ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

MBA PROGRAM

The Effect of drivers of Work-Life Balance on Employee Engagement: The mediating role of work life balance and The Moderating Role of Technological Advancement in NGO in Addis Ababa

A research thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfilment of the Requirements for the Master of Business Administration (MBA)

BY: Bezawit Bisrat Abera

Advisor: Lakew Alemu (PhD)

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Addis Ababa, Ethiopia

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December, 2024

ADDIS ABABA, ETHIOPIA

Approval Statement

This thesis, entitled "The Effect of Work-Life Balance Drivers on Employee Engagement: Examining the Mediating Role of Work-Life Balance and the Moderating Impact of Technological Advancement in NGOs operating in Addis Ababa," has been developed and presented to the Addis Ababa University, School of Graduate Studies, for evaluation under my guidance, in compliance with the academic standards of the institution.

APPROVED BY BOARD OF EXAMINERS

X 

Lakew Alemu (PhD)
Advisor

X 

Baymot Tadesse (PHD)
External Examiner

X 

Zelalem Gebrestadik (PHD)
Internal examiner

Declaration

I, Bezawit Bisrat Abera, certify that the research titled "The Effect of Work-Life Balance Drivers on Employee Engagement: Investigating the Mediating Role of Work-Life Balance and the Moderating Impact of Technological Advancement in NGOs in Addis Ababa" is the product of my personal effort and original inquiry. I assure that all information sources and references utilized in this study have been properly acknowledged and cited. This research reflects my independent work, apart from the guidance and suggestions provided by my Research Advisor. Additionally, I declare that this study has not been previously submitted, either wholly or partially, for any academic degree at this or any other institution. It is submitted as a requirement for completing the Master's degree in MBA

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By: Bezawit Bisrat Abera

Signature: _____

Date: _____

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Abstract

This study aims to examine the effect of flexible working hours, workload, and supportive organizational culture on employee engagement in GIZ, with a focus on the mediating role of work-life balance and the moderating role of technological advancements. The research addresses a critical gap in understanding how workplace dynamics and technological progress influence employee engagement, a vital factor for organizational success. Using a quantitative research design and a descriptive approach, the study analyzed primary data collected through structured questionnaires from a sample of 275 GIZ employees selected via stratified random sampling. Data were analyzed using correlation, regression, and mediation-moderation analyses. The findings revealed that flexible working hours ($B = 0.373$, $p < 0.001$) and supportive organizational culture ($B = 0.564$, $p < 0.001$) positively and significantly affect employee engagement, while workload ($B = -0.122$, $p < 0.05$) negatively impacts engagement. Work-life balance was found to partially mediate the relationship between workplace factors and employee engagement, enhancing its positive effects and mitigating negative ones. Technological advancements significantly moderated the relationship, strengthening the influence of work-life balance on engagement. These results underscore the importance of fostering flexible work arrangements, reducing excessive workload, and creating a supportive organizational culture to enhance engagement. The study concludes that organizations like GIZ should prioritize work-life balance initiatives, leverage technological advancements to support employee well-being, and address workload challenges to improve engagement levels. Recommendations include implementing targeted interventions such as flexible scheduling, employee support programs, and workload management strategies, as well as exploring innovative technologies to create a conducive work environment. Future research should expand the scope by incorporating longitudinal studies, mixed-methods approaches, and additional variables to provide a comprehensive understanding of employee engagement dynamics.

Keywords: Employee engagement, flexible working hours, workload, supportive organizational culture, work-life balance, technological advancements.

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Acronym of the study

WLB: Work-Life Balance

EE: Employee Engagement

TA: Technological Advancement

NGOs: Non-Governmental Organizations

GIZ: Deutsche Gesellschaft für Internationale Zusammenarbeit

SPSS: Statistical Package for the Social Sciences

IV: Independent Variable

DV: Dependent Variable

SEM: Structural Equation Modeling

B: Beta Coefficient

p: Probability Value

CHAPTER ONE

1 INTRODUCTION

1.1. Background of the Study

In today's fast-changing work environment, achieving a balance between professional responsibilities and personal life is essential—especially in developing contexts like Ethiopia. Work-life balance (WLB) is defined as the equilibrium between work and personal life that enables employees to meet their obligations without significant conflict (Greenhaus & Beutell, 1985; Mungania, 2017). Although extensive research has examined WLB in developed nations, there is a paucity of empirical studies in developing settings such as Ethiopia, where cultural, economic, and technological factors create unique challenges.

Organizations worldwide have increasingly recognized that key drivers—such as flexible working hours, effective workload management, and supportive organizational cultures—are critical for enhancing employee engagement (Kossek, Baltes, & Matthews, 2011). For instance, flexible working hours empower employees by providing greater control over their schedules, which can lead to improved job satisfaction and higher engagement levels (Amarakoon & Wickramasinghe, 2010). Similarly, a supportive organizational culture, characterized by respect, recognition, and open communication, has been linked to increased commitment and reduced turnover (Kewalramani, 2020; Harter, Schmidt, & Hayes, 2002).

Despite these insights, many organizations still struggle with employee engagement. Recent data suggest that a significant number of workers—only 37% in one US-based poll—fully understand their organization's values and goals, indicating a broader crisis in engagement (Ninaus, Diehl, & Terlutter, 2021). This challenge is further compounded by factors such as excessive workloads, which can lead to stress and burnout, ultimately undermining employee engagement (Kossek et al., 2011).

Additionally, the rapid pace of technological advancement is reshaping work processes globally (Polimenov et al., 2015). While technology can streamline operations and enhance flexibility (Holden & Sunindijo, 2018), its impact on work-life balance and employee engagement is still underexplored, particularly in the context of non-governmental organizations (NGOs) in Ethiopia.

This study, therefore, focuses on GIZ, a leading NGO in Addis Ababa, to examine how flexible working hours, workload management, and supportive organizational culture influence employee engagement. It further investigates the mediating role of work-life balance and the moderating effect of technological advancements in this relationship. By addressing these factors within the Ethiopian context, this research aims to bridge the gap between global theories of work-life balance and the practical realities of emerging economies, offering tailored insights to improve employee well-being and organizational performance.

1.2 Statement of the Problem

Employee engagement is a critical determinant of organizational success, yet low engagement levels—manifested in increased absenteeism, burnout, and reduced productivity—continue to challenge organizations worldwide (Harter, Schmidt, & Hayes, 2002; Ninaus, Diehl, & Terlutter, 2021). While extensive research conducted in developed nations has established that work-life balance drivers, such as flexible working hours and a supportive organizational culture, significantly enhance employee engagement (Greenhaus & Beutell, 1985; Amarakoon & Wickramasinghe, 2010), there remains a notable research gap in understanding these dynamics in developing economies like Ethiopia. In particular, at GIZ in Addis Ababa, preliminary evidence indicates that employees face substantial challenges, including extended working hours, high workloads, and limited delegation of tasks, which exacerbate work-life conflicts and subsequently contribute to employee disengagement (Lula, 2018). Furthermore, although technological advancements offer promising avenues for improving work flexibility and efficiency, they also have the potential to blur the boundaries between professional and personal life, thereby increasing stress levels when not managed appropriately (Boswell & Olson-Buchanan, 2007). Despite these multifaceted challenges, no study has comprehensively examined how work-life balance mediates the relationship between its drivers and employee engagement, nor how technological advancements moderate this relationship within the context of Ethiopian NGOs. Given that global studies have reported alarmingly low engagement levels—sometimes as low as 13% (Gallup, 2015)—it is imperative to address this research gap. By investigating these interrelationships in a local context, this study aims to develop targeted strategies to enhance employee well-being and productivity, ultimately contributing to the sustainable success of organizations operating in emerging economies.

1.3 Basic Research Questions

1. How does a flexible working hour affect employee engagement in GIZ?
2. How does workload influence employee engagement in GIZ?
3. How does supportive family work environment affect employee engagement in GIZ?
4. To what extent does work-life balance mediate the relationship between work-life balance drivers and employee engagement in GIZ?
5. How do technological advancements moderate the relationship between work-life balance deriver and employee engagement in GIZ?

1.4. Objectives of the Study

1.4.1. General Objective of the Study

The general objective of this study is to investigate the effect of work-life balance drivers on employee engagement, considering the mediating role of work-life balance and the moderating role of technological advancements in the context of GIZ in Addis Ababa.

1.4.2. Specific Objectives of the Study

Specifically, the study aims to achieve the following objectives:

1. To examine the effect of flexible working hours on employee engagement in GIZ.
2. To analyze the influence of workload on employee engagement in GIZ.
3. To investigate the effect of supportive family work environment on employee engagement in GIZ.
4. To determine the mediating role of work-life balance in the relationship between work-life balance drivers and employee engagement in GIZ.
5. To explore the moderating role of technological advancements in the relationship between work-life balance drivers and employee engagement in GIZ.

1.5. Significance of the study

This research is expected to offer substantial value to organizations aiming to strengthen employee engagement and foster a better work-life balance, with significant relevance for future researchers, policymakers, and various industries. It explores the influence of key work-life balance factors on employee engagement, highlighting the mediating effect of work-life balance and the moderating influence of technological advancements. The study also delves into how engagement impacts employees' professional performance and personal well-being, particularly in environments shaped by technological progress. Employees who are more engaged tend to experience lower stress levels and are better equipped to maintain a balanced work-life dynamic.

