performance. As a result, bank management and HR departments should have a human resource plan in place so that the plans can be executed regardless of management changes. This study examined the human resource planning in the context of benefits, selection and management changes while the current study brought out the aspect of human resource planning in the context of definition of roles and task delivery methods.

Mbiu and Nzulwa (2018) studied the influence of human resource planning on employee productivity in county governments in Kenya. This study adopted a descriptive research design with a population of 216 employees at Council of Governors (COG) in Nairobi. Using stratified sampling a sample size of 55 respondents was picked and data collected using a questionnaire with closed-ended and open-ended questions. The study's major findings revealed the existence of positive and significant relationship between recruitment and deployment, training and development of talent, talent retention, succession planning and performance of the Council of Governors in Kenya. The study concluded that the relationship between recruitment and deployment, training and development of talent, talent retention, succession planning and Employee Productivity was statistically significant. The study recommended that Council of Governors should put mechanisms in place to enhance internal recruitment of talent, develop current talent training manuals, and conduct of talent surveys to ensure internal talent structures are relevant. Whereas this study focused on the HR aspects of recruitment and deployment,

training and development of talent, talent retention, succession planning, the current study focused on employee task alignment to the task delivery methods.

Further, Katua, (2014) investigated the effect of human resources management strategies on the performance of commercial banks in Kenya. The study adopted a mixed method approach in a population of 46 banks and 2,738 employees. Data was collected from a sample of 349 employees through questionnaires and interviews. It was established that HRP practices like training and development, recruitment and selection, relations, reward and compensation strategies have a significant positive effect on performance of commercial banks in Kenya. From the study, it is concluded that there is a positive relationship between strategic human resource management and employee performance among commercial banks in Kenya thus enhancing firm's performance and profitability. It was recommended that commercial banks should develop and document human resource management strategies that are linked with the overall bank's strategy. This study sought to understand whether a similar recommendation can be made in the context HRP practices that enable a hybrid working model organizational strategy. Additionally, human resource management in the context of hybrid working model has mostly been studied from the perspective of the company as a whole (Van-Gestel, Denis, & Ferlie, 2020), with little focus on employees' perspectives and their perceptions of these hybrid approaches (Williamson, Colley, & Foley, 2020).

2.3.4 Perceived Work-life Balance and Employee Productivity

Having a harmonious balance between work and personal life is critical to bringing a healthy and stress-free environment and allowing employees to unleash their full potential. The management of work-life balance and/or work-family conflict interest of employees have been found to be among the primary aspects to be addressed by the organization as a way to preserve human resources (Au and Ahmed, 2019). In a global study on future work arrangement preferences, Reisinger and Fetterer (2021) report that knowledge workers find flexibility more important to them than wage or other benefits (59% of respondents) and would prefer to work for a company that gives them the flexibility to work from anywhere rather than exclusively on the employer's premises (77%). However, flexibility does not exclude occasional working from the office; for 61%

of respondents, flexibility meant the ability to work from the office and from home, depending on task requirements. In addition, Reisinger and Fetterer (2021) emphasized that workers in the study were motivated by autonomy, i.e., the ability to decide where, when, and how to do their work as long as they met their goals. Work-life balance was a good precursor to the hybrid model, as participants had no problem with balancing and still achieving their deliverables.

Larasati and Hasanati (2019) sought to find out the effects of work-life balance on employee engagement in millennial generation employees. The research participants in this study were employees of PT. Senwell company in Indonesia. Researchers employed a work-life balance scale and the Utrecht work engagement scale in collecting the data. A simple linear regression was recruited to analyse the data. The results showed that the percentage of work-life balance on employee engagement was 14.3 %. This implies that companies that consider the welfare of employees' personal life and work life are proven to be able to influence the level of employee engagement in the company.

Aziz-Ur-Rehman and Siddiqui (2019) studied the relationship between flexible working arrangements, work-life balance and job satisfaction in Karachi public sector universities, in Pakistan. This study adopted a descriptive research design with the independent variables flexible working arrangements with factors like flexi-time, contractual working, work shifts and telecommuting, that are provided to employees to improve their productivity and maintain work-life balance. The sample size was 200 respondents with a structured questionnaire distributed online and physical visits. The findings of this study revealed that flexible working arrangements were positively correlated with work-life balance. The study also discovered that work-life balance is a strong mediator between flexible working arrangements and job satisfaction (Aziz-Ur-Rehman and Siddiqui, 2019). Whereas this study was done in Pakistan, the current study was domiciled in Kenya to examine whether work life balance has an impact on productivity in the ICT sector regulator and the results were significant on work-life balance having an influence in the employee performance. Whereas the study in Pakistan focused on various forms of hybrid working model including flexi-time, contractual working, work shifts and telecommuting,

the current study studied hybrid working model in the context of work stress management, interaction between work and family, career satisfaction and remote work management.

Annan (2020) examined the impact of work-life balance and employee performance at the Ghana Audit Service, Cape Coast Metropolis. The research also sought to find out the causes of work-life imbalance among audit staff as well as the effect of labour-life balance on employee performance. The study adopted the correlational research design and used a questionnaire to collect data from 75 employees of the firm. The study found that stress, work overload and irregular work schedule are some of the causes of work-life imbalance. It was also deduced that work-life balance had a substantial effect on the performance of employees. Further, Ghareeb (2019) analyzed the relationship between work-life balance and productivity among employees in Medium Organizations in Ghana. This study adopted a quantitative research method with data from collected from 240 respondents. This was analyzed using different statistical techniques such as reliability survey, descriptive of variable analysis, correlation analysis using the Statistical Package for Social Science (SPSS). The correlation results indicated that work-life balance is positively correlated with productivity. These two studies from Ghana reviewed the work-life balance in generalized format without a specific focus on work-life balance in the context of hybrid working hours thus creating a research gap. The current study will bring more precision to the factors of work-life balance with some inclination towards remote work management.

Locally, Kipkoech (2018) investigated the impact of flexible working patterns on employee performance in the Kericho County Referral Hospital. The research objectives were to assess the effects of part time working, to investigate the effects of work shift, to determine the effects of flexi time and to establish the effects of temporary contracts on employee performance (Kipkoech, 2018). A descriptive research design was adopted and the population of 111 employees stratified into top management, doctors, clinical officers, nurses and support staff. A sample of 104 staff was selected using stratified sample techniques and data collected using a closed and open-ended questionnaire. The study found out that flexi working strategies was significant to performance of employees in an organization with the performance contributed by flexi working methods being 22.9%

while other factors which were not measured recorded 77.1%. Temporary contract, work shift and part time working were positive significant predictors while flexi time positive but not significant to performance (Kipkoech, 2018). This implies that temporary contract, work shift and part time had positive effect performance. The study recommended research on flexi time and performance which the current study focused on in the context of work-life balance. The findings indicated that there was a positive alienation to hybrid model which brought about work-life balance and so employee performance.

Mbugua (2021), analyzed the effect work life balance as a specific employee engagement strategy in relation to employee engagement in the software development space in Kenya. The target of the study was the millennial workforce in the software industry in Kenya, aged between 20 and 39 years. He targeted Millennials from their respective workforces were targeted in this study so as to understand their employee engagement strategy preference and overall reception to their company's current employee engagement initiatives. From a population of 430 a sample size of 189 respondents were selected and questionnaires shared electronically. Pearson's correlation was used to evaluate the work-life balance to ascertain its importance to the millennial workforce. The study found that work-life balance positively related to employee engagement with a Pearson's correlation score of 0.269. The study recommended that companies should avoid overworking their employees by enabling them to have a work-life balance. Remuneration, though not studied as one of the objectives, was regardless, highly regarded by the employees but was only considered feasible after a suitable work-life balance was attained (Mbugua, 2021). The results indicated that with the existent human resource policies, these guided the hybrid model and the employees were able to have a work-life balance and so their productivity was realized.

Indeed, different scholars have different views on the impact of remote working on the work life balance of workers. Some believe that work from home positively impacts the work-life balance (Pelta, 2020). On the contrary, there are adverse effects found in studies where a blur between work life and personal life is visible and it seems that home-based working may negatively impact WLB (Palumbo, Manna, and Cavallone, 2020). Putri and Amran (2021) studied the effect of work from home during the coronavirus disease on the

WLB of employees in Indonesia and found that it had a positive impact. However, employees often cannot balance their work and personal time as their working environment might be flexible, but their hours are increased. This lack of clarity motivates the research gap with the researcher keen to find out what the true effect of remote working is on work-life balance in the context of the Communications Authority of Kenya. The study results found a significant relationship between work-life balance and employee productivity at CA.

2.3.5 Work Design and Employee Productivity

Word design or Job design as it is identified by some scholars has a rich documented history dating back to the industrial revolution. Campion and Thayer (1987) identified four distinct job design models that draw from unique disciplines. This includes the mechanistic (i.e., scientific management and the industrial engineering approach focused on maximizing efficiency), motivational (i.e., the organizational psychology approach focused on maximizing job satisfaction and motivation), the biological model from ergonomics and medical sciences that focused on maximizing comfort and physical health, and the perceptual-motor model from experimental psychology and human factors that considers the attention and informational demands of the work. This interdisciplinary model highlights the discrete benefits and trade-off of each disciplinary-based approach, which can be particularly helpful when designing and redesigning job (Campion and Thayer, 1987).

Raharjo, Nurjannah, Solimun, and Fernandes (2018) sought to analyze the relationship between job design, job commitment and organizational culture with human resource performance using a case study of the construction services provided by national consultants. The research population consisted of all employees of a national company offering consultation services, from four big Indonesian State-Owned Enterprises Contractors. The variables organizational culture and job design have a significant direct effect on job commitment. Likewise, the effect of organizational culture and job commitment on human resource performance is also significant. However, a different result is shown in the result of the direct effect of the variable job design on the variable human resource performance, which indicates that the variable job design does not have

a significant direct effect on the variable human resource performance. In other words, the intensity of the job design value will not affect the intensity level of human resource performance. The work design at CA had a significant relationship with employee productivity as per the study findings.

Siengthai and Pila-Ngarm (2016) examined the effect of job redesign as well as that of the interaction effect of job redesign and job satisfaction on employee performance. Large-scale questionnaire survey was conducted in 2012 taking the hotel and resort industry and the banking industry in Thailand as its research sites. Multiple regression analysis was used to analyse the survey data obtained from 295 sample respondent managers. The researchers found that job redesign is significantly and inversely related to employee performance. Meanwhile job satisfaction is found to be positively and significantly related to employee performance. Moreover, the interaction effect between job redesign and job satisfaction is found to be positively and significantly related to employee performance. Hence, firms should try to enhance employee job satisfaction while implementing job redesign so that the job redesign will result in improved employee performance. The findings suggest that implementing job redesign without concerned employees experiencing job satisfaction or merely implementing job redesign can result in a possible decreased employee performance. The study results had an indication that CA has structured work designs have a significant effect on employee productivity.

Adagbabiri & Okolie (2019) assessed the impact of job design on employee performance in the Nigerian Bottling Company Plc, Benin City. This study adopted descriptive design and data was collected via a survey of 237 respondents. The study found that job design which comprises job rotation, job enlargement and job enrichment has a positive correlation with employee performance (Adagbabiri & Okolie, 2019). This study recommended that employees should be involved in the process of designing their job characteristics and that HR Managers should consider individual differences and attributes while reviewing and redesigning work at regular intervals. This study focussed on job design in the context of rotation, enlargement and enrichment while the current

study will focus on work design in the context of job autonomy, job feedback, job characteristics and work context.

Despite its salience for practice and policy, and its sound theoretical underpinning, work design has not received the research attention that is warranted especially given radical shifts in work organizations (Parker, Wall and Cordery, 2020). It is against this background that this study sought to examine the effect of work design on employee productivity in the Communications Authority of Kenya. The study findings indicated that the employee's productivity was good at CA and this was associated with the work designs that have been put in place at the Authority.

2.4 Research Gaps

Disparities were established in the literature reviewed; especially methodological gaps, empirical gaps and findings. Table 2.1 summarizes the gaps identified from the review of existing literature on the influence of hybrid working arrangements on employee productivity.