The results of this research will provide practical recommendations for organizations in diverse sectors, helping them identify crucial elements that enhance productivity through improved employee engagement. Moreover, the findings will serve as a useful resource for future studies investigating similar topics. Policymakers can utilize these insights to formulate and implement policies that promote employee engagement and support work-life balance across different fields. Ultimately, this research aims to enrich the understanding of the interplay between technological advancements, work-life balance factors, and employee engagement, contributing to improved organizational performance.

1.6. Scope of the Study

- **Geographical and Time Scope**

This study is geographically focused on GIZ a non-governmental organization located in Addis Ababa, Ethiopia. The research was conducted over a period of six months, from January 2024 to June 2024. Data collection was involving employees within GIZ to ensure a comprehensive understanding of the organizational context and the factors influencing employee engagement and work-life balance in this specific setting.

- **Theoretical and Methodological Scope**

Theoretically, this study is grounded in the frameworks of work-life balance, employee engagement, and the effect of technological advancements on organizational behavior. It explore the drivers of work-life balance, such as flexible working hours, workload, and supportive family work environment, and how these factors influence employee engagement. The mediating role of work-life balance and the moderating role of technological advancements were central to this investigation. Methodologically, the study was employing a quantitative approach, utilizing structured questionnaires for data collection. Surveys were distributed to employees of GIZ to gather data on their perceptions of work-life balance, engagement levels, and the influence of technological advancements. Statistical techniques were used to analyze the collected data, ensuring a robust examination of the research questions and hypotheses.

1.7. Limitations of the study

This study is limited by its methodological approach, which relies solely on quantitative data collected through questionnaires. This approach may overlook deeper insights and nuances that could be captured through qualitative methods like interviews or focus groups. Furthermore, the findings may not be broadly generalizable beyond the specific context of GIZ in Addis Ababa,

due to the constraints of sample size and representativeness. Despite these limitations, the study aims to provide valuable insights into the relationship between work-life balance drivers, employee engagement, and technological advancements in organizational settings.

1.8. Structure of the Thesis

This paper was consisting of five chapters. The first chapter was include introductory sections, covering the background of the study, statement of the problem, objectives of the study, significance of the study, and scope and limitations of the research. The second chapter was focus solely on the literature review, examining existing research and theoretical frameworks. In the third chapter, the research design was outlined, detailing sources of data, data collection techniques (primarily structured questionnaires), method of data analysis and presentation, target population, and sampling methods. Chapter four was present the main findings of the study based on the data collected and analyzed. The final chapter, chapter five, was discuss the summary, conclusions drawn from the study's findings, and recommendations for future research and practice in the field.

1.9 Operational Definitions of Key Terms

- **Work-Life Balance:** The extent to which employees can effectively manage and integrate work and personal responsibilities.
- **Employee Engagement:** The level of emotional commitment and active participation employee's show toward their work.
- **Flexible Working Hours:** The degree of control employees have over their work schedules, including options for remote work, staggered hours, or compressed workweeks.
- **Workload:** Employees' perception of the volume and intensity of work tasks assigned within a given period. Evaluated by self-reports on task quantity and time pressure.
- **Supportive Organizational Culture:** The degree to which the workplace environment is characterized by support, open communication, and recognition.
- **Technological Advancement:** The extent to which modern digital tools and systems are incorporated into work processes to enhance efficiency.

CHAPTER TWO

2. LITERATURE REVIEW

2.1 Introduction

The significance of work-life balance has grown considerably in contemporary society, where corporate demands seem relentless, characterized by extended working hours and stringent deadlines. Since the early 1970s, demographic changes have heightened the attention of employers and scholars on work-life balance and its effects on the interaction between work and family. This focus includes various aspects such as conflict, stress, compensation, enrichment, and achieving a general state of equilibrium (Gregory and Milner, 2009).

2.2 Theoretical Framework of the study

2.2.1 Overview of Work Life Balance

The literature offers various interpretations of Work-Life Balance (WLB), yet no universally accepted definition or measurement exists. WLB extends beyond 'family-friendly policies,' enabling both parents and non-parents to effectively manage their work and personal responsibilities. Cascio (2000) defines WLB as "employer-sponsored benefits or working conditions that help employees balance work and non-work demands." Hudson (2005) suggests that WLB involves harmonizing the different roles individuals play in their lives, consistent with role theory, which indicates that balancing multiple life roles can cause stress and strain. Clark (2001) describes a balanced life as achieving happiness and functioning well both at work and at home while minimizing role conflict.

Ryan and Kossek (2008) argue that companies should reassess their concept of the ideal worker, recognizing that employees may have family responsibilities and that these obligations might intersect with their professional lives, affecting their health or job performance (Kalliath & Brough, 2008). Fleetwood (2007) asserts that WLB can be felt through individuals' control over their work schedules and patterns. Grzywacz and Bass (2003) found a positive relationship between family-work conflict and work facilitation in defining WLB. The work-family conflict construct, developed by Khan (1990) and expanded by Greenhaus and Beuttell (1985), distinguishes between time-based conflict, strain, and behavior-based conflict.

Adaptation theory, which views work-family conflict as a significant stressor negatively affecting well-being, is supported by Matthews et al. (2014), who provide evidence that work-

family conflict harms well-being. Conversely, positive work-family enrichment has been shown to benefit employee health, although the relationship between work-family situations and direct health outcomes remains underexplored. Kalliath and Brough (2008) highlight the difficulty of summarizing WLB into a single metric and note that WLB levels can fluctuate over time due to life events. They define WLB as "the individual perception that work and non-work activities are compatible and promote growth according to an individual's current life priorities" (Kalliath & Brough, 2008).

Lazar (2010) explains that work-life balance involves a satisfying level of engagement across various life roles rather than requiring equal time distribution between paid and unpaid activities. Additionally, technological advancements and the global economy have contributed to the evolution of the WLB concept in the literature, alongside demographic trends that increase the potential for overlap between work and non-work domains throughout our lives (Allen & Martin, 2017).

2.2.2 Work-Life Balance (WLB) Benefits & Long-Term Outcomes

Over the past decade, research on Work-Life Balance (WLB) has significantly increased, providing substantial evidence supporting effective WLB policies and their numerous benefits for 21st-century businesses. A recent survey by Microsoft revealed that 71% of employees consider work-life balance one of the most critical aspects of their jobs (Stark, 2017). The literature underscores the importance of WLB practices in enhancing WLB outcomes, presenting strong arguments for their implementation in organizations (Brough et al., 2014; Rantanen, Kinnunen, Mauno, and Tement, 2013).

Research indicates that flexibility is increasingly crucial for workers of all ages globally (Lyons & Kuron, 2014). Modern businesses are highly focused on offering optimal WLB policies to improve employee retention, engagement, job satisfaction, mental health, and productivity (Shekhar, 2016). Allen, Herst, and Bruck (2000) categorized WLB outcomes into three groups:

1. Work-related outcomes: performance, job satisfaction, absenteeism, and turnover intentions.
2. Non-work-related outcomes: performance at home, marital, family, and life satisfaction.
3. Stress outcomes: substance abuse, psychological strain, and burnout.

Lazar (2010) supports these findings with an updated view of the benefits of WLB, emphasizing employee engagement and turnover intention. The research suggests a positive correlation between WLB and turnover intention, as employees may leave or seek more accommodating

employers if their work-life balance is disrupted (Allen et al., 2000; O'Driscoll et al., 2011). Moreover, WLB practices are positively associated with employee quality of life and general well-being (McCarthy et al., 2013). Chronic WLB conflict has been linked to serious health issues like somatic complaints and cardiovascular diseases (Grzywacz & Bass, 2003).

Kossek, Lewis, and Hammer (2010) argue that work-life bundling is essential for establishing an organization as an "employer of choice" that cares about employees' needs outside of work. Companies that adopt a wide range of WLB practices demonstrate their regard for employees as individuals. Recent academic focus has shifted to the relationship between engagement and WLB. Although organizational commitment and employee engagement are sometimes used interchangeably, they are distinct concepts. Some experts view employee engagement as the opposite of burnout (Schaufeli, 2008) and recognize that engagement and WLB are positively related, which is crucial for organizational performance (Ellis & Sorensen, 2007).

According to Shekhar (2016), a global survey by Ernst & Young with 9,700 employees across eight countries found that one-third of respondents viewed WLB as an unattainable goal due to high work hours, increased responsibilities, lack of flexibility, and supportive work environments. Public sector employees generally have more access to WLB policies than those in the private sector. Factors such as organization size, union density, recruitment, retention, and the proportion of female employees significantly influence WLB practices in public sector enterprises (Dulk & Groeneveld, 2012). Drew et al. (2003) note that recruitment and retention of quality employees are major concerns for both public and private sector employers, with WLB policies potentially being a decisive factor in job decisions. The Further Education and Training (FET) sector organization, SOLAS, has faced challenges in hiring and retaining highly skilled workers, with a trend of retirements and resignations since 2016.

Forys (2016) provides evidence that organizational culture moderators affect employee engagement, well-being, and organizational outcomes. WLB policies are most effective in inclusive and transparent work environments. Workplace culture significantly influences the implementation and accessibility of WLB programs (Redmond et al., 2006). The data in this study supports the business case for implementing WLB practices to reduce employee turnover intentions and enhance job satisfaction, productivity, engagement, and absenteeism. Bedarkar and Pandita (2014) also found a strong relationship between employee engagement, retention, and positive work-life balance.

However, implementing WLB practices can have drawbacks, such as increased managerial responsibilities, staffing shortages during peak hours, or higher implementation costs across the organization (Susi & Jawaharrani, 2010). According to economic theory, flexible working varies across industries, businesses, and occupations. Businesses adopt WLB policies when they offer significant long-term savings or lower implementation costs (Allen & Martin, 2017). McNamara et al. (2012) identify high financial costs of flexibility and more urgent concerns as obstacles to implementing WLB programs, along with equitable treatment of employees in accessing these policies between the public and private sectors.

2.2.3 The drivers of work-life balance

The concept of Work-Life Balance (WLB) has undergone substantial development over time, influenced by multiple factors that affect individuals' personal lives and professional responsibilities. Scholarly interest in WLB has grown, particularly in response to evolving work patterns, societal shifts, and increased attention to employee well-being (Greenhaus & Powell, 2006). Central to this discussion are various key drivers of WLB, such as the transformation of work structures in developed economies, the adoption of flexible work arrangements, workload management, and the promotion of supportive family-friendly environments (Kossek et al., 2011; Mungania, 2017). These factors collectively play a significant role in helping employees maintain a healthy balance between work obligations and personal life, thereby enhancing overall life satisfaction and productivity.

2.2.3.1 The Changing Nature of Work in Affluent Societies

The need for WLB initiatives in affluent societies has been prominently influenced by shifts in the nature of contemporary work. Schor's (1991) work laid the foundation for understanding the contemporary pressures on work-life integration. Since then, research has identified several themes related to this driver:

1. Increased Work Demands: The globalization of the 1980s introduced a highly competitive economic environment, leading to strategies that increased work demands. These strategies included extended work hours, hei ghtened work intensity due to organizational downsizing, and the integration of advanced technology (Sparks, Faragher & Cooper, 2001; Bloom, Kretschmer & van Reenen, 2006; Gambles, Lewis & Rapoport, 2006). Such changes have intensified the challenges employees face in balancing work and personal life.

2. Consumerism and Financial Pressures: The dominance of financial and consumeristic values has further entrenched the central role of paid work in individuals' lives. The drive for material success often overshadows the need for personal time and balance (Noon & Blyton, 2007).

3. Quality of Life Concerns: The negative impacts of long working hours on individuals' quality of life have become a significant concern. The literature highlights how excessive work hours affect not only personal well-being but also family and community life (Bonney, 2005; Green, 2001; Pocock, 2003).

2.2.3.2 Flexible Working Hours

Flexible working hours are a critical driver of WLB, allowing employees to better align their work schedules with personal needs. Flexible work arrangements include options such as staggered hours, compressed workweeks, and telecommuting. These arrangements provide employees with greater autonomy and control over their work schedules, which can lead to reduced stress and improved work-life integration (Milner & Gregory, 2009; McCarthy et al., 2013). Research indicates that flexibility in work hours is positively associated with employee satisfaction and retention (Lombardi, Sassetti & Cavaliere, 2019).

2.2.3.3 Workload

Workload management is another essential driver of WLB. Excessive workloads can lead to burnout and stress, negatively impacting both personal and professional life. Effective workload management involves not only fair distribution of tasks but also the implementation of support systems to help employees manage their responsibilities (Armstrong, 2014). Studies suggest that reducing workload and providing support for managing high demands can enhance employees' ability to balance work and personal life, thereby improving overall job satisfaction and performance (Kashyap, Joseph & Deshmukh, 2016).

2.2.3.4 Supportive Family Working Environment

A supportive family working environment is crucial for achieving WLB. Organizations that offer family-friendly policies, such as parental leave, childcare support, and family health benefits, contribute to employees' ability to manage work and family responsibilities effectively (McGuiness et al., 2014). Such policies not only improve employee well-being but also foster a more engaged and loyal workforce (Lazar, 2010). Research highlights that organizations with robust family support systems see better employee retention and performance outcomes (Walker, 2012; Maharshi & Chaturvedi, 2015).

The drivers of Work-Life Balance—ranging from the changing nature of work and flexible working hours to workload management and supportive family environments—play a significant role in shaping employees' ability to achieve a balance between their professional and personal lives. Understanding these drivers helps organizations implement effective WLB practices that enhance employee satisfaction, retention, and overall performance. As the work environment continues to evolve, addressing these drivers will remain crucial for fostering a balanced and productive workforce.

2.3. Theoretical part of the study

2.3.1 Role Stress Theory

This theory is based on historical role theory (Kahn et al., 2016), which posits that confusion about one's role can lead to negative outcomes. According to Kahn et al. (2016), high demands because anxiety and tension, and stress is exacerbated when individuals juggle multiple responsibilities. Roles and the expectations of those roles in one's professional or personal life are interconnected. Workers are assumed to have limited psychological and physiological resources, which they must manage within their role constraints. Increased pressure from multiple roles can deplete these resources, depending on an individual's capacity.

Because people's responsibilities at work and in their personal lives are intertwined, role theory is particularly well-suited for examining the impact of work-life balance policies on employee retention. To be effective, individuals must meet the criteria they have set for themselves, which will enhance their well-being both at work and at home. Therefore, providing employees with flexible work schedules enables them to balance work and family obligations, reducing stress and increasing commitment. Role theory has proven to be one of the most valuable frameworks for guiding decision-makers in their efforts to mitigate work-life conflict. This theory thus supports the proposition that work-life balance influences employee performance at KICD.

2.3.2 Social Exchange Theory

This term refers to actions voluntarily taken by employees due to the motivation they derive (Blau, 2009). It encompasses both internal and external components. Social exchange creates an activity that relies on reciprocity and is founded entirely on trust. According to Walker (2012), this exchange system benefits both companies and employees. For example, when companies foster an environment that supports work-life balance, employees may respond with increased

dedication and engagement, resulting in higher productivity (Lombardi, Sassetti & Cavaliere, 2019).

This theory exemplifies employee involvement in social interaction. When the connection is strengthened, employees may feel valued, which they reciprocate through their success at work. Walker (2012) notes that both firms and employees support work-life balance guidelines, with employees repaying these favors through increased energy and productivity.

Maharshi & Chaturvedi (2015) suggest that advances in social exchange theory imply that family benefits can encourage employee involvement and initiative by fostering a perceived obligation to reciprocate greater advantages with increased effort. Employees perform best when they can balance their work and other life areas. This investigation focuses on wellness programs and the expectation that companies implementing these programs will receive favorable returns from their employees.

2.3.3 Human Capital Theory

The human capital theory emphasizes that individuals possess innate abilities, behaviors, and personal energy, which constitute the human capital they bring to their work (Armstrong, 2014). This human capital is what generates value from employees. Consequently, human resource management focuses on attracting, retaining, and developing human capital to enhance performance (Armstrong, 2014). Employee procurement is a critical process in sourcing this human capital. According to Kashyap, Joseph, and Deshmukh (2016), employees own this capital and decide when, how, and where they will contribute it, meaning they can choose when to unleash their potential.

To achieve better organizational performance, the focus must be on strategies to attract, retain, develop, and maintain the human capital that creates value (Armstrong, 2014). This begins with the scientific procurement of the right employees and strategies to fully engage them.

The theory drives the study by identifying the employee procurement process as the precursor to the quality of human capital in counties, which in turn impacts operational performance through drivers of employee engagement within the county environment. Thus, this theory supports the study of the moderating influence of employee engagement on the relationship between the implementation of employee procurement and performance.

2.3.4. Spill over Theory

The spillover theory posits that experiences in one role affect an individual's performance and feelings in another role. This theory suggests a prevalent view of work-family relationships, indicating that workers often carry their feelings, emotions; attitudes, skills, and behaviors from work into their family life and vice versa (Noon and Blyton, 2007). Spillover theory encompasses the multidimensional aspects of the work-family relationship and is perceived in two types: positive and negative.

Positive spillover occurs when satisfaction and achievement in one domain lead to satisfaction and achievement in another. Conversely, negative spillover refers to problems, issues, and despair in one domain bringing similar emotions into another domain (Xu, 2009).

The spillover model proposes that one domain can influence the other in either a positive or negative way. While sufficient research supports this model, there remains a need for more comprehensive propositions regarding the nature, causes, and consequences of spillover.

2.4 Works-Life Balance (WLB) Practices

Work-Life Balance (WLB) practices encompass various efforts to balance employees' work and non-work domains. This category includes job-sharing and part-time employment agreements that allow employees to work fewer hours each week (McCarthy et al., 2013). Flexible working increases employee autonomy and preferences for specific work arrangements, enabling them to choose start and stop times based on their schedules (Milner & Gregory, 2009). Employees might also have the option to work from home or a different office.