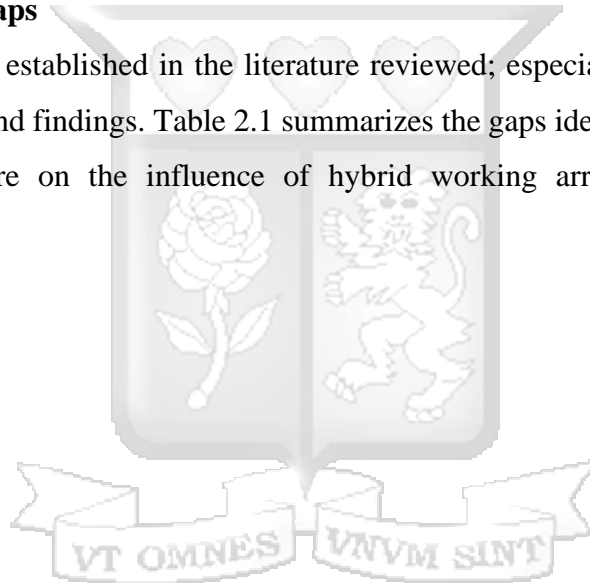


Table 2.1: Summary of the Literatures Reviewed, Findings & Research Gap

Author	Title of the Study	Findings	Research Gap
Trivedi and Patel (2022)	Mining Public Opinion about Hybrid Working with RoBERTa	Majority of individuals showed favorable sentiment toward the hybrid work arrangement	Whereas this study focused on the general sentiment towards hybrid work arrangements in a bid to seek public opinion, the current study is more specific to the factors that enable hybrid working model including human resource planning, ICT adoption, work-life balance and work design.
Ngwa et. al, (2019)	Effect of reward system on employee performance among selected manufacturing firms in the Litoral region of Cameroon	There was a positive relationship between HR planning and employee performance	This study examined the human resource planning in the context of employee benefits, selection and management changes while the current study brought out the aspect of human resource planning in the context of definition of roles and task delivery methods.
Mbiu and Nzulwa (2018)	Influence of human resource planning on employee productivity in county governments in Kenya.	The relationship between recruitment and deployment, training and development of talent, talent retention, succession planning and Employee Productivity was statistically significant.	This study focused on the HR aspects of recruitment and deployment, training and development of talent, talent retention, succession planning while the current study focused on employee task alignment to the task delivery methods.

Author	Title of the Study	Findings	Research Gap
Muiruri (2021)	The effect of technological innovations on the performance of accounting firms, a case study of the Big Four accounting firms in Kenya	Adoption of computerized auditing techniques positively impacts the performance of the big four accounting firms in Kenya	This study was limited to study in accounting firms which are basically multinationals with a focus on better client relations, while the current study explored a national ICT Regulator which has different management structures and ICT adoption framework.
Lakhwani, Dastane, Satar, and Johari (2020)	The Impact of Technology Adoption on Organizational Productivity.	The three factors of technology adoption, i.e Technological change, IT infrastructure, and IT knowledge management play important role in deciding organizational productivity.	This study focused on technology adoption effect at an organizational productivity level, the current study focused on ICT adoption on an individual employee level.
Adagbabiri and Okolie (2019)	The impact of job design on employee performance in the Nigerian Bottling Company Plc, Benin City.	The study found that job design which comprises job rotation, job enlargement and job enrichment has a positive correlation with employee performance.	This study focussed on job design in the context of rotation, enlargement and enrichment while the current study focussed on work design in the context of job autonomy, job feedback, job characteristics and work context.
Source: Researcher, 2023			

2.5 Conceptual Framework

The representation of the dependent and independent variables being investigated in a study in a diagrammatic form is referred to as conceptual framework (Mugenda & Mugenda, 2011). It links the various aspects listed as independent variables that may influence employee performance (Swanson & Chermack, 2013). The conceptual framework for this study is as outlined in figure 2.1.

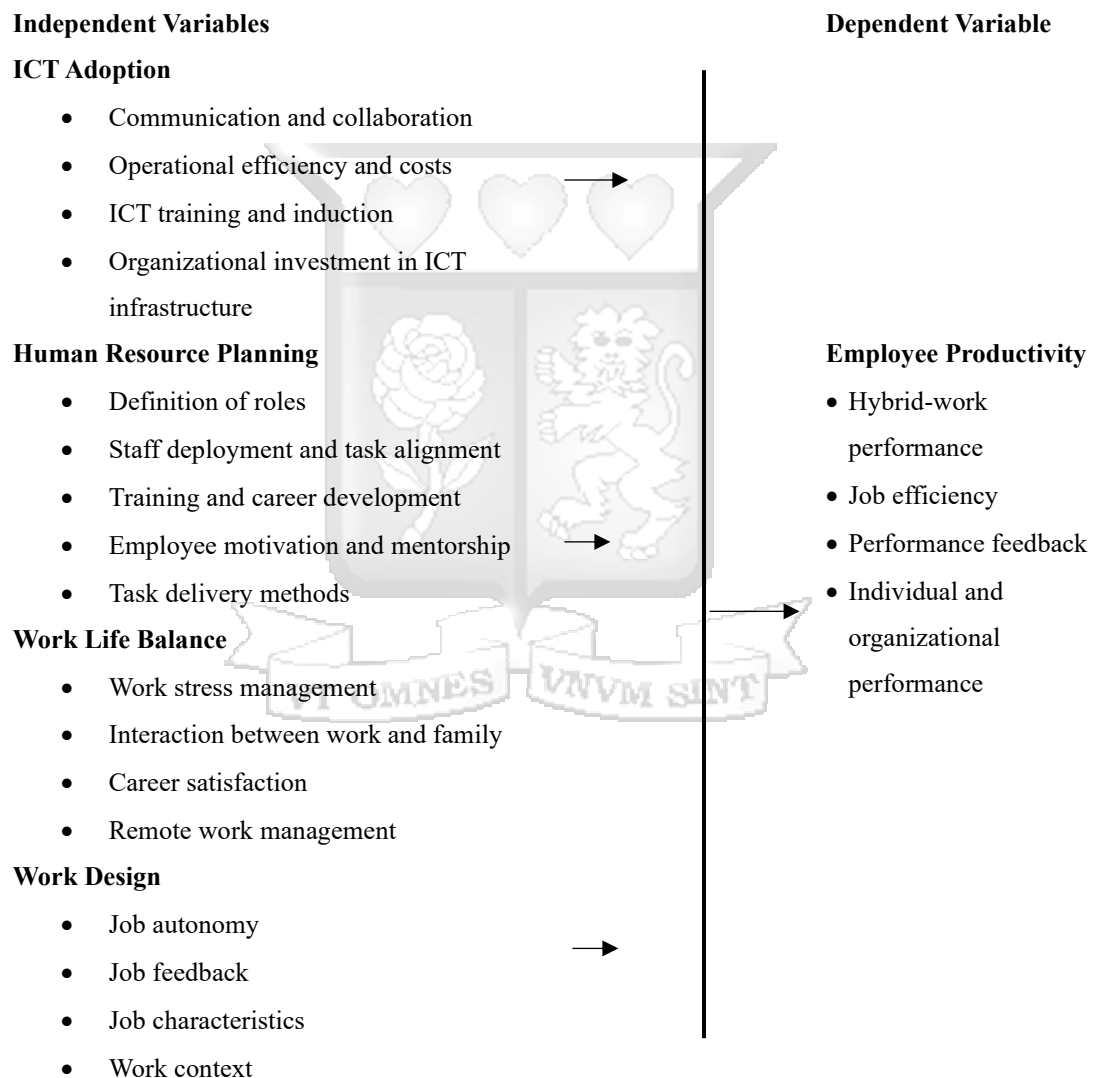


Figure 2.1: Conceptual Framework

Source: Researcher, 2023

2.6 Operationalization of Variables

As shown in the conceptual framework, this study's independent variables are ICT adoption, human resource planning, work-life balance and work design while the dependent variable is employee productivity. Table 2.2 shows the operationalization of the variables.



Table 2.2: Operationalization of Variables

Variable	Type of Variable	Indicators	Measurement	Data Collection tool	Supporting Literature
ICT Adoption	Independent	<ul style="list-style-type: none"> •Communication and collaboration •Operational efficiency and costs •ICT training and induction •Organizational investment in ICT infrastructure 	Likert Scale	Questionnaire	(Junglas, et. al., 2022; Lakhwani et. al., 2020; Muiruri, 2021)
Human Resource Planning	Independent	<ul style="list-style-type: none"> •Definition of roles •Staff deployment and task alignment •Training and career development •Employee motivation and mentorship •Task delivery methods 	Likert Scale	Questionnaire	(Ngwa et. al., 2019; Mbiu & Nzulwa 2018; Katua, 2014)
Work Life Balance	Independent	<ul style="list-style-type: none"> •Work stress management •Interaction between work and family •Career satisfaction •Remote work management 	Likert Scale	Questionnaire	Larasati & Hasanati, 2019;(Aziz-Ur-Rehman & Siddiqui, 2019; Putri & Amran, 2021; Palumbo, Manna, & Cavallone, 2020)
Work Design	Independent	<ul style="list-style-type: none"> •Job autonomy •Job feedback •Job characteristics •Work context 	Likert Scale	Questionnaire	(Hussain 2018; Raharjo et al., 2018; Adagbabiri & Okolie, 2019; Siengthai & Pila-Ngarm, 2016)
Employee Productivity	Dependent	<ul style="list-style-type: none"> •Hybrid-work performance •Job efficiency •Performance feedback •Individual and organizational performance 	Likert Scale	Questionnaire	(Warsame, 2017; Kramer & Kramer, 2020; Broadhurst, 2012)
Source: Researcher, 2023					

2.7 Chapter Summary

This chapter consists of the empirical and literature review. It presents the theoretical literature review of the border theory and technology acceptance in the context of study's dependent variables. The chapter will provide a summary of literature and research gaps, the conceptual framework and operationalization of variables.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The study methodology is discussed in this chapter. The pertinent areas covered in this chapter include research design, target population, sample and sampling technique, data collection and pretesting of research instrument. Other areas covered include validity, reliability, data analysis and ethical considerations.

3.2 Research Philosophy

According to Sekaran and Bougie (2013), a research philosophy points out to the adopted strategy for data collection, analysis and consumption. It contextualizes and details how the researcher conducted themselves during the duration of the study (Pat, 2006). There are four key philosophies that are useful when researching contemporary research on business subjects which include positivism, critical realism, constructionism, and pragmatism (Creswell, 2014). This study adopted the positivist philosophy that believes that the truth is steady and can be portrayed from a target perspective without meddling with the phenomenon being observed (Creswell, 2008). Positivism is associated with a self-understanding of scientific activity in which social science is independent of the reality it describes (Riley, 2007). This philosophy was adopted due to the fact that the study was scientific in nature by attempting to establish how factors of hybrid working arrangements affected employee productivity in the Communications Authority of Kenya. The positivism philosophy helps researchers make accurate predictions about society and social change. Additionally, positivists attempt to identify the causes which influence outcomes; and they assume useful research is based on theory, hypothesis, and quantitative data (Cooper & Schindler, 2014). For this reason, positivism philosophy was as suited for this study because it relies on the quantitative data.

3.2.1 Research Design

Research design is a plan or outline which provides conditions for data collection, analysis and measurement in a way that enables the realization of the research purpose (Cooper & Schindler, 2014). Additionally, it is a structured framework for investigation, which aids in obtaining answers to research questions. It also depicts the relationship between

different variables and their link to the study, which assists in obtaining empirical evidence. Research design entails exploratory designs, descriptive, designs, quasi-and experimental designs (Ogula, 2005).

Descriptive research design was appropriate for the study because the information collected about the subjects represented what was going on at one point in time (Cooper & Schindler, 2014). The main purpose of a descriptive survey was to detail the situation as is, that is, the researcher reports the findings (Kombo and Tromp 2016). The design was appropriate for the study since it allowed for the collection of information for independent and dependent variables using a structured questionnaire. Descriptive design is suitable when collecting information about peoples' attitudes, habits or variety of education and social issues (Orodho and Kombo, 2017). The study further adopted a correlational study design. This design allowed for quantitative statistical analysis in drawing inferences based on the data collected in the research. Cross-sectional examination includes accumulation of information at a solitary point in time. Babbie (2010) noted that numerous graphic examinations are cross-sectional in nature. This examination configuration necessitated that factors are not controlled by the researcher hence giving the freedom required by the managing philosophical tenets.