Organizations that support WLB practices provide access to various family-friendly policies. According to McGuinness et al. (2014), these include initiatives, services, and subsidized childcare in the workplace, promoting employee well-being through physical, mental, and exercise programs. Additional workplace activities covered by WLB include phased retirement, educational support, and participation in volunteer campaigns (Lazar, 2010). Some scholars also consider counseling and other employee assistance programs or training, such as stress/time management, part of WLB efforts (McCarthy et al., 2013).

Kopelman et al. (2006) suggest that to enhance organizational outcomes, modern businesses should implement more WLB techniques rather than fewer. The European Diversity Research & Consulting body lists the most widely used WLB programs in Europe (Susi & Jawaharrani, 2011). According to Susi and Jawaharrani (2011), effective WLB programs require a workplace

culture that reflects organizational norms and values from the CEO down, effective communication, and continuous support from a management team trained in implementing these policies.

2.5 Employee Engagement

The growing significance of human capital and its psychological engagement in business is closely tied to the rising importance of employee engagement in the twenty-first century (Schaufeli, 2013). As a fundamental aspect of high-performance work practices, employee engagement has become a primary focus for HR (Attridge, 2009). Schaufeli (2013) emphasizes that employees with strong psychological attributes are vital to an organization's long-term success. He argues that employee engagement is a highly desirable state and a crucial factor for businesses striving to excel in competitive markets. Satisfied employees are essential for motivating others, generating innovative ideas, cultivating a supportive and cooperative work environment, and enhancing the company's reputation. According to data from HR consulting firms, high engagement levels correlate with increased profits, enhanced productivity, higher retention rates, proactive behaviors, and greater customer satisfaction (Schaufeli, 2013).

2.5.1 Definition of Employee Engagement

The Gallup Organization introduced the term "employee engagement" for consulting firms in the 1990s, coinciding with significant shifts in the business environment. Schaufeli (2013) notes that "employee engagement" and "work engagement" are interchangeable, although the former is more commonly used in academic circles and among consulting firms and business policymakers. According to Khan (1991), workplace engagement involves employees physically, cognitively, and emotionally in their roles, a concept he popularized in the literature. Jawaharrani defines engagement as the state in which individuals are emotionally and intellectually committed to the organization, characterized by three primary behaviors: Say, Stay, and Strive (Susi & Jawaharrani, 2010).

Research by Rich et al. (2010) and Christian et al. (2011) confirmed that the positive correlation between engagement and work-related attitudes is distinct and not merely a byproduct of job performance. However, the terminology and theoretical framework of employee engagement are not universally agreed upon. Shuck (2011) reviewed 213 publications and identified four approaches to engaging employees:

A) The Antithesis of Burnout: Popularized by Maslach & Leiter (1997), this approach views employee engagement as the positive opposite of burnout, characterized by a lack of accomplishment, cynicism, and exhaustion (Schaufeli, 2013). This approach often utilizes the Job Demands-Resources (JD-R) model, which suggests that resources foster engagement through energy, persistence, and attention, impacting job performance and work-life balance.

B) The Needs-Satisfying Approach: Developed by Khan (1990), this approach measures employee engagement through physical, cognitive, emotional, and mental activities during role performances. Jobs that are challenging, meaningful, and safe, and that provide adequate resources, are thought to encourage engagement.

C) The Happiness Engagement Approach: Promoted by the Gallup Organization, this approach emphasizes employee involvement and enthusiasm for work to achieve business goals such as customer satisfaction, productivity, and value for money (Harter et al., 2002).

D) The Multidimensional Approach: Proposed by Saks (2008), this approach distinguishes between organizational and work engagement and emphasizes the behavioral, emotional, and cognitive aspects of an employee's role performance.

Anitha (2014) examined Khan's hypothesis and identified reliable indicators of worker engagement. Schmidt (2004) highlights the importance of employee engagement in the public sector, where it is fostered by various support programs, health and well-being initiatives, and strong employee involvement. This helps organizations target the right cohort of workers during recruitment and retention efforts.

2.6 WLB & Employee Engagement

The lack of research comparing WLB (Work-Life Balance) methods to employee engagement is notable. While both concepts are extensively studied individually, there is evidence suggesting a direct correlation between WLB practices, well-being, employee happiness, and engagement. WLB initiatives influence employees' perception of organizational support, which in turn affects their engagement and job satisfaction (Allen & Martin, 2017).

Susi and Jawaharrani (2011) provide compelling evidence on the impact of WLB on employee engagement and the intention to leave. Companies that address the unique needs of their employees are better equipped to handle issues related to age, gender, and workplace diversity. These companies are also more effective in creating and implementing WLB policies that involve all organizational groups (Susi & Jawaharrani, 2011).

Shockley et al. (2017) found that employees who respond to emails and phone calls after hours and on weekends experience higher levels of work-home conflict and lower engagement levels. A Gallup poll cited by Shockley shows that 50 to 80 percent of workers do not fully engage in their jobs.

Drawing on social exchange theory, Saks (2008) argues that employees reciprocate their employer's resources and support with higher engagement levels. He also asserts that employee involvement leads to reduced turnover intentions, increased organizational loyalty, and job satisfaction. Modern businesses seeking a competitive edge recognize that a highly engaged workforce contributes to superior performance, productivity, retention, and customer service (Purcell, 2014). Conversely, low engagement is linked to poor performance, inefficiency, and high turnover rates (Shockley et al., 2017). To mitigate the risk of losing top talent, businesses should enhance internal policies and train management to support employees in maintaining a healthy work-life balance.

Schaufeli (2013) defines work engagement as a positive, fulfilling state of mind characterized by vigor, dedication, and absorption, measurable through the UWES self-report questionnaire, and explained by the Job Demands-Resources (JD-R) model. High engagement levels lead to greater investment in one's job, pride, and a sense of significance (Shimazu et al., 2010). Vigor and resilience, combined with absorption, describe a state where individuals are contentedly immersed in their tasks (Shimazu et al., 2010). The UWES questionnaire, available in 22 languages, is the most widely used tool for measuring employee engagement (Schaufeli, 2013).

Ulrich (2012) found that employees satisfied with their work-family life are more likely to go above and beyond, fostering high levels of dedication. Anitha (2014) found a strong correlation between WLB and employee engagement, noting that organizational policies supporting work-life balance and flexible work arrangements enhance engagement and retention. Flexibility in work schedules and locations is associated with the ability to work longer hours (Richman et al., 2008). Anitha (2014) also identified major WLB culture challenges, including lack of managerial support, fear of negative career impacts, gender policy outlook, well-being, work environment, and coworker relationships.

Research by the Gallup Organization shows that productive workplace environments correlate with satisfied employees. A comprehensive study in the US, with a sample of 955,000 respondents, found that high work engagement led to profitability in 78 percent of business units

and accounted for 94 percent of the success rate (Schaufeli, 2013). Boyd et al. (2011) support these findings, showing that high engagement levels improve organizational commitment, foster innovation, encourage proactive behavior, and reduce turnover.

Rath and Harter (2010) found that disgruntled workers have high absence rates and experience workplace stress, which negatively impacts the company long-term. CIPD (2014) data indicates that workers are engaged in various aspects of their professional lives, including management, family, profession, stakeholders, and coworkers. Organizations in the Further Education and Training (FET) sector, such as SOLAS, should employ diverse approaches to create a happy and healthy work environment (Bhuvanaiah & Raya, 2014).

Bhalerao (2013) argues that improved WLB policies help HR manage workforce diversity more effectively and meet specific needs, giving companies a competitive edge through fit, competent, and motivated personnel. Research shows a significant link between employee engagement and positive business outcomes such as productivity, high performance, and retention (Bhalerao, 2013). Studies by Schaufeli and Bakker (2010) demonstrate that higher engagement levels are associated with more innovative work and a reduced desire to leave the company. Halbesleben's (2010) meta-analysis yielded similar results.

Bal and Lange (2015) found a positive correlation between employee engagement and flexible HRM practices in a long-term study spanning 11 countries. The findings emphasized the impact of HRM flexibility on younger workers who value leisure and flexibility. Flexible work practices also help older employees perform better and counteract age-related declines, highlighting the importance of the availability of these practices over mere awareness. Engagement was found to be unrelated to the adoption of flexible programs.

A 2007 survey by the Equal Employment Opportunities Trust indicated that companies supporting WLB see improvements in productivity and employee engagement. However, the study emphasized that programs and policies aimed at enhancing WLB and engagement require support from management and employees at all organizational levels (Susi & Jawaharrani, 2011). Myilswamy & Gayatri (2014) support the claim that employee engagement significantly impacts workforce productivity, retention, customer loyalty, and profitability. They demonstrate that engagement levels influence employee productivity and their willingness to remain with the company.

2.7. Technological Advancement and Work Life Balance

While many people work in fixed workspaces with set hours, those in knowledge and information fields can leverage new technologies to make their work portable, allowing flexibility in where and when they complete their tasks (Currie & Eveline, 2011). The term "telecommuting," coined by M.J. Niles, describes employees using computer-based technology to communicate with their employer while working remotely from a traditional office setting (Heiden, 2021). As work methods evolve, managing work-life balance becomes more challenging due to the diminishing physical and temporal boundaries between work and home (Currie & Eveline, 2011).

Currie and Eveline (2011) highlight that technologies have prompted a reevaluation of work locations and speeds. With this shift, strategies to limit the expansiveness of work have gained importance. Recent research shows that ICTs enable employees to work anytime, anywhere, without being confined to a traditional office (Adisa, Gbadamosi, & Osabutey, 2017). Consequently, more employees are opting to telecommute either part-time or full-time, using technology to stay engaged even outside regular business hours.

Additionally, ICTs are transforming workplaces into "hybridity's," allowing employees to rearrange their workspaces and hours to meet their needs (Ibid). However, this flexibility can pressure employees to stay connected to their jobs through ICTs. Some argue that ICTs and telework increase work-family conflict by making employees more available for work, while others believe they facilitate work-life balance through flexible schedules (Heiden, 2021). Innovations in affordable technologies have made it easier for employees to remain connected to work (Hunter et al., 2019).

Gadeyne et al. (2018) discuss how telework can integrate work into home life and vice versa, illustrating both the benefits and challenges of telework for work-life balance. For instance, telework can help an employee work from home during a child's illness, but the blurred lines of flexible work may lead to expectations of constant availability for work matters (Hunter et al., 2019). This shift changes the focus of work-life balance from location to the necessity of being accessible for work at home.

Beauregard, Basile, and Canónico (2019) note that the boundaries between work and life are porous, requiring continuous efforts to maintain balance. There is a paradox where technologies that help manage balance also tether employees to work. Employers expect staff to take work

home, meet after hours, and be reachable by phone, email, or pager, while also keeping personal and professional lives separate. However, these distinctions are often artificial as most workers do not completely transition from one sphere to another (Ibid).

Beigi, Shirmohammadi, and Stewart (2018) investigated the relationship between work characteristics and work-life outcomes, focusing on communication tools used outside regular working hours. They examined how employees in traditional work environments use CTs to perform work tasks beyond typical hours. The study found that CT use is linked to work-life integration, making it harder to distinguish between the two spheres (Beauregard, Basile, & Canónico, 2019). People who strongly identify with their role are more likely to integrate it into other domains, such as work into life or life into work. Those who integrate work into their personal lives set fewer boundaries for CT use after hours and experience fewer negative reactions to role boundary interruptions.

Adisa, Gbadamosi, and Osabutey (2017) found a positive correlation between high work-to-life conflict and high work-to-non-work permeability. People who easily integrate work into their personal lives are less likely to set limits on CT use after hours and experience higher work-to-life conflict. Work-life conflict occurs when demands in one domain make it difficult to fulfill expectations in another domain. Integrating work and non-work can either mitigate or exacerbate work-life conflict, depending on the context.

Heiden, Widar, Wiitavaara, and Boman et al. (2021) focused on personal digital assistants (PDAs) and work-life boundary management. PDAs were chosen for their capability and portability, resembling handheld computers with built-in apps for tasks, notes, calendars, and address books. The study aimed to understand how people use PDAs to manage boundaries between personal and professional lives. This examination highlighted the dynamics of work-life boundary management enabled by technological affordances, beyond specific technologies.

2.8. Technological Advancement and Employee Engagement

The relationship between technology and employee engagement is multifaceted and beneficial. HR technology encompasses a variety of tools and frameworks that drive employee engagement, which is crucial for company success. This synergy is evident in the enhancement of work culture, the facilitation of communication, the support of personalized growth, and the streamlining of HR operations. By automating administrative tasks such as payroll, attendance

tracking, and benefits administration, HR technology allows HR professionals to allocate more resources to strategic goals (Florkowski, 2019).

Technology reduces the administrative burden, freeing up HR personnel to focus on strategies that enhance engagement (Evans, 2012). Moreover, communication and collaboration tools integrated into HR technology foster transparent engagement by bridging geographical gaps. Employees, regardless of their location, can easily communicate with managers, colleagues, and leadership. Open communication channels promote a sense of belonging, which in turn encourages active participation and a shared understanding of engagement (Ibid).

Additionally, Learning Management Systems (LMS) within HR technology empower employees to take control of their professional development. Personalized learning plans and digital tools support continuous development and job satisfaction, which are critical for sustained engagement (Sheehan et al., 2014). Feedback mechanisms also play a vital role in the symbiotic relationship between HR technology and employee engagement. Performance management software and recognition platforms provide timely feedback and validation, helping to maintain engagement and reinforce positive behavior.

Furthermore, HR technology contributes to a positive work environment. Well-being apps, tech-enabled flexible work schedules, and data-driven insights into employee sentiments all enhance overall job satisfaction and well-being, thereby regulating employee engagement. In summary, HR technology and employee engagement have a reciprocal relationship. According to Laumer et al. (2018), HR technology promotes personalized growth, improves communication, optimizes HR functions, and supports well-being—all of which are essential for engagement. Given the crucial role of engaged employees in achieving company goals, the smart integration of HR technology is vital.

2.9. Empirical Framework of the Study

The evolving internal and external forces in the environment have created new challenges for parents trying to balance their careers and personal responsibilities. Allen and Martin (2017) highlight a significant trend in the United States, where the percentage of women in the labor market rose from 29% in the 1950s to 47% in 2015. This trend has led to a notable increase in working mothers and dual-earner households, with similar patterns observed in Europe and beyond. Barrette (2009) noted that from 1996, 46% to 61% of parents have struggled to balance work and family duties.

Amid concerns about labor market participation rates and an aging population, research indicates that both men and women increasingly seek a better balance between work and family responsibilities (Gregory and Milner, 2009). Heather Schuck aptly stated, "We will never feel truly satisfied by work until we are satisfied by life" (Shekhar, 2016).

A study by McCrindle Research on 3,000 Australians found that Work-Life Balance (WLB) practices are crucial in determining turnover rates and job attraction in modern companies, thus enhancing employee engagement (Susi and Jawaharrani, 2010). The growing demand for WLB initiatives has become a major HR concern, requiring the incorporation of such practices into the corporate culture.

Using the United Nations Office for Project Services (UNOPS) as a case study, Victoria (2022) examined the impact of work-life balance on employee performance in non-governmental organizations. The results indicated a significant inverse relationship ($r = -0.258$, $p = 0.026$) between employee stress and performance. The adjusted R2 value was 0.054, meaning that differences in employee stress explained 5.4% of the variation in performance. The study also found a positive but negligible relationship ($r = 0.414$, $p = 0.905$) between employee performance and technology integration, and a marginally significant, positive relationship ($r = 0.090$, $p = 0.441$) between time management and performance. However, there was a statistically significant positive correlation ($r = 0.463$, $p = 0.000$) between self-management and performance, indicating that self-management significantly improves performance.

Abonyo (2023) conducted a study on the connections between employee engagement, work-life balance, and perceptions of organizational culture. The results showed that work-life balance is negatively and strongly correlated with perceptions of organizational culture. Employee engagement is positively and strongly correlated with work-life balance, while it is negatively and significantly correlated with perceptions of organizational culture. The study also found that work-life balance moderates the relationship between employee engagement and perceptions of organizational culture, reducing the impact of organizational culture on engagement when work-life balance is considered.

Euart (2019) studied the relationship between managers' work-life balance and employee engagement. The findings showed no statistically significant association between employee engagement and managers' satisfaction with work-life balance ($r = 0.155$, $p > 0.01$). Work-life imbalances cause significant internal conflict, affecting managers' overall ability to lead and

manage. Their actions can either strengthen or weaken a productive workplace. The study suggests that creative strategies to help managers balance their personal and professional lives can enhance employee engagement and reduce stress for both managers and staff.

Raymart (2021) explored the mediating role of technological advancements on the relationship between hotel front-line employees' engagement and work-life balance. A sample of 274 employees in the Davao Region showed a strong correlation between technological innovation and employee engagement, but a negative correlation suggesting that better work-life balance reduces employee engagement. The Sobel test indicated that when technological advancements were considered, the direct effect of work-life balance on engagement became more positive.

Marjolein (2016) examined the relationship between work-life balance, work engagement, and participation in employee development activities using a moderated mediation model. The study found insufficient evidence for the moderating influence of leader-member exchange or the mediation effect of work engagement. However, there was a significant correlation between work-life balance and work involvement. Employees with high work-life conflict were less engaged at work and more likely to participate in training programs. Further research is needed to identify other relevant work-related or personal resources.

Angela (2021) studied the impact of work-life balance on employee performance at the Kenya Institute of Curriculum Development. The results showed a strong correlation between flexible work schedules, welfare and leave policies, recreational opportunities, and employee performance. Regression analysis indicated that these factors accounted for 50.1% of changes in performance. Therefore, work-life balance is crucial for enhancing employee performance, and it is recommended that managers and policymakers continue to implement work-life balance initiatives.

Jasmina, Miha, and Goran (2020) examined the relationship between work-life balance, job engagement, and life satisfaction as a moderator. The study of 164 higher education instructors from several European countries found that life satisfaction mediates the relationship between job engagement and work-life balance. The findings highlight the importance of work-life balance, life satisfaction, and job engagement.