3.3 Population and Sampling

Population refers to the aggregate of individuals in the study. It comprises of all potential participants that can make up the study group (Kumar, 2008). In research, population refers to the group of elements in which a study problem exists.

3.3.1 Target Population

According to Sekaran & Bougie (2016) a target population ought to have unique and similar characteristics under investigation by the researcher. The study's unit of analysis was the Communications Authority of Kenya. The study's target participants comprised of all employees of the organization whose number stood at 248 distributed across 20 departments (CA Annual Report, 2021). These departments included: Corporate Communications (CC), Compliance & Enforcement (CE), Competition Management Services (CMS), Consumer Protection & Advocacy (CPA), Cyber Security (CS), Finance & Accounts (F&A), Frequency Spectrum Management (FSM), Human Resource &

Administration (HRA), Internal Audit (IA), Information Communication & Technology (ICT), Corporation Secretary & Legal Services (LS), Monitoring, Inspection & Regional Co-ordination (MIRC), Multimedia Services (MMS), Public Education & Awareness (PEA), Postal & Telecom Services (PTS), Regulatory Affairs (RA), Research Planning & Quality Management (RPQM), Supply Chain Management (SCM), Standards & Type Approval (STA) and the Universal Service Fund (USF). The Authority's employees are categorized into four major categories and these formed the sampling frame for the study as shown on table 3.1.

Table 3.1: Target population

Category	Population	Distribution Across Departments	% of Population
Senior Management	37	20	14.9
Middle Management	46	20	18.5
Lower Management	111	20	44.8
Support Staff	54	20	21.8
Total	248	20	100
Source: Communications Authority, 2023			

3.3.2 Sampling Design and Sample Size

The study used a stratified sampling technique to determine the study sample. This is a type of sampling method in which the total population is divided into smaller groups or strata to complete the sampling process. According to Bryman (2001), a representative sample of the population is selected through establishing a sampling frame. The sampling frame refers to all the elements that are a representation of the population from which the sample under study is being assessed (Keen, 2015). Additionally, Bryman and Bell (2011) identify a sampling frame as the list of elements from which a sample is formulated. In the current study, the sample frame was drawn from the 20 Departments in the Communications Authority of Kenya. A sample size is the set of participants or elements from which information is obtained, which is represented by 'n' (Murthy and Bhojanna, 2008). The ultimate test of a sample design is how well it represents the characteristics of the population (Kothari, 2004). This study calculated the sample size using the Yamane

formula as shown below;

$$n = \frac{N}{1 + N(e)^2}$$

Where: n was the sample size, e is the error term, and N is the total target population.

$$\begin{aligned} N &= \frac{248}{1+248 (0.05)^2} \\ &= \mathbf{153} \end{aligned}$$

The final sample size for this research was 153 employees sampled across all the departments in the Authority. The population was sampled due to the homogeneity of participants whereby there was no need of studying the entire population as the employees had highly similar characteristics.

3.4 Data Collection Methods

The study used primary data and adopted the use of a questionnaire to collect data from all the respondents. This tool was administered to all respondents and questions asked were closed-ended. The choice to use a questionnaire is based on the fact that the tool is considerably easy to understand and use for the respondents (Bryman & Bell, 2011). The questionnaire captured both the respondents' demographic information and data covering both independent and dependent variables. In a bid to ensure easier, more convenient and faster data collection, the questionnaire was administered online using google forms. Additionally, collection of data was done through the drop and pick method of administering structured questionnaires to the research participants to ensure participation of those not able to use google forms. One hundred and one questionnaire were filled via google forms, while 38 were filled through drop and pick method. The participants using the pick and drop method were identified purely based on convenience of the respondents. The questionnaire comprised of six parts including: General Information; Effect of ICT Adoption on Employee Productivity; Influence of Human Resource Planning on Employee Productivity; Influence of Perceived Work-Life Balance on Employee Productivity; Influence of Work Design on Employee Productivity; and, Employee Productivity. Data was collected for a period of 2 weeks.

3.5 Data Analysis

The research adopted a quantitative analysis. Quantitative data collected was analyzed statistically using the Statistical Package for Social Scientist (SPSS version 27). Results were presented in tables, graphs and pie charts. Both correlation and multiple linear regression analysis was carried out. The model below was used to represent the relationship between performance as a linear function of the independent variables.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon. \text{ When } \beta_5 = 0 \dots \dots \dots \text{equation 3.2}$$

Where; Y= Employee productivity

ϵ = Error factor associated with research instruments

α =the constant

β s= Beta coefficients, X_1 = ICT Adoption, X_2 = Human Resource Planning, X_3 = Work Life Balance, X_4 = Work Design.

3.6 Research Quality

Prior to actual study the questionnaire was pretested within a proportion of the sample size to assure research quality. Pilot testing is a study done prior to embarking on the main study to enhance the validity and reliability of the data collection tool (Field, 2009). Further a validity and reliability test were conducted.

3.6.1 Pilot Study

This aided in examining shortcomings associated with the research instrument. A pilot study is necessary for testing the reliability of data collection instruments (Sekeran & Bougie, 2009). According to Mugenda and Mugenda (2003), 10% of accessible population (sample size) is generally recommended by the social researchers. Therefore, a total of 20 respondents one from each department, were subjected to a pilot study based on respondent availability convenience. The respondents who participated in the pilot study were not included in the actual study. The pilot study was conducted to check for possible errors on the questionnaire which can be as a result of unclear instructions. The questionnaire was edited to correct the deficiencies and errors detected during the pilot study before the main collection of data. According to Sim, Saunders, Waterfield, and Kingstone (2014) the main purpose of pretesting research instrument is to evaluate corrective measures to be adopted to enhance the quality of information gathered.

3.6.2 Validity Tests

Validity measures the accuracy and meaningfulness of inferences depending on the findings (Field, 2009). Validity tests was measured by subjecting the questionnaire for review by my supervisor and research proposal panel. They assessed all the statements in the questionnaires to determine their validity, and eliminate all invalid questions. The study only focused on content validity where only the contents of the instrument was assessed as to whether it measured what it ought to measure.

3.6.3 Reliability

The reliability test was conducted to measure whether the research instrument provided the same results each time the instrument was used among the sample respondents. Reliability refers to the degree to which a research instrument will produce consistent results after repeated trials in different environments (Lee & Lings, 2008). The common method for testing a research instrument's reliability is the Cronbach's Alpha. The researcher applied the Cronbach's alpha in conducting reliability tests. The Cronbach's alpha estimates the internal consistency within the research instrument (Wise, 2013). All constructs had an alpha score above 0.7 and were thus were adopted for the study.

Table 3.2: Reliability Results

Variable	Alpha	Items	Verdict
ICT Adoption	0.845	11	Accepted
Human Resource Planning	0.770	11	Accepted
Work Life Balance	0.848	12	Accepted
Work Design	0.769	11	Accepted
Employee Productivity	0.743	11	Accepted

Source: Author, 2023

3.7 Results utilization and dissemination

The study results were fundamental in driving the policy guidelines and programming of interventions that were aimed at scaling up the employee productivity with working from home or hybrid models. CA used the information for the basis of planning, advocacy and delivery of targeted human resource interventions. Moreover, evidence for referencing,

documentation and further research is a major contribution of this study. The results were disseminated to the CA, Strathmore University, NACOSTI and other local and international conferences for purposes of knowledge sharing.

3.8 Ethical considerations

Ethical approval was sought from Strathmore University's Institutional Ethics Review Committee. A research permit was obtained from The National Commission for Science, Technology and Innovation (NACOSTI). Additionally, a letter of introduction was obtained from Strathmore University Business School introducing the researcher as Master of Public Policy and Management student at the school and confirming that the research study was for academic purposes only. The data collection questionnaire was accompanied by a note detailing the study's intent and approval from the National Commission for Science, Technology, and Innovation (NACOSTI). Confidentiality and privacy was observed by not having personal identification information on the questionnaire and allowing the respondents to fill the questionnaire in privacy as this is an ethical requirement by NACOSTI. The study protected and kept information confidential under lock and key for hardcopy questionnaires and using passwords in laptops and, before revealing any information, the researcher sought informed consent from the respondents.

3.9 Chapter Summary

This study adopted a descriptive research design with cross-sectional examination being used in accumulation of information. Further this chapter described the study's unit of analysis, Communications Authority of Kenya, with a view to bring out the target population and sampling technique. The study adopted the use of a questionnaire for all the respondents. Finally, the chapter outlined the research quality considerations as well as the ethical considerations.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the results as per the objectives of the study and they are in form of tables, charts, figures and texts, to show the data that was derived during the data collection phase. Quantitative results are presented in this section. Stata version 27, and Ms Excel version 2019 were used for data analysis.

4.2 Response Rate

The number of respondents targeted were 153. The response rate was 90.8% and the remaining 9.2%, although previously having given consent to participate in the study, declined to undergo the study hence their data was not included in this study. According to Werner (2004), results from surveys with response rates above 80% are considered reliable. This means that the questionnaires filled and returned were sufficient enough to provide the required data therefore, the researcher proceeded with data analysis and interpretation.

4.3 Respondents' Socio Demographic Characteristics

4.3.1 Gender of the Respondents

The summary of the gender information of the study participants is shown in table 4.1. Majority of the respondents were male represented by 74 (53.2%) and the female were 65 (46.8%).

Table 4.1 Sex of the respondents

Variable	Category	Freq.	Percent
Gender	Male	74	53.2%
	Female	65	46.8%
	Total	139	100

Source: Research Data (2023)

4.3.2 Respondents' Age

The respondents below 35 years were 25 (18.0%), 35-45 years were 67 (48.2%), and 46 years and above were 47 (33.8%) as shown in table 4.3.

Table 4.2 Age of the respondents

Variable	Category	Freq.	Percent
Age	Below 35 years	25	18.0%
	35-45 years	67	48.2%
	46 year and above	47	33.8%
	Total	139	100

Source: Research Data (2023)

4.3.3 Department of the Respondents'

The summary of the respondents who were interviewed as per their departments is shown in table 4.3. Majority were from Corporate Communications (10.7%) and Consumer Protection & Advocacy (9.3%), while the least were from Internal Audit, Multimedia Services and Research Planning & Quality Management all tying at 2.2%.

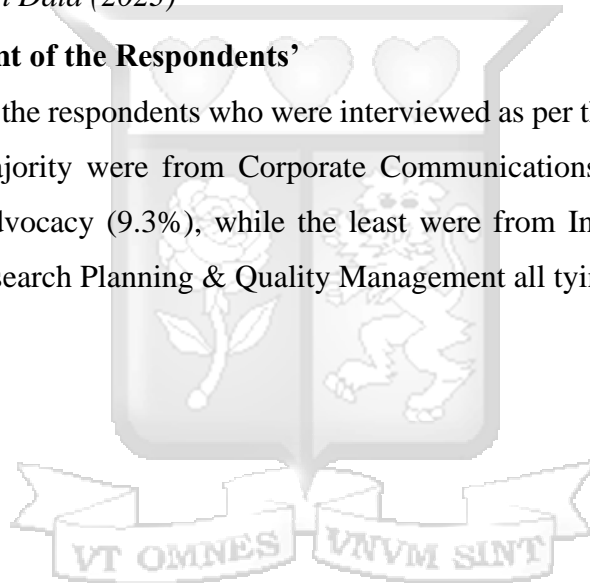


Table 4.3 Department of the respondents'

	Category	Freq.	Percent
Department	Competition Management Services	7	5.0%
	Compliance & Enforcement	4	2.9%
	Consumer Protection & Advocacy	13	9.3%
	Corporate Communications	15	10.7%
	Cyber Security	4	2.9%
	Finance & Accounts	5	3.6%
	Frequency Spectrum Management	5	3.6%
	Human Resource & Administration	11	7.9%
	ICT Department	9	6.5%
	Internal Audit	3	2.2%
	Legal Services	6	4.3%
	Monitoring, Inspection & Regional Coordination	9	6.5%
	Multimedia Services	3	2.2%
	Postal & Telecom Services	5	3.6%
	Public Education & Awareness	11	7.9%
	Regulatory Affairs	8	5.8%
	Research Planning & Quality Management	3	2.2%
	Standards & Type Approval	10	7.1%
	Supply Chain Management	4	2.9%
	universal Service Fund	4	2.9%
Total	139	100.0%	

Source: Research Data (2023)

4.3.4 Years of experience of respondents

The study findings showed that on the years of experience, those with less than 5 years were 29 (20.9%), 33 (23.7%) had 5-10 years of experience, 38 (27.3%) had 10-15 years of experience and 39 (28.1%) had above 15 years of experience as shown in table 4.4.