Orawan (2022) investigated the effects of remote work on employee engagement, finding a strong correlation between remote work and engagement. Remote work positively influences engagement by providing flexibility.

Grace (2021) studied the moderating effect of gender on the relationship between work-life balance and employee commitment at the University of Cape Coast. The results showed no significant gender differences in the relationship between work-life balance and job satisfaction or commitment. However, work-life balance policies should consider all types of employees, regardless of gender.

Francis (2014) researched work-life balance and employee engagement in Kenyan state corporations. The study found that corporate culture, coworker support, supervisor support, and workplace policies positively affect engagement. The study emphasized that work-life balance is crucial for fostering an engaged workforce, providing valuable insights into the determinants of engagement and suggesting future research on measurement tools that consider individual personality factors.

2.10. Conceptual Framework of the Study

The conceptual framework of this study revolves around three main constructs: Employee Engagement, Technological Advancement, and Work-Life Balance, influenced by Work-Life Balance Drivers.

Independent Variables:

Work-Life Balance Drivers: Factors influencing work-life balance, such as flexible working hours, workload management, and Supportive family work Environment (Mungania, 2017).

Mediating Variable:

Work-Life Balance: Equilibrium between work responsibilities, family commitments, and personal leisure (Mungania, 2017). Mediate the relationship between work-life balance drivers and employee engagement.

Dependent Variable:

Employee Engagement: Emotional connection and commitment to the organization, its vision, and colleagues (Kewalramani, 2020).

Moderating Variable:

Technological Advancement: Degree to which technology enhances efficiency and productivity in work processes (Holden & Sunindijo, 2018). Moderate the relationship between technological advancement and employee engagement.

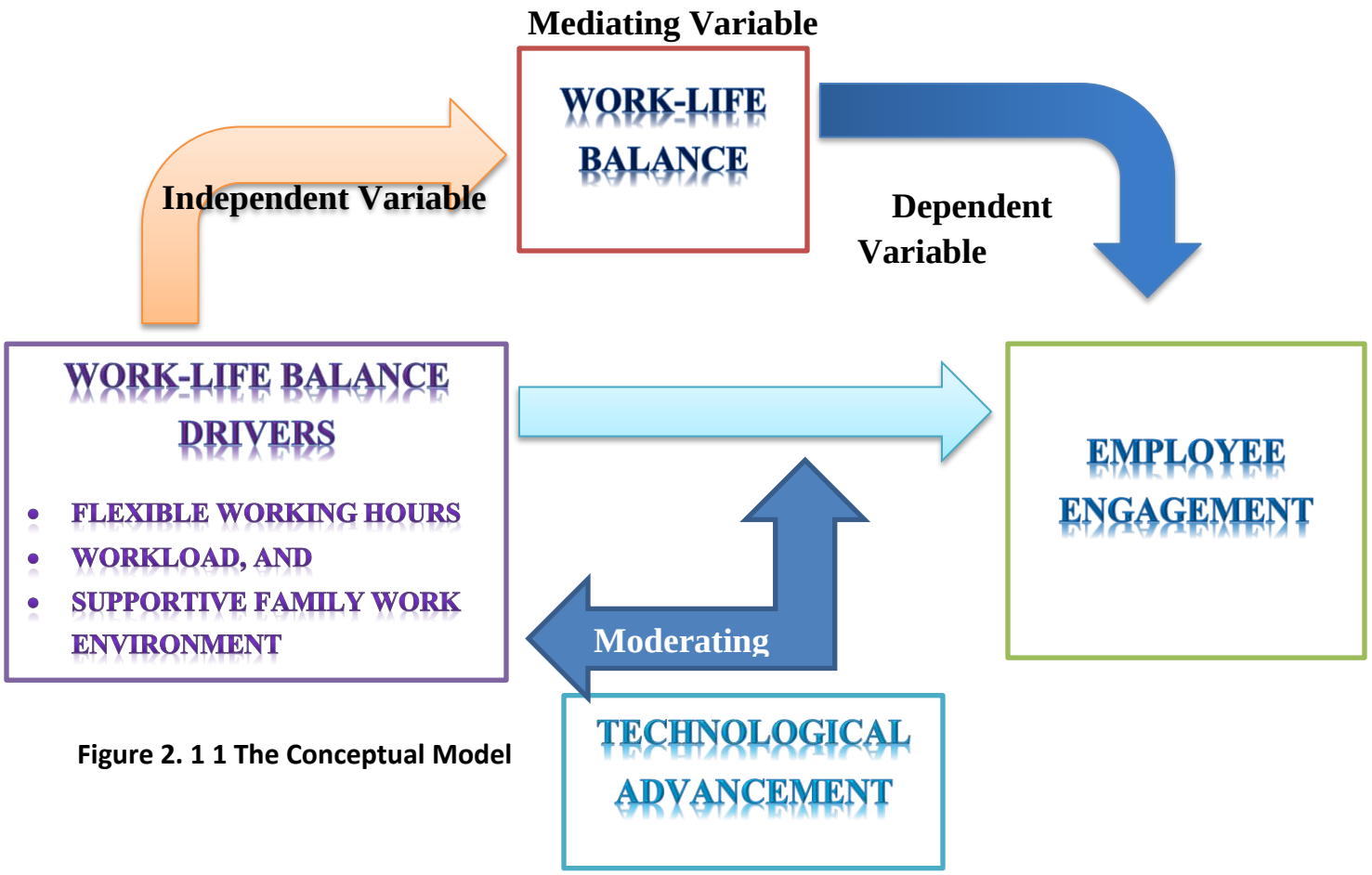


Figure 2. 1 1 The Conceptual Model

2.11. Hypothesis

H1: Flexible working hours positively affect employee engagement in GIZ.

H2: Workload negatively affects employee engagement in GIZ.

H3: Supportive family work positively affects employee engagement in GIZ.

H4: Work-life balance mediates the relationship between work-life balance drivers and employee engagement in GIZ.

H5: Technological advancements moderate the relationship between work-life balance and employee engagement in GIZ.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.0 Introduction

This chapter was provided a systematic description of the methodology for conducting the research. It was include sections on research design, population, sampling frame, sample and sampling technique, instruments, data collection procedure, pilot test, data processing, and measurement variables.

3.1 study area setting

The Deutsche Gesellschaft für International Zusammenarbeit (GIZ) has been working in Ethiopia on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) since 1964. GIZ operates in Ethiopia on behalf of BMZ and other national and international partners, aligning with the Ethiopian Government's objectives. Germany's development cooperation with Ethiopia focuses on three priority areas: economic development and vocational education and training, agriculture and food and nutrition security, and the conservation and sustainable use of natural resources (biodiversity). Additionally, GIZ supports Ethiopia in providing services for displaced people, with the country hosting over 900,000 registered refugees as of the end of 2018. GIZ also promotes health, renewable energy, and social and environmental standards in the industry. It works with the Civil Peace Service in conflict management and engages in development partnerships with the private sector in Ethiopia. GIZ Ethiopia's structure is classified under clusters, consisting of four main clusters: the Regional Transformation Cluster, Climate Change Cluster, Social Transformation Cluster, and Economic Transformation Cluster.

3.2 Research Philosophy

This study adopts a research methodology grounded in the positivist philosophy, which serves as the foundation for quantitative research. Additionally, post-positivism, which emerged as both an evolution and critique of positivism, shapes the research approach. Positivism operates on the premise that knowledge is objective, politically and socially impartial, and can be attained with quantitative accuracy by gathering observable facts that reflect an independent reality. The primary goal of research within this paradigm is to identify universal laws. Conversely, post-

positivism asserts that while theories cannot be conclusively verified as true, they remain valid until proven false (Willis, 2007).

While positivists argue that data can be gathered without being influenced by the researcher's personal or societal beliefs, post-positivists recognize that preexisting social and political frameworks inevitably affect data collection to some extent Willis, 2007). Unlike traditional positivists, post-positivists are skeptical about the possibility of entirely detaching the researcher from the subject of study or assuming a single, universally accepted reality. Consequently, post-positivists tend to align with naturalist perspectives, asserting that complete researcher objectivity is unachievable and that multiple realities may coexist depending on different viewpoints.

3.3 Research Approach

This research utilized a quantitative approach, consistent with the positivist philosophy guiding the study. Quantitative research involves systematically gathering and analyzing numerical data to detect patterns, relationships, and causal links between variables. This method is particularly effective for hypothesis testing and precise measurement of variables (Creswell, 2014). Through the use of structured tools such as surveys and questionnaires, the study collected substantial data from a large sample of respondents, which was then analyzed using statistical techniques to generate significant insights and produce generalizable conclusions (Bryman, 2012). The decision to adopt a quantitative approach was based on its ability to offer a clear and measurable assessment of how work-life balance drivers influence employee engagement, including the mediating role of work-life balance and the moderating effect of technological advancements. Employing statistical analysis ensures that the results are rigorous, dependable, and applicable for future research, policymaking, and practical interventions in the areas of employee engagement and work-life balance (Zikmund et al., 2013). This approach enhances objectivity and reproducibility, thereby contributing valuable, evidence-based findings to the existing literature.