Table 4.4 Years of experience of respondents

Variable	Category	Freq.	Percent
Years of experience	Less than 5	29	20.9%
	5-10	33	23.7%
	10-15	38	27.3%
	Above 15	39	28.1%
	Total	139	100

Source: Research Data (2023)

4.3.5 Respondents' position in the organization

The study findings indicate that the senior managers were 22 (15.8%), the middle managers were 29 (20.9%), the lower managers were 64 (46.0%) and the support staff were 24 (17.3%) as shown in table 4.5.

Table 4.5 Respondents' position in the organization

Variable	Category	Freq.	Percent
Level of education	Senior management	22	15.8%
	Middle management	29	20.9%
	Lower management	64	46.0%
	Support staff	24	17.3%
	Total	139	100

Source: Research Data (2023)

4.3.6 Highest level of education of respondents

The study findings indicate that a majority of the respondents had attained some level of education, 24 (17.3%) had post graduate degree, 110 (79.1%) bachelor degree and 5 (3.6%) had college diploma as shown in table 4.6.

Table 4.6 Highest level of education of the respondents

Variable	Category	Freq.	Percent
Level of education	Post graduate degree	24	17.3%
	Bachelor' degree	110	79.1%
	College diploma	5	3.6%
	Total	139	100

Source: Research Data (2023)

4.4 Descriptive Analysis

The research collected data using quantitative Likert scale questionnaires, and the responses obtained were reviewed and analyzed using descriptive techniques. The study employed means and standard deviation as the main methods of interpreting the responses of the participants. The means of responses are interpreted as follows; (5.00-4.21) indicates strongly agree, (4.20-3.41) indicates agree, (3.40-2.61) indicates neither agree nor disagree, (2.60-1.81) indicates disagree, and (1.80-1.00) indicates strongly disagree (Norman, 2010). The results were presented in tabular form across each variable of the study using means and standard deviations analysis.

4.4.1 ICT Adoption and Employee Productivity

4.4.1.1 ICT adoption

The study reported that 76.3% [95% CI: 71.9-80.4] of the employees agreed that the organization uses ICT to manage workers in the day-to-day operations, while 23.7% [95% CI: 19.6-27.5] of the participants indicated otherwise as shown in figure 4.2 below.

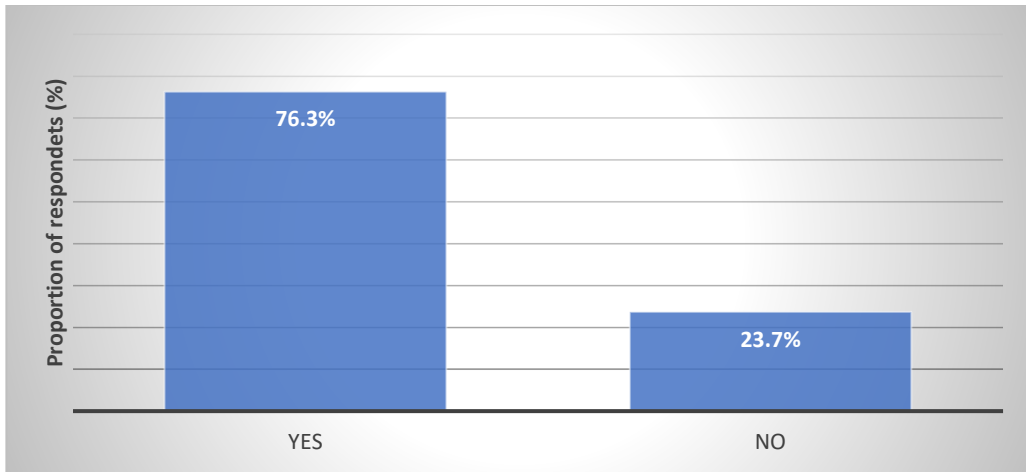


Figure 4.2 Organization Use of ICT to manage workers

Source: Research Data (2023)

4.4.1.2 Induction of employees on use of ICT

The organization inducts employees to ICT resources upon introduction of a new module or when one is new and this was agreed by 75.5% [95% CI: 71.9-79.2], while 17.3% [95% CI: 14.3-21.6] indicated induction is not done and 7.2% [95% CI: 3.5-10.1] said they were not sure as shown in figure 4.3 below.

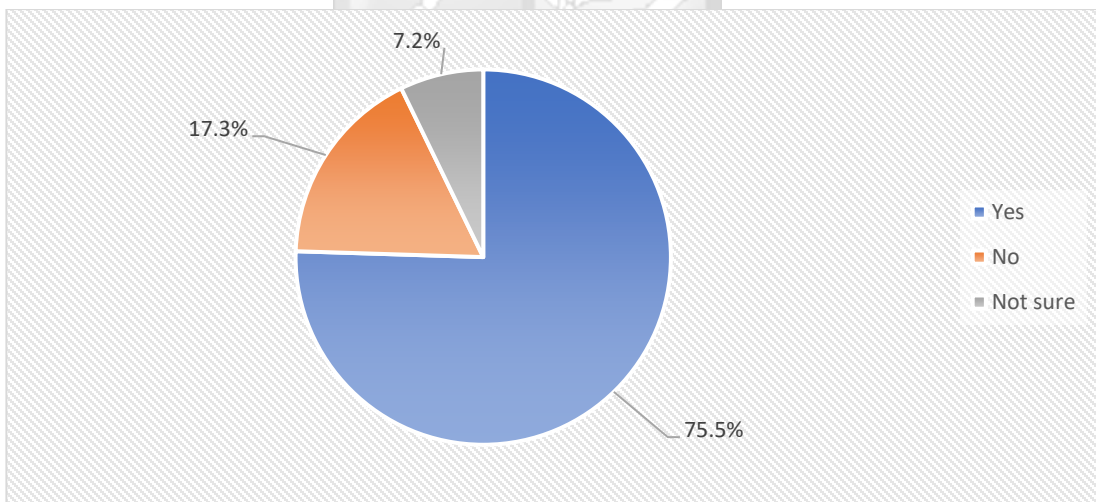


Figure 4.3 Induction of employees on use of ICT

Source: Research Data (2023)

4.4.1.3 Use of ICT to improve productivity

The study results indicate that 33.8% [95% CI: 29.8-37.6] of the respondents agreed to a very large extent that the use of ICT improved productivity, while 45.3% [95% CI: 40.2-48.3] agreed to a large extent and 20.9% [95% CI: 17.6-24.8] agreed to a small extent as shown in figure 4.4 below.

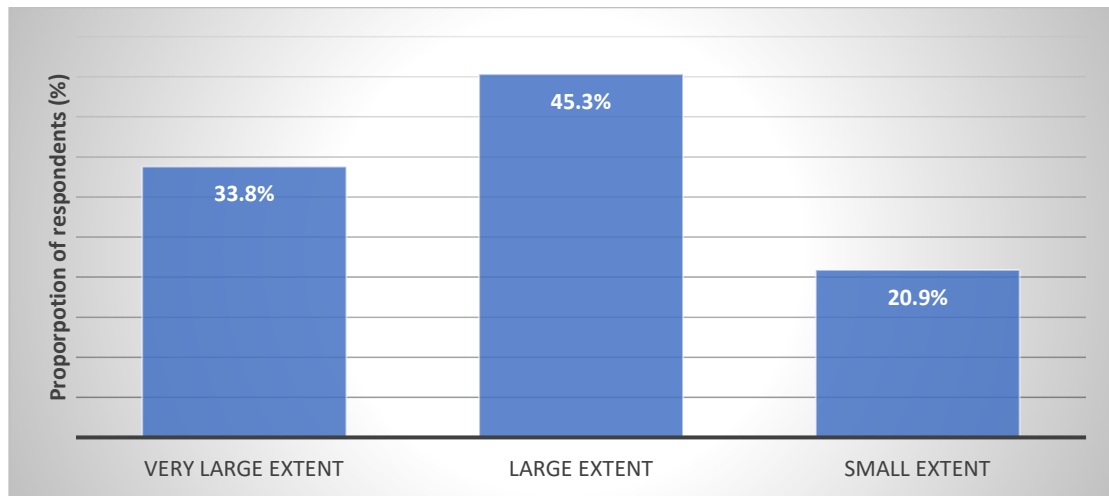


Figure 4.4 Use of ICT to improve productivity

Source: Research Data (2023)

4.4.1.4 Descriptive Analysis of the effect of ICT adoption on employee productivity

The highest score was recorded in organizational reliance on technology where respondents strongly agreed that the organization relied on technology to communicate and collaborate with internal and external stakeholders (mean=4.7770, dev=0.4178). On the other hand, lowest score was recorded in staff acquittance on government ICT policy where respondents disagreed to staff acquainting themselves with government ICT policy (mean=2.4173, dev=0.9317). The overall findings indicated an agreement that ICT has an effect on employee productivity (mean=3.8031, dev=0.7253). A detailed presentation of the findings is shown on table 4.7. The results suggest that the Authority has ICT systems for implementation of hybrid working model and these help to improve employee productivity.

Table 4.7 Effect of ICT adoption on employee productivity

Statement	N	Min	Max	Mean	Std. dev.
We rely heavily on technology to communicate and collaborate with internal and external stakeholders.	139	4	5	4.7770	0.4178
ICT in the organization reduced operational costs and increased productivity.	139	3	5	4.7050	0.5171
Training of ICT use has increased productivity amongst workers.	139	1	5	4.1727	0.8591
Management has invested and continues to invest in ICT facilities to increase productivity.	139	2	5	4.0719	0.7768
ICT has improved efficiency across the business processes.	139	2	5	3.9640	0.9884
The existing ICT infrastructure enhances efficient running of ICT solutions and service delivery.	139	2	5	3.3094	0.6577
I always have a feeling of exhaustion caused by web meetings.	139	2	4	3.0072	0.6538
The staff have acquainted themselves with the Government ICT policy.	139	1	5	2.4173	0.9317
Overall	139	1	5	3.8031	0.7253

Source: Research Data (2023)

4.4.2 Human Resource Planning and Employee Productivity

4.4.2.1 Human resource plan with clear guidelines on employee work schedule

The responses on if the organization has a well-structured human resource plan with clear guidelines on employee work schedule, 51.8% [95% CI: 47.3-56.5] agreed, 28.1% [95% CI: 25.4-33.1] indicated no, while those who were not sure were 20.1% [95% CI: 17.3-24.1] as shown in figure 4.5.

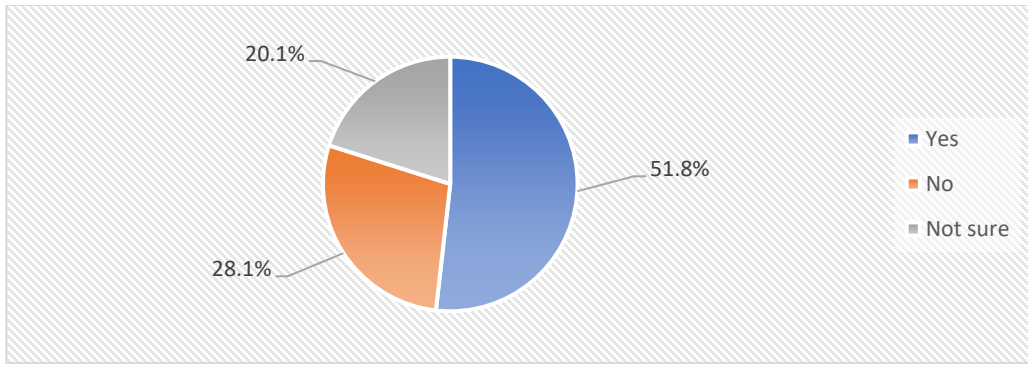


Figure 4.5 HR guidelines on employee work schedule

Source: Research Data (2023)

4.4.2.2 Human resource has employee reward system

The stakeholder who agreed that there exists employee reward system were 79.9% [95% CI: 75.2-84.9], while the rest 20.1% [95% CI: 16.3-24.9] were not sure as shown in figure 4.6.

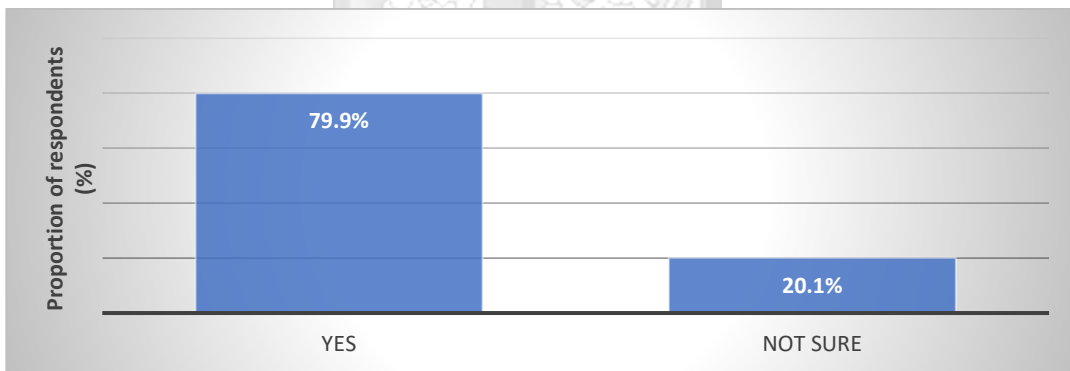


Figure 4.6 HR employee reward system

Source: Research Data (2023)

4.4.2.3 Descriptive Analysis of HR planning influence on employee productivity

The overall findings indicated an agreement that human resource planning had an influence on the productivity of employees (mean=3.5755, dev=0.8265). The highest score was recorded on employee motivation where there was a strong agreement that the organization motivates its employees with both financial and non-financial incentives (mean=4.3453, dev=0.7775). On the other hand, lowest score was recorded in sufficiency of training opportunities where there was disagreement that the organization provides

sufficient training opportunities to improve staff competencies and update them on any new policies and procedures (mean=2.4388, dev= 0.9256). A detailed presentation of the findings is shown on table 4.8. These findings imply that the organization has adopted the right human resource practices in support of hybrid working model.

Table 4.8 HR resource planning and influence on employee productivity

Statement	N	Min	Max	Mean	Std. dev.
Our organization motivates its employees with both financial and non-financial incentives.	139	3	5	4.3453	0.7775
The roles of all staff in the organization are clearly defined	139	2	5	4.3381	0.8036
All employees in the organization align their regular tasks with the overall institutional strategy.	139	3	5	4.2878	0.6398
The organization allows employees to deliver some tasks while working from home.	139	3	5	4.2518	0.6820
Mentorship help an employee feel less isolated at work, too, and encourage him to interact more with others.	139	2	5	3.9353	1.0371
My organization provides fair deployment and staffing levels across all departments.	139	2	5	3.1439	0.7077
The management provides opportunity for individual and professional development.	139	1	5	2.9281	0.7861
Staff working from home observe working hours (work shifts)	139	1	4	2.5108	1.0792
There are sufficient training opportunities to improve staff competencies and update them on any new policies and procedures.	139	1	4	2.4388	0.9256
Overall	139	1	5	3.5755	0.8265

Source: Research Data (2023)

4.4.3 Perceived Work-Life Balance and Employee Productivity

4.4.3.1 Working from home versus work-life balance

The study sought to understand if working from home has a work-life balance and the respondents who agreed were 22.3% [95% CI: 18.1-27.7] while the majority 77.7% [95% CI: 73.4-81.6] indicated disagreed as shown in figure 4.7.

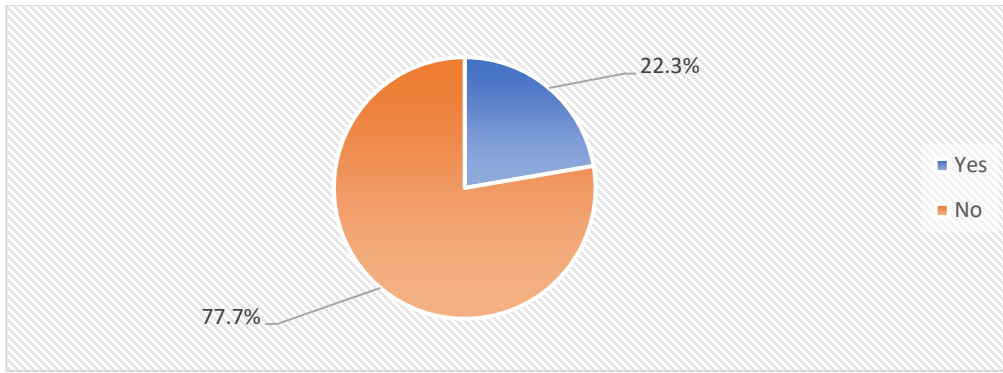


Figure 4.7 Working from home has a work-life balance

Source: Research Data (2023)

4.4.3.2 Contributions of working from home to achieving your goals

The contributions of working from home to achieving my goals in the organization were assessed and 23.0% [95% CI: 19.9-27.2] indicated to a very large extent, 47.5% [95% CI: 42.3-51.1] to a large extent and to a small extent were 29.5% [95% CI: 24.1-32.3] as shown in figure 4.8.

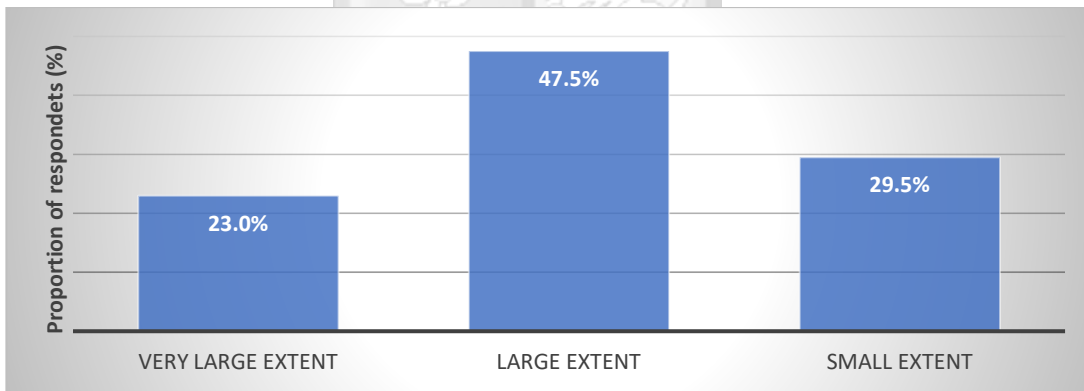


Figure 4.8 Contributions of working from home to achieving your goals

Source: Research Data (2023)

4.4.3.3 Descriptive analysis of influence of perceived work-life balance on employee productivity

The overall results indicated that participants agreed that work-life balance has an influence on employee productivity (mean=3.7612, dev=0.7008). Strong agreement from participants was recorded on the observation of the leave policy (mean=4.5899, dev 0.4936), while there was a disagreement on work preventing employees from attending

to their families (mean=1.9928, dev= 0.7172. This is shown in table 4.9. These findings suggested that achievement of work life balance at an individual level enhances employee productivity.

Table 4.9 Influence of perceived work-life balance on employee productivity

Statement	N	Min	Max	Mean	Std. dev.
My institution observes the leave policy in employment agreement.	139	4	5	4.5899	0.4936
Annual leave helps me to reduce work related stress.	139	2	5	4.4604	0.6286
Breastfeeding mothers enjoy flexible working arrangements to take care of their babies.	139	2	5	4.4101	0.6683
Sometimes I can work while at home through telecommunication.	139	1	5	4.3957	0.7384
I can decide the start and finish times for specific tasks assigned.	139	2	5	4.3525	0.6122
I find it difficult to manage work and multiple family responsibilities.	139	2	5	4.0432	0.7408
My family does not prevent me from attending to my work.	139	2	5	3.7914	0.5956
Working from home make me feel isolated and lead to psychological stress.	139	1	4	3.2734	0.9073
There is adequate provision of recreational facilities in the institution.	139	1	5	2.3022	0.9061
My work does not prevent me from attending to my family.	139	1	4	1.9928	0.7172
Overall	139	1	5	3.7612	0.7008

Source: Research Data (2023)

4.4.4 Work Design and Employee Productivity

4.4.4.1 Provision of structured work design in departments

Majority of the respondents 82.7% [95% CI: 78.4-86.5] agreed that a structured work design is provided at departmental level, 15.1% [95% CI: 11.3-19.5] indicated no structured work design and 2.2% [95% CI: 0.8-4.6] did not know as shown in figure 4.9.

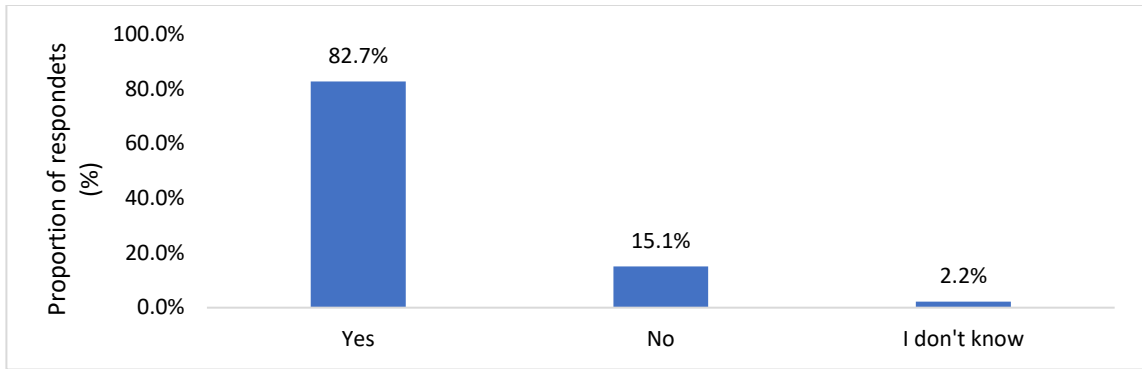


Figure 4.9 Structured work design in your department

Source: Research Data (2023)

4.4.4.2 Existing work design is effective in achieving goals

According to majority of the respondents 74.1% [95% CI: 70.5-79.0], the existing work designs are effective in achieving set goals, while 25.9% [95% CI: 21.6-28.9] said the designs are not effective as shown in figure 4.10.

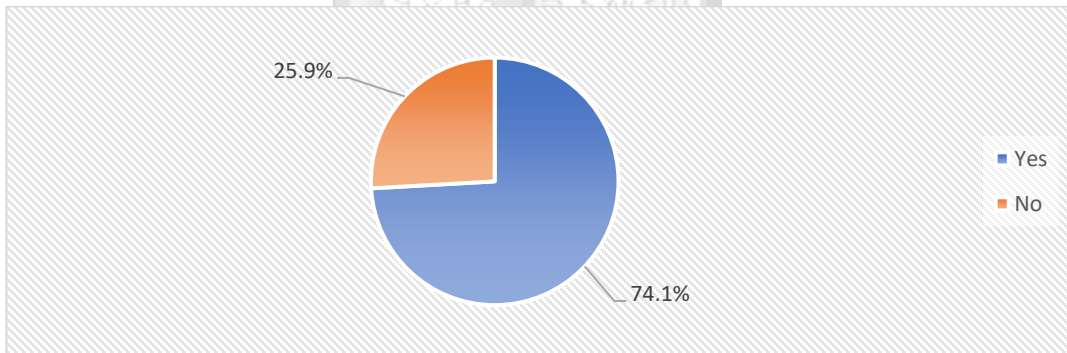


Figure 4.10 Existing work designs help achieve goals

Source: Research Data (2023)

4.4.4.3 Descriptive Analysis on impact of work design on employee productivity

The overall findings indicate that participants strongly agreed that work design has an impact on the employee productivity (mean=4.2958, dev=0.6711). The highest score was recorded on respondents strongly agreeing that their jobs required a special kind of skills. Additionally, the respondents agreed that their job provides significant autonomy in making decisions (mean=3.8921, dev=0.9905) as per shown in table 4.10. This implies that work design has an impact on employee productivity.