3.4 Research Design

This research adopted an explanatory research design to examine the causal link between drivers of work-life balance and employee engagement, with particular attention to the mediating influence of work-life balance and the moderating impact of technological advancements.

Explanatory research was selected due to its effectiveness in uncovering the reasons behind specific outcomes and providing a deeper understanding of the underlying mechanisms (Saunders, Lewis, & Thornhill, 2016). The study employed a cross-sectional survey approach to gather quantitative data from employees working at GIZ-SLM in Addis Ababa. Structured questionnaires were distributed to collect detailed information on work-life balance factors, employee engagement, work-life balance, and technological advancements. This approach enabled the efficient collection of a substantial dataset within a limited timeframe, allowing for comprehensive analysis and reliable findings.

3.5 Target Population

According to Cooper and Schindler (2011), a population is defined as the entire group of elements to which a study's findings are meant to apply. GIZ Ethiopia, operating on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), comprises a diverse workforce totaling 894 employees. These employees are distributed across various clusters that reflect GIZ's broad scope of activities in Ethiopia. Specifically, the Climate Change Cluster consists of 245 employees, while the Regional Transformation Cluster encompasses 6 employees. The Social Transformation Cluster comprises 283 employees, and the Economic Transformation Cluster includes 360 employees. Each cluster focuses on specific developmental objectives aligned with Ethiopia's national priorities, such as economic development, climate resilience, social equity, and regional transformation. Understanding the demographics and distribution within these clusters is crucial for targeting the survey instruments effectively and ensuring representative data collection across different sectors of GIZ's operations in Addis Ababa.

Table 3. 1 Total Population Distribution

No.	Category	Total population	Percentage
1	Climate Change Cluster	245	28.4%
2	Regional Transformation Cluster	6	0.67%
3	Social Transformation Cluster	283	31.65%
4	Economic Transformation Cluster	360	40.26%
	Total	894	100%

Source: Human Resource department of GIZ Ethiopia, 2024

3.6 Sampling technique

In this study, the research was adopting probability sampling methods among probability methods, specifically utilizing stratified sampling and simple random sampling. Stratified sampling involves dividing GIZ Ethiopia's workforce into distinct clusters based on organizational units such as Climate Change, Regional Transformation, Social Transformation, and Economic Transformation. Each cluster represents a homogeneous subgroup with specific operational focuses and employee demographics. Proportional stratified sampling was used to ensure that the sample size from each cluster is representative of its size in the total population, enhancing the accuracy of subgroup analysis. Following stratification, simple random sampling was implemented to randomly select employees from each stratum. This method ensures that every employee in GIZ Ethiopia has an equal chance of being included in the study, minimizing bias and increasing the generalizability of the findings to the entire organization (Cooper & Schindler, 2011). These sampling techniques are chosen for their structured approach to sampling, ensuring the validity and reliability of the research outcomes.

3.7 Sample Size

To determine the sample size for this study, Yamane's formula was be applied, taking into account a 95% level of confidence and a 5% margin of error. This formula is widely used in research to calculate the appropriate sample size needed to ensure statistical accuracy and reliability of study results. This approach was ensure that the selected sample adequately represents the diversity and composition of employees across different clusters within GIZ Ethiopia, thereby enhancing the study's validity and the generalizability of its findings.

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

Where: n= desired size (sample size)

N= total population size

e=limit of error tolerance 5% (0.05). N=894, e=0.05, Thus $n = \frac{894}{1+894(0.05)2}$

$n \frac{894}{1+894(0.0025)} = \; » \frac{894}{3.235} = 277.$

Table 3. 2 Sample size distribution table

Category	Distribution Formula	Percentage Formula
Climate Change Cluster	$\frac{245}{894} * 277 = 76$	$\frac{245}{894} = \mathbf{27.1}\%$

Regional Transformation Cluster	$\frac{6}{894} * 277 = 2$	$\frac{6}{894} = \mathbf{0.7}\%$
Social Transformation Cluster	$\frac{283}{894} * 277 = 88$	$\frac{283}{894} = \mathbf{31.6}\%$
Economic Transformation Cluster	$\frac{360}{894} * 277 = 111$	$\frac{360}{894} = \mathbf{40.3}\%$
Total	**277**	**100%**

Source Owen Survey computation 2024

3.8 source of data

In this study, both primary and secondary sources of data were utilized to comprehensively explore the research objectives. Primary data was collected directly from employees within GIZ Ethiopia through structured questionnaires distributed among sampled participants. This approach allows for the gathering of specific insights and firsthand perspectives on variables such as employee engagement, work-life balance, and the impact of technological advancements. The questionnaire design was informed by established theories and previous research findings to ensure relevance and reliability (Sekaran & Bougie, 2016). Additionally, secondary data was sourced from organizational reports, academic journals, and relevant literature on topics related to employee engagement, technological advancements, and work-life balance in similar organizational contexts. These secondary sources were providing a broader theoretical framework and empirical evidence to support and contextualize the study's findings. By integrating both primary and secondary data, this research aims to achieve a robust analysis and comprehensive understanding of the factors influencing employee engagement and work-life balance within GIZ Ethiopia.

3.9 Data Collection instrument

The data collection instrument for this study was consisting of structured questionnaires designed to gather comprehensive quantitative data from employees at GIZ Ethiopia. The questionnaire was structured into the following sections:

1. Employee Engagement: Based on the Dedication, Absorption, and Vigor dimensions (Schaufeli & Bakker, 2004), the questionnaire was include items to measure each dimension. Dedication relates to employees' enthusiasm, inspiration, and pride in their work. Absorption refers to being fully immersed and engrossed in one's work. Vigor pertains to high levels of energy and resilience while working.

2. Work-Life Balance Scale: Adopted from Hayman (2005) and originally developed by Mcayley (2003), this scale was consisting of 15 questions. It was assess employees' perceptions of their ability to manage and balance responsibilities across work, family, and personal life domains. Questions were cover aspects such as time management, fulfillment of personal commitments, and satisfaction with work-life integration.

3. Work-Life Drivers:

- **Flexible Working Hours**: This section was explore employees' perceptions of flexibility in their working hours. It was assess the extent to which employees have control over their work schedules, including options for flexible start and end times, remote work opportunities, and adjustments to accommodate personal obligations.
- **Supportive family work Environment**: This subsection was gauge employees' perceptions of the supportive family work environment at GIZ. Questions was focus on aspects such as managerial support for work-life balance initiatives, inclusivity, and the availability of resources to support employee well-being.
- **Workload**: This section was assessing employees' perceptions of their workload and its impact on their ability to achieve work-life balance. It was include questions on workload distribution, time pressures, and the balance between job demands and available resources.

4. **Technological Advancement**: This section was exploring employees' perceptions of how technological advancements influence their work-life balance. Questions was examine the use of technology in facilitating flexible work arrangements, managing workload, and enhancing communication efficiency within the organization.

The questionnaire was utilizing Likert scales for quantitative responses, allowing participants to indicate their agreement or disagreement with statements on a structured scale. Additionally, open-ended questions were included to capture qualitative insights and nuanced perspectives on the topics covered.

Prior to full-scale implementation, the questionnaire was undergoing pilot testing with a small sample of employees to validate its effectiveness, clarity, and relevance. Feedback from the pilot study was inform refinements to ensure the questionnaire accurately captures the intended variables and aligns with the study's objectives.

3.10 Data Processing and Analysis

According to Sekaran (2003), as cited by Njuguna (2008), data analysis has three main objectives: understanding the data, assessing its quality, and testing research hypotheses. "Understanding the data" helps the researcher gauge respondents' reactions to the questionnaire items and evaluate the quality of the measures. This involves using descriptive statistics such as response rates, means, and standard deviations of the observed variables. Assessing the quality of the data is crucial for ensuring the reliability and validity of the measures, lending credibility to subsequent analyses and findings. Once the data is prepared, the researcher can test the hypotheses using appropriate statistical tests. In this study, quantitative data was analyzed by calculating response rates and using descriptive statistics, such as means, standard deviations, frequencies, and percentages, through the Statistical Package for Social Sciences (SPSS) version 26 and Microsoft Excel. Inferential analysis, including multiple and correlation analyses, was determine the strength and direction of relationships between the dependent and independent variables. Regression models were developed, and hypothesis testing was conducted using multiple regressions. Data was presented in graphs, tables, and pie charts.

3.10.1 Model Specification

The model specification was outline the relationship between the dependent variable (Employee Engagement) and the independent variables (Work-Life Balance Drivers, Work-Life Balance, and Technological Advancement) while incorporating the mediating role of Work-Life Balance and the moderating role of Technological Advancement.