Table 4.10 Impact of work design on employee productivity

Statement	N	Min	Max	Mean	Std. dev.
My job requires special kind of skills	139	4	5	4.5827	0.4949
The job involves completing a piece of work that has an obvious beginning and end.	139	3	5	4.4245	0.6136
The job allows me to make my own decisions about how to schedule my work.	139	3	5	4.3813	0.6527
The job involves a great deal of task variety.	139	2	5	4.3597	0.6256
The job allows me to decide on the order in which things are done on the job.	139	3	5	4.3237	0.6507
The job has a large impact on people outside the organization.	139	3	5	4.3165	0.6143
The job itself provides feedback on my performance.	139	3	5	4.2014	0.6934
I am enthusiastic about my job.	139	3	5	4.1799	0.7046
The job provides me with significant autonomy in making decisions.	139	2	5	3.8921	0.9905
Overall	139	2	5	4.2958	0.6711

Source: Research Data (2023)

4.4.5 Employee Productivity

4.4.5.1 Hybrid model increased productivity

The study findings indicated that 54.7% [95% CI: 50.1-59.7] agreed that working from home/hybrid model has increased their productivity, while 45.3% [95% CI: 41.4-48.9] said the model has not increased their productivity as shown in figure 4.11.

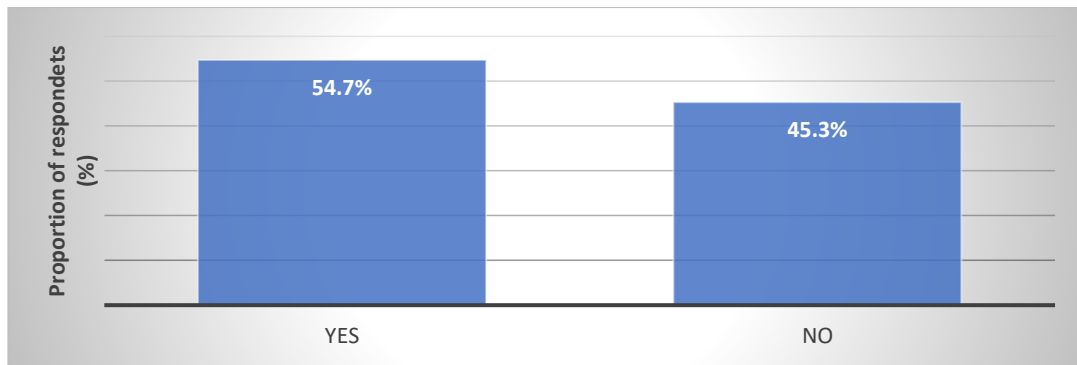


Figure 4.11 Working from home/hybrid model has increased my productivity

Source: Research Data (2023)

4.4.5.2 Organizational performance increased during working from home era

The study findings indicated that 52.5% [95% CI: 47.8-56.4] agreed that CA performance had increased in the work from home era, while 47.5% [95% CI: 44.1-51.2] said the work from home model did not increase CA productivity as shown in figure 4.12.

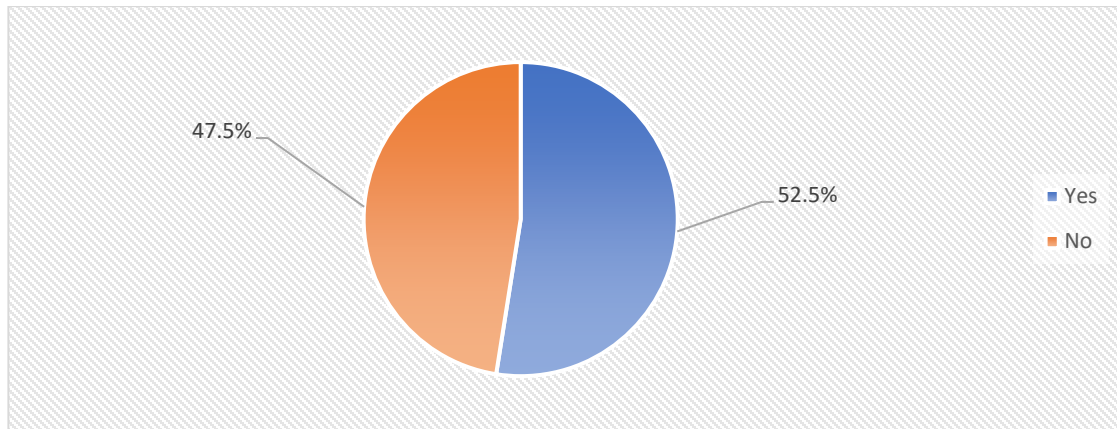


Figure 4.12 Organizational performance increased during working from home era

Source: Research Data (2023)

4.4.5.3 Employee productivity

On average, the respondents agreed that flexible work arrangements influence productivity (mean =4.0064, dev = 0.6590). The respondents strongly agreed to being provided with timely performance feedback (mean =4.4532, dev=0.4996) while respondents were neutral on provision of performance improvement opportunities (mean=2.8633, dev=0.6831). This is presented in table 4.11.

Table 4.11 Employee productivity

Statement	N	Min	Max	Mean	Std. dev.
I am provided with timely performance feedback	139	4	5	4.4532	0.4996
I achieve individual and group targets.	139	3	5	4.3885	0.6199
I understand how my performance impacts the organization.	139	3	5	4.3813	0.6852
I complete tasks within set time.	139	3	5	4.3741	0.6624
A hybrid model empowers employees me to work as per my strengths which in turn boosts productivity	139	3	5	4.2662	0.6871
Flexible work arrangements influence my productivity	139	3	5	4.2374	0.6976
The organization recognizes my high performance and rewards it.	139	3	5	4.1655	0.7081
My performance is affected by trying to balance work and family responsibilities	139	2	4	2.9281	0.6878
I am given performance improvement opportunities when in need.	139	2	4	2.8633	0.6831
Overall	139	2	5	4.0064	0.6590

Source: Research Data (2023)

4.5 Inferential analysis

4.5.1 Correlation analysis

The findings indicate a positive and significant association between the adoption of ICT and human resource planning ($R_h=0.371$, $p=0.034$). The results did establish a positive and significant association between human resource planning and employee productivity ($R_h=0.047$, $p=0.0160$). On the other hand, a positive and significant association between work-life balance and employee productivity was established ($R_h=0.306$, $p=0.014$). The work design had a positive and significant association with employee productivity ($R_h=0.409$, $p=0.023$)

Table 4.12 Correlation analysis

		ICT adoption	Human resource planning	Work-life balance	Work design	Employee productivity
ICT adoption	Pearson correlation	1	0.508**	0.481**	0.512*	0.371*
	Sig. (2-tailed)	.	0.046	0.025	0.001	0.034
	N	139	139	139	139	139
Human resource planning	Pearson correlation	0.508**	1	0.037*	0.041*	0.047*
	Sig. (2-tailed)	0.046	.	0.24	0.19	0.0160
	N	139	139	139	139	139
Work-life balance	Pearson correlation	0.481**	0.271*	1	0.289*	0.306*
	Sig. (2-tailed)	0.025	0.024	.	0.003	0.014
	N	139	139	139	139	139
Work design	Pearson correlation	0.512**	0.481**	0.573**	1	0.409**
	Sig. (2-tailed)	0.001	0.195	0.042	.	0.023
	N	139	139	139	139	139
Employee productivity	Pearson correlation	0.371*	0.047*	0.306*	0.409*	1
	Sig. (2-tailed)	0.034	0.160	0.014	0.023	.
	N	139	139	139	139	139

** . Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Source: Research Data (2023)

4.5.2 Regression analysis

The study conducted linear regression and multiple liner regression to test the strength of relationship between dependent variables and the independent variable. This helped to establish the combined effect of hybrid working model on employee productivity at CA.

4.5.2.1 Effect of ICT adoption on employee productivity

The findings of the regression analysis between ICT adoption and employee productivity indicate an $R^2=0.151$, which implies 15.1% changes in employee productivity as a result of ICT adoption as shown in table 13 below.

Table 4.13 Regression between ICT adoption and employee productivity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.371 ^a	0.151	0.201	3.96101

a. Predictors: (Constant), ICT Adoption

The results indicated a f-statistic = 17.039, $p=0.034$, which therefore indicate a significant association between ICT adoption and employee productivity in CA.

Table 4.14 ANOVA for ICT adoption and employee productivity

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	291.813	1	291.813	17.039	0.034 ^b
	Residual	867.104	138			
	Total	1158.917	139			

a. Dependent Variable: Employee productivity

b. Predictors: (Constant), ICT Adoption

4.5.2.2 Effect of human resource planning on employee productivity

The study findings of the regression analysis between human resource planning and employee productivity indicate an $R^2=0.169$, which implies 10.9% changes in employee productivity as a result of human resource planning as shown in table 15 below.

Table 4.15 Regression between human resource planning and employee productivity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.413 ^a	0.109	0.145	4.70632

a. Predictors: (Constant), Human resource planning

The results indicated a f-statistic = 14.634, p=0.0160, which therefore indicate a significant association between human resource planning and employee productivity in CA.

Table 4.16 ANOVA for ICT adoption and employee productivity

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	275.903	1	275.903	14.624	0.0160 ^b
	Residual	795.348	138			
	Total	1071.251	139			

a. Dependent Variable: Employee productivity

b. Predictors: (Constant), human resource planning

4.5.2.3 Effect of work-life balance on employee productivity

The study findings of the regression analysis between work-life balance and employee productivity indicate an $R^2=0.247$, which implies 24.7% changes in employee productivity as a result of work-life balance as shown in table 17 below.

Table 4.17 Regression between work-life balance and employee productivity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.602 ^a	0.247	0.251	4.01382

a. Predictors: (Constant), Work-life balance

The results indicated a f-statistic = 13.294, p=0.0140, which therefore indicates a significant association between work-life balance and employee productivity in CA.

Table 4.18 ANOVA for work-life balance and employee productivity

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	308.451	1	308.451	13.294	0.014 ^b
	Residual	826.902	138			
	Total	1135.353	139			

a. Dependent Variable: Employee productivity

b. Predictors: (Constant), Work-life balance

4.5.2.4 Effect of work-design on employee productivity

The study findings of the regression analysis between work design and employee productivity indicate an $R^2=0.291$, which implies 29.1% changes in employee productivity as a result of work design as shown in table 18 below.

Table 4.18 Regression between work-life balance and employee productivity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.602 ^a	0.291	0.251	4.01382

a. Predictors: (Constant), Work design

The results indicated a f-statistic = 15.832, $p=0.030$, which therefore indicates a significant association between work design and employee productivity in CA.

Table 4.19 ANOVA for work design and employee productivity

Model		Sum of squares	df	Mean Square	F	Sig.
1	Regression	299.301	1	299.301	15.832	0.030 ^b
	Residual	814.621	138			
	Total	1113.922	139			

a. Dependent Variable: Employee productivity

b. Predictors: (Constant), Work design

4.5.2.5 Summary of regression analysis

An analysis was conducted on the ICT adoption, human resource planning, work-life balance and work design on employee productivity. The model summary shows that the independent variables included in the model shown in table 4.20 below explains a 24.9% of employee productivity.

Table 4.20 Regression summary

Change Statistics								
Model	R	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.461 ^a	0.249	4.691	0.249	19.472	4	415	0.006

a. Predictors: (Constant), ICT adoption, Human resource planning, Work-life balance, Work design

Source: Research Data (2023)

Further analysis on the coefficients indicated that, ICT adoption had significant effect on employee productivity (b=7.038, t =4.105, p=0.022), similarly human resource planning (b=0.904, t =0.671, p=0.037), work-life balance (b=3.409, t =2.958, p=0.018), and work design (b=2.893, t =3.001, p=0.030) had significant effect on employee productivity as shown in table 4.21 below.

Table 4.21 Model coefficients

Model	Unstandardized Coefficients		Standardized Coefficients			95% C.I for B	
	B	Std. Error	Beta	t	P-value	Lower	Upper
1 (Constant)	12.701	1.904		8.904	0.006	5.049	11.827
ICT adoption	7.038	1.031	5.019	4.105	0.034	0.93	9.548
Human resource planning	0.904	0.069	0.851	0.671	0.016	0.691	12.051
Work-life balance	4.873	0.831	4.022	3.295	0.014	2.325	6.114
Work design	2.893	0.351	3.044	3.001	0.030	0.398	4.452
a. Dependent Variable: Employee productivity							

Source: Research Data (2023)

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The results in relation to the literature reviewed above are summarized in this section, as well as indicating the areas that will need further future research. The discussion, conclusion and recommendations are also provided under this section.

5.2 Discussion of the findings

5.2.1 Effect of ICT Adoption on Employee Productivity

The findings indicate a positive and significant association between the adoption of ICT and employee productivity ($R_h=0.371$, $p=0.034$). This is in line with Junglas, Goel, Rehm, and Ives (2022), who indicated that technology driven organizational transformation heightened during the COVID-19 pandemic is gaining momentum, as employees increasingly invest in technology for work. IT consumerization, employees use their smartphones, notebooks and tablets in the workplace, accompanied by a growing toolbox of applications. Google Apps and Dropbox are just a few consumer tools that employees use to get their work done, and in doing so, often bypass the authority of the IT department and the organization. The findings agreed with Lakhwani, Dastane, Satar, and Johari (2020), who demonstrated that technological change and IT infrastructure positively and significantly impact the organization's productivity. The research findings demonstrated that technological change and IT infrastructure positively and significantly impact the organization's productivity and impact on organizational productivity of IT companies in Malaysia (Lakhwani *et al.*, 2020).

The findings of the regression analysis between ICT adoption and employee productivity indicate an $R^2=0.151$, which implies 15.1% changes in employee productivity as a result of ICT adoption. The findings concur with a study in Kenya, which concluded that the adoption of computerized auditing techniques positively impacts the performance of the big four accounting firms in Kenya. Further, generalized audit software has led to faster analysis of big data and improved insights for forensic audits, thus the adoption of accounting internet technologies positively impacts the performance of accounting firms in Kenya by improving employee productivity (Muiruri, 2021). The results indicated a f-

statistic = 17.039, $p=0.034$, which therefore indicate a significant association between ICT adoption and employee productivity in CA. This also agrees to the findings from Lakhwani in Malaysia that IT has increased efficiency in processes which has improved the productivity of the companies in Malaysia and thus creating a positive impact (Lakhwani *et al.*, 2020). Similarly, a study by Junglas, et. al., (2022) is in line with the findings that the policies around the information communication technology are not well known to many people and the interpretation thereof and the limits of infrastructure is a common factor in organizations. The findings indicated that ICT adoption positively influences productivity and reduces operational costs.

5.2.2 Influence of Human Resource Planning on Employee Productivity

The results did establish a positive and significant association between human resource planning and employee productivity ($R_h=0.047$, $p=0.0160$). This aligned with a study by Ngwa, Adeleke, Agbaeze, Ghasi, and, Imhanrenialena (2019) which had positive relationship between HR planning and employee performance and concluded that, bank management and HR departments should have a human resource plan in place so that the plans can be executed regardless of management changes. Another study concurs that human resources planning strategies can enhance performance of a firm thus the need to develop and document such strategies with the object of enhancing both employee and organizational performance (Katua, 2014). Therefore, it is clear that clear guidance and existence of human resource strategies on how to structure work schedule has a positive impact on employee productivity.

The study findings of the regression analysis between human resource planning and employee productivity indicate an $R^2=0.169$, which implies 10.9% changes in employee productivity as a result of human resource planning. A study by Katua (2014), established that HR practices like training and development, recruitment and selection, relations, reward and compensation strategies have a significant positive effect on performance of commercial banks in Kenya. Similar findings were established by Mbiu and Nzulwa (2018) in a study on the influence of human resource planning on employee productivity in county governments in Kenya.

The results indicated a f-statistic = 14.634, $p=0.0160$, which therefore indicate a significant association between human resource planning and employee productivity in CA. This is in line with a study in Kenya, which concluded that the relationship between recruitment and deployment, training and development of talent, talent retention, succession planning and employee productivity was statistically significant (Mbiu and Nzulwa, 2018). A similar finding was put in place to enhance internal recruitment of talent, develop current talent training manuals, and conduct of talent surveys to ensure internal talent structures are relevant (Williamson, Colley, & Foley, 2020). Positive relationship between HR planning and employee productivity has been noted, and this is attributed to the clear role definition, existence of human resource policies, allowance for flexible work delivery approaches like working from home and the HR motivation strategies in addition to mentorship and training.

5.2.3 Perceived Work-life Balance on Employee Productivity

A positive and significant association between work-life balance and employee productivity was established ($R_h=0.306$, $p=0.014$). This is in tandem with a study in Indonesia which indicated that the percentage of work-life balance on employee engagement was 14.3 % (Larasati and Hasanati, 2019). On the other hand, the study findings were contrary to a study in Karachi public universities which revealed that flexible working arrangements were positively correlated with work-life balance. The study also discovered that work-life balance is a strong mediator between flexible working arrangements and job satisfaction (Aziz-Ur-Rehman and Siddiqui, 2019).

The study findings of the regression analysis between work-life balance and employee productivity indicate an $R^2=0.247$, which implies 24.7% changes in employee productivity as a result of work-life balance. A study finding in Pakistan agreed that flexible working arrangements were positively correlated with work-life balance. The study also discovered that work-life balance is a strong mediator between flexible working arrangements and job satisfaction (Aziz-Ur-Rehman and Siddiqui, 2019). Putri and Amran (2021) studied the effect of work from home during the coronavirus disease on the work-life balance of employees in Indonesia and found that it had a positive impact. However, employees often could not balance their work and personal time as their

working environment was flexible, but their hours are increased. Some believe that work from home positively impacts the work-life balance (Pelta, 2020). On the contrary, there are adverse effects found in studies where a blur between work life and personal life is visible and it seems that home-based working may negatively impact WLB (Palumbo, Manna, and Cavallone, 2020).

The results indicated a f -statistic = 13.294, $p=0.0140$, which therefore indicates a significant association between work-life balance and employee productivity in CA. The findings agreed with a study done in Kericho County, which indicated that that flexi working strategies was significant to performance of employees in an organization with the performance contributed by flexi working methods being 22.9% (Kipkoech, 2018). Another study in Kenya found that work-life balance positively related to employee engagement with a Pearson's correlation score of 0.269 (Mbugua, 2021). The study therefore, shows a significant positive effect of work-life balance on employee productivity.

5.2.4 Work Design and Employee Productivity

The work design had a positive and significant association with employee productivity ($R_h=0.409$, $p=0.023$). Likewise, the effect of organizational culture and job commitment on human resource performance is also significant according to a study done in Indonesia (Raharjo, Nurjannah, Solimun, and Fernandes, 2018). This also concurred with results in Thailand study that job redesign is significantly and inversely related to employee performance. Meanwhile job satisfaction is found to be positively and significantly related to employee performance. Moreover, the interaction effect between job redesign and job satisfaction is found to be positively and significantly related to employee performance (Siengthai and Pila-Ngarm, 2016). Proper work designs within department do help in the achievement of the set goals and therefore, improving the employee productivity.

The study findings of the regression analysis between work design and employee productivity indicate an $R^2=0.291$, which implies 29.1% changes in employee productivity as a result of work design. This agrees to a study which found that job design which comprises job rotation, job enlargement and job enrichment has a positive correlation with employee performance (Adagbabiri & Okolie, 2019). The findings

further correspond with a study done in Nigeria to find out the impact of job design and there is a positive correlation between redesigning work to give employee feedback at all times, both vertical and horizontal and this had a positive impact on work performance (Adagbabiri & Okolie, 2019). The variables organizational culture and job design have a significant direct effect on job commitment which translates to increased human resource performance and significant impact on the performance of work (Raharjo et al., 2018). This indicates that when employees are motivated and given feedback, it results in an increase impact of the organization work even outside. Therefore, when employees are given autonomy of work, it has a direct correlation to increased employee productivity. This shows that work design is significantly related to employee productivity.

5.3 Conclusions

The study concludes that the adoption of ICT in management of employees and work flow, significantly impact the employee productivity and thus subsequently organization's productivity positively, as this is further linked to reduced operational costs and improved efficiency. Positive relationship between HR planning and employee performance was noted, and this is attributed to the clear role definition, existence of human resource policies, allowance for flexible work delivery approaches like working from home and the HR motivation strategies in addition to mentorship and training. This has been correlated with improved employee productivity. Working from home gives the employees the autonomy to make their own decisions in regards to work without supervision. This flexibility presented efficacy in self-management while working from home, managing family responsibilities, while working and thus improved employee productivity. Work design significantly impacts employee productivity. Flexible work designs and arrangements such as hybrid models, and independent decision making, has positive impact on the employee productivity.

5.5 Recommendations

It was noted that employees do not have full knowledge on government ICT policies, the study thus recommends that the onboarding of employees should include such policies to increase knowledge and awareness and continuous adoption of adoption of ICT approaches. The study therefore, recommends the adoption of ICT in management of

employees and work flow since this significantly impacts the employee and thus subsequently organization's productivity positively, as this is further linked to reduced operational costs and improved efficiency. Further, proper and fair deployment of staff, observation of working shifts should be implemented, thus a recommendation that CA to develop and document guidelines and standard operating procedures for HR with the object of enhancing both employee and organizational performance and promote the aspect of team work. Having hybrid models within the workplace, has positive influence on employee productivity. The study further recommends CA to have more recreational facilities at work to ease stressful situations, and provision of counselling services for employees to air their feelings. More relevant learning platform such as exchange programs from other institutions and countries, so as to better strengthen the work flexibilities that will increase efficiency of systems, strengthen the skillset of the team and enhance the productivity of employees.

5.6 Limitations of the Study

The limitations of the study include the researcher focusing on the Communication Authority which already has advanced systems to enhance working from home and improved employee productivity. This cannot be generalized to a public institution for example that has no such advance ICT innovations to facilitate working from home, hence a research gap to be explored in future studies. The study was purely quantitative, hence the gap on the qualitative aspect that was not part of the data collection.

5.7 Suggestions for Further Studies

The next study can focus on sampling the larger corporations of the public sector, so that the findings can be generalized to all the organizations in the economy. Another study should employ a qualitative aspect that will give room for delving deeper into the underlying reasons on the subject matter that can affect employee productivity, while working from home.

5.8 Recommendations

The Communications Authority of Kenya provides critical services to both individuals and businesses ranging from licensing, consumer protection, spurring competition to monitoring compliance with set laws amongst other specific mandates revolving around

enforcement of regulatory policies. The regulatory policies significantly affect how businesses transact, since all businesses have the responsibility to adhere to the pre-determined regulations. This means the findings of this could be used to improve policymaking specifically on the mode of service delivery. The CA could utilize the study findings to alleviate the bottlenecks that do limit it from fully from adopting flexible working policies and strategies to improve employee productivity. Additionally, the study findings provide the support that flexibility in work designs, work environments and models can spur discussions on expanding and giving liberty on flexibility and adoption of work designs. These findings are also key to the various public and private entities in adopting or developing guidelines for hybrid working arrangements.



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APPENDICES

APPENDIX ONE: RESEARCH INSTRUMENT

QUESTIONNAIRE

PART A: GENERAL INFORMATION

1. Sex

Male Female

2. Age Bracket

Below 35 years 35 – 45 years 46 and above

3. Which department do you work for within the organization?

Corporate Communications (CC) Compliance & Enforcement
(CE)

Consumer Protection & Advocacy (CPA) Cyber Security (CS)

Competition Management Services (CMS) Finance & Accounts (F&A) [
]

ICT Department [Supply Chain Management
(SCM)

Frequency Spectrum Management (FSM), [Internal Audit (IA),

Human Resource & Administration (HRA) [Multimedia Services (MMS)
[

Public Education & Awareness (PEA) [Postal & Telecom Services
(PTS) [

Standards & Type Approval (STA) [Universal Service Fund
(USF) [

Legal Services (LS) [Regulatory Affairs (RA) [

Monitoring, Inspection & Regional Co-ordination (MIRC) []

Research Planning & Quality Management (RPQM) []

4. How many years have you worked in the organization?

Less than 5 years [] 6-10 years [] 11-15 years [] Over 16 years []

5. Please indicate your position in the organization

Senior Management [] Middle Management []

Lower Management [] Support Staff []

6. What is your highest level of Education?

- College Diploma
- Bachelor's Degree
- Post Graduate Degree
- Other (Specify).....

PART B: EFFECT OF ICT ADOPTION ON EMPLOYEE PRODUCTIVITY

7. Is your organization using information communication and technology to manage workers?

- a. Yes ()
- b. No ()
- c. Not sure ()

8. Does the organization induct employees on use of ICT resources?

- a. Yes ()
- b. No ()
- c. Not sure ()

9. To what level do you agree on the use of ICT in your organization to improve your productivity?

- a. Very large extent ()

- b. Large extent ()
- c. Small extent ()
- d. No extent at all ()

Rate the level of agreement with the following statements that relate to effect of ICT adoption on employee productivity. Where 1= Strongly Disagree; 2 = Disagree 3= Moderate, 4 = Agree and 5 = Strongly Agree

	Effect of ICT adoption on employee productivity	1	2	3	4	5
1	We rely heavily on technology to communicate and collaborate with internal and external stakeholders.					
2	I always have a feeling of exhaustion caused by web meetings.					
3	ICT in the organization reduced operational costs and increased productivity.					
4	ICT has improved efficiency across the business processes.					
5	Training of ICT use has increased productivity amongst workers.					
6	The staff have acquainted themselves with the Government ICT policy.					
7	Management has invested and continues to invest in ICT facilities to increase productivity.					
8	The existing ICT infrastructure enhances efficient running of ICT solutions and service delivery.					

PART C: INFLUENCE OF HUMAN RESOURCE PLANNING ON EMPLOYEE PRODUCTIVITY

10. The organization has a well structure human resource plan with clear guidelines on employee work schedule?

- a. Yes ()
- b. No ()
- c. Not sure ()

11. The human resource has an employee award or motivation system, depending on the performance

- a. Yes ()
- b. No ()
- c. Not sure ()

Rate the level of agreement with the following statements that relate to influence of human resource planning on employee productivity. Where 1= Strongly Disagree; 2 = Disagree 3= Moderate, 4 = Agree and 5 = Strongly Agree

	Influence of human resource planning on employee productivity	1	2	3	4	5
1.	The roles of all staff in the organization are clearly defined					
2.	The management provides opportunity for individual and professional development.					
3.	My organization provides fair deployment and staffing levels across all departments.					
4.	The organization allows employees to deliver some tasks while working from home.					
5.	Staff working from home observe working hours (work shifts)					
6.	All employees in the organization align their regular tasks with the overall institutional strategy					
7.	Our organization motivates its employees with both financial and non-financial incentives					
8.	Mentorship help an employee feel less isolated at work, too, and encourage him to interact more with others.					

9.	There are sufficient training opportunities to improve staff competencies and update them on any new policies and procedures.					
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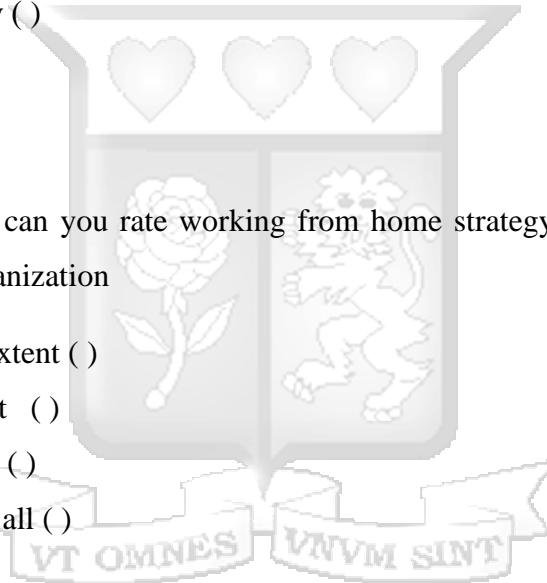
PART D: INFLUENCE OF PERCEIVED WORK-LIFE BALANCE ON EMPLOYEE PRODUCTIVITY

12. Do you think working from home has a work-life balance?

- a. Yes ()
- b. No ()
- c. I don't know ()

13. To what extent can you rate working from home strategy as a contributor to your functions in the organization

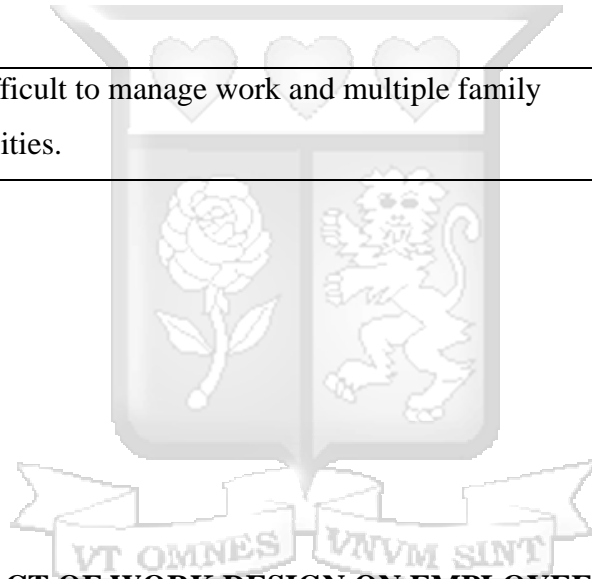
- a. Very large extent ()
- b. Large extent ()
- c. Small extent ()
- d. No extent at all ()



Rate the level of agreement with the following statements that relate to influence of perceived work-life balance on employee productivity. Where 1= Strongly Disagree; 2 = Disagree 3= Moderate, 4 = Agree and 5 = Strongly Agree

	Influence of perceived work-life balance on employee productivity	1	2	3	4	5
1	Working from home make me feel isolated and lead to psychological stress.					
2	My institution observes the leave policy in employment agreement.					

3	Annual leave helps me to reduce work related stress.					
4	My work does not prevent me from attending to my family.					
5	My family does not prevent me from attending to my work.					
6	I can decide the start and finish times for specific tasks assigned.					
7	Sometimes I can work while at home through telecommunication.					
8	Breastfeeding mothers enjoy flexible working arrangements to take care of their babies.					
9	There is adequate provision of recreational facilities in the institution.					
10	I find it difficult to manage work and multiple family responsibilities.					



PART E: IMPACT OF WORK DESIGN ON EMPLOYEE PRODUCTIVITY

14. Has the organization provided a structured work design in your departments?

- a. Yes ()
- b. No ()
- c. I don't know ()

15. Do you think the existing work design is effective in achieving your goals?

- a. Yes ()
- b. No ()
- c. Not sure ()

Rate the level of agreement with the following statements that relate to influence of work design on employee productivity. Where 1= Strongly Disagree; 2 = Disagree 3= Moderate, 4 = Agree and 5 = Strongly Agree

	Impact of work design on employee productivity	1	2	3	4	5
1	The job allows me to make my own decisions about how to schedule my work.					
2	The job provides me with significant autonomy in making decisions.					
3	The job allows me to decide on the order in which things are done on the job.					
4	The job involves a great deal of task variety.					
5	The job has a large impact on people outside the organization.					
6	The job involves completing a piece of work that has an obvious beginning and end.					
7	The job itself provides feedback on my performance.					
8	I am enthusiastic about my job.					
9	My job requires special kind of skills					



PART F: EMPLOYEE PRODUCTIVITY

16. Has working from home/hybrid model has increased my productivity?

- a. Yes ()
- b. No ()
- c. I can't tell ()

17. The performance of the organization improved due to working from home era

- a. Yes ()
- b. No ()

Rate the level of agreement with the following statements that relate to employee productivity. Where 1= Strongly Disagree; 2 = Disagree 3= Moderate, 4 = Agree and 5 = Strongly Agree

	EMPLOYEE PRODUCTIVITY	1	2	3	4	5
1	Flexible work arrangements influence my productivity					
2	My performance is affected by trying to balance work and family responsibilities					
3	A hybrid model empowers employees me to work as per my strengths which in turn boosts productivity					
4	I complete tasks within set time.					
5	I achieve individual and group targets.					
6	The organization recognizes my high performance and rewards it.					
7	I am given performance improvement opportunities when in need.					
8	I am provided with timely performance feedback					
9.	I understand how my performance impacts the organization.					



APPENDIX TWO: RESEARCH INTRODUCTION LETTER

Ole Sangale Rd, Madaraka Estate,
P.O Box 59857 00200, Nairobi, Kenya.
Cell: +254 703 414/6/7, Twitter: @SBSKenya
Email: info@sbs.ac.ke or visit www.sbs.strathmore.edu



Strathmore
UNIVERSITY
BUSINESS SCHOOL

Tuesday, 14 March 2023

To Whom It May Concern,

RE: FACILITATION OF RESEARCH – LEWIS MURIITHI

This is to introduce Lewis Muriithi who is a **Master's in Public Policy and Management (MPPM)** student at Strathmore University Business School, admission number MPPM/123889/19. As part of our MPPM Program, Lewis is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MPPM course. To this effect, he would like to request for appropriate data from your organization.

Lewis is undertaking a research paper on "**Effect of the Factors of Hybrid working model on Employee productivity in the Communications Authority of Kenya.**" The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MPPM Program seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.

Yours Faithfully,

Njoki Kiagiri
Manager – Graduate Programmes

APPENDIX THREE: ETHICAL APPROVAL

14th March 2023

Mr Muriithi Lewis Muchangi,
lewis.muriithi@strathmore.edu

Dear Mr Muriithi,

RE: Effect of the Factors of Hybrid Working Model on Employee Productivity in the Communications Authority of Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU- master's** research proposal. Your application reference number is **SU-ISERC1603/23**. The approval period is from **14th March 2023 to 13th March 2024**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 48 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 48 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to SU-ISERC.

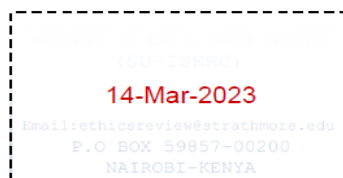
Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,




or: **Dr Ben Ngoye,**
Secretary; SU-ISERC

Cc: Mr Ambrose Rachier,
Chairperson; SU-ISERC




APPENDIX FOUR: NACOSTI APPROVAL


REPUBLIC OF KENYA

Ref No: 903554 **Date of Issue: 25/March/2023**


RESEARCH LICENSE




This is to Certify that Mr. Lewis Muchangi Muriithi of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: EFFECT OF THE FACTORS OF HYBRID WORKING MODEL ON EMPLOYEE PRODUCTIVITY IN THE COMMUNICATIONS AUTHORITY OF KENYA for the period ending : 25/March/2024.

License No: NACOSTI/P/23/24587

903554
Applicant Identification Number


Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
 - i. Endanger national security
 - ii. Adversely affect the lives of Kenyans
 - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
 - iv. Result in exploitation of intellectual property rights of communities in Kenya
 - v. Adversely affect the environment
 - vi. Adversely affect the rights of communities
 - vii. Endanger public safety and national cohesion
 - viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

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APPENDIX FIVE: STUDY BUDGET

Study Budget for Examining the Effect of the Factors of Hybrid Working Model on Employee Productivity in the Communications Authority of Kenya.

Researcher: Lewis M. Muriithi

Period: February 2023 – March 2023

Sponsor – Student (Self)

No.	Activity/Item	Unit Cost (KES)	No. of Units	Total Cost (KES)
1.	Internet Connectivity	2,900	2 Months	5,800
2.	Transport/Fuel to disburse and collect physical questionnaires	6,000	1 full tank	6,000
3.	Telephone charges	1,000	2 Months postpaid	2,000
4.	Printing, Binding and other materials	20 per page	120 Pages * 2	4,800
5.	Miscellaneous	1,000	5 Incidences	5,000
Total				22,600