Model Specification for Regression Equations

Dependent Variable (Y)

- **Employee Engagement (EE)**

Independent Variables (X)

- **X1**: Flexible Working Hours (FWH)
- **X2**: Supportive family work Environment (SFWE)
- **X3**: Workload (WL)
- **X4**: Technological Advancement (TA)
- **M**: Work-Life Balance (WLB) - Mediating Variable

Regression Equations

Model 1: Direct Effect of Work-Life Balance Drivers on Employee Engagement

$$EE=\beta 0+\beta 1FWH+\beta 2SOC+\beta 3WL+\epsilon$$

Model 2: Mediating Effect of Work-Life Balance

$WLB=\beta0+\beta1FWH+\beta2SOC+\beta3WL+\epsilon$

$EE=\beta0+\beta1FWH+\beta2SOC+\beta3WL+\beta4WLB+\epsilon$

Model 3: Moderating Effect of Technological Advancement

$EE=\beta0+\beta1FWH+\beta2SOC+\beta3WL+\beta4TA+\beta5(FWH\times TA)+\beta6(SOC\times TA)+\beta7(WL\times TA)+\epsilon$

- ✓ Mediating Variable

Work-Life Balance (WLB): Assessing the equilibrium between personal life and work responsibilities.

- ★ Model 1: Direct Effect of Work-Life Balance Drivers on Employee Engagement

  $EE=\beta0+\beta1WLB\ Drivers+\epsilon$

- ★ Model 2: Mediating Effect of Work-Life Balance

  $EE=\beta0+\beta1WLB\ Drivers+\beta2WLB+\epsilon$

- ★ Model 3: Moderating Effect of Technological Advancement

  $EE=\beta0+\beta1WLB\ Drivers+\beta2TA+\beta3(WLB\ Drivers\times TA)+\epsilon$

- ✓ Mediation Analysis

To test for the mediating effect of Work-Life Balance:

1. Direct Path (c'): The effect of WLB Drivers on EE without considering WLB.

2. Indirect Path (a \b): The effect of WLB Drivers on EE through WLB.

3. Total Effect (c): The combined effect of WLB Drivers on EE considering both direct and indirect paths.

- ✓ Moderation Analysis

To test for the moderating effect of Technological Advancement:

1. Interaction Term: $\beta3(WLB\ Drivers\times TA)$ was included to assess if the relationship between WLB Drivers and EE changes with different levels of TA.

By specifying the models in this manner, the research aims to comprehensively understand the interplay between work-life balance drivers, technological advancement, and employee engagement in the context of GIZ-SLM in Addis Ababa.

3.11 Reliability and validity test

3.11.1 Reliability

A reliability test assesses the consistency and stability of a measurement instrument over time or across different conditions. It ensures that the tool produces dependable results, minimizing errors and enhancing the credibility of the data. Common methods include Cronbach's alpha, test-retest, and split-half reliability, all of which evaluate the instrument's internal consistency and overall trustworthiness in research.

Table 3. 3 Reliability test table

Reliability Statistics	Cronbach's Alpha	No of Items	Internal consistency
Flexible working hours	.790	9	Acceptable
Supportive organizational culture	.844	13	Good
Workload	.844	8	Good
Work-life balance	.889	15	Good
Technological advancement	.732	8	Acceptable
Employee engagement	.829	16	Good

Source Owen survey, computation 2024

The reliability statistics for the study's variables demonstrate acceptable to good internal consistency, as measured by Cornbrash’s alpha. Flexible working hours achieved a reliability coefficient of 0.790 across 9 items, indicating an acceptable level of consistency. Supportive organizational culture and workload both recorded a Cornbrash’s alpha of 0.844, based on 13 and 8 items, respectively, reflecting a good level of reliability. Work-life balance, evaluated with 15 items, exhibited a strong internal consistency with a Cornbrash’s alpha of 0.889, categorized as good. Technological advancement, measured with 8 items, showed an acceptable reliability level with a Cornbrash’s alpha of 0.732. Finally, employee engagement, assessed with 16 items, achieved a Cornbrash’s alpha of 0.829, indicating good internal consistency. These results confirm that the measurement instruments used for the study are reliable and appropriate for data

collection and analysis.

3.11.2 Validity Test

Validity refers to the extent to which an instrument accurately measures what it is intended to measure. In this study, validity was assessed using factor analysis to ensure that the constructs align with the underlying theoretical framework and that the items effectively represent the respective variables. Key validity metrics, including Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity, were applied to evaluate the adequacy of the data for factor analysis.

The KMO values indicate the proportion of variance in the variables that might be common variance, which is crucial for the validity of the constructs. A KMO value above 0.7 is considered adequate for factor analysis. Additionally, Bartlett's test of sphericity was used to confirm that the correlations between variables were statistically significant, ensuring the appropriateness of the data for further analysis.

By ensuring high levels of construct validity, the study confirms that the instruments used not only measure the intended variables but also provide a solid foundation for meaningful interpretation of the results. This process underscores the robustness of the findings and their alignment with theoretical constructs.

3.12 Ethical consideration

According to ethical research guidelines, it is imperative to ensure that participants are fully informed about the nature and purpose of the study (Sekaran, 2003). The researcher was thoroughly explaining the research study to the respondents, highlighting that their information was used exclusively for academic purposes. Participation was explicitly stated as voluntary, and respondents was informed that they have the right to decline or withdraw from the study at any time during the research period without any coercion. Informed consent forms were provided for participants to sign, ensuring they make an informed choice about their involvement. To protect respondents' privacy, strict standards of anonymity were maintained throughout the study (Sekaran, 2003).

CHAPTER FOUR

4. DATA PRESENTATION ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents the findings of the study through systematic data analysis and interpretation. It aims to provide clear insights into the research objectives by examining the relationships between the variables under investigation. The chapter begins with an overview of the demographic characteristics of the respondents, followed by the results of reliability and validity tests to ensure the credibility of the instruments. Statistical tools and techniques are then employed to analyze the data, highlighting trends, patterns, and relationships. The findings are interpreted in the context of the research questions and objectives, providing a foundation for meaningful conclusions and actionable recommendations in subsequent chapters.

4.2 Examining background of the respondent

Table 4 1 .General information of the respondent

Gender				
		Frequency	Percent	Valid Percent
Valid	Male	136	49.5	49.5
	Female	139	50.5	50.5
	Total	275	100.0	100.0
Please indicate your age group				
		Frequency	Percent	Valid Percent
Valid	Below 25 years	55	20.0	20.0
	26 - 30 years	118	42.9	42.9
	31 - 40 years	61	22.2	22.2
	Above 40 years	41	14.9	14.9
	Total	275	100.0	100.0
Please indicate your highest level of formal education				
		Frequency	Percent	Valid Percent

Valid	Diploma	14	5.09	5.09
	BSc/BA Degree	199	72.36	72.36
	Master Degree and above	62	22.25	22.25
	Total	275	100.0	100.0

Your current job level?

		Frequency	Percent	Valid Percent
Valid	Manager	77	28.0	28.0
	Non-Manager	198	72.0	72.0
	Total	275	100.0	100.0

What is your Marital Status?

		Frequency	Percent	Valid Percent
Valid	Married	132	48.0	48.0
	Single	136	49.5	49.5
	Divorced	7	2.5	2.5
	Total	275	100.0	100.0

How many children do you have?

		Frequency	Percent	Valid Percent
Valid	Less than Three	118	42.9	42.9
	I have 3-5	71	25.8	25.8
	3	82	29.8	29.8
	More than SIX	3	1.1	1.1
	I don't have any children	1	.4	.4
	Total	275	100.0	100.0

Source Owen survey, 2024

The demographic profile of the respondents provides insights into the general characteristics of the study participants. Regarding gender distribution, the sample comprised 136 males (49.5%)

and 139 females (50.5%), ensuring a balanced representation of both genders. In terms of age, the majority of respondents (42.9%) fell within the 26-30 years age group, followed by those aged 31-40 years (22.2%), below 25 years (20.0%), and above 40 years (14.9%), indicating a relatively young workforce. The respondents' educational background showed that 72.36% held a BSc/BA degree, 22.25% had attained a master's degree or higher and 5.09% possessed a diploma, reflecting a well-educated population. Concerning job levels, the majority (72.0%) were non-managers, while 28.0% held managerial positions. Marital status analysis revealed that 49.5% of the respondents were single, 48.0% were married, and 2.5% were divorced. Additionally, 42.9% of participants reported having fewer than three children, 29.8% had three children, 25.8% had 3-5 children, 1.1% reported having more than six children, and 0.4% indicated having no children. This demographic overview provides a comprehensive understanding of the respondents' profiles, which serves as a foundation for analyzing the subsequent data.

4.3 Descriptive statics

This section presents the results of the descriptive analysis, utilizing mean and standard deviation to interpret the data. The aim is to evaluate respondents' perceptions and levels of agreement across various variables. Data were gathered using a five-point Likert scale with the following designations:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

The mean values represent the average degree of agreement or disagreement among respondents concerning the questionnaire items. To improve clarity in interpretation, the response categories were redefined as follows:

- Scores from 1.00 to 1.80 were interpreted as "Strongly Disagree."
- Scores between 1.81 and 2.60 indicated "Disagree."
- Scores ranging from 2.61 to 3.40 reflected "Neutral."
- Scores from 3.41 to 4.20 signified "Agree."
- Scores from 4.21 to 5.00 represented "Strongly Agree."

These thresholds were adapted from the guidelines proposed by Best (1977) and referenced by Birhanu (2017) to provide a more detailed understanding of respondents' views on the variables analyzed. By applying this systematic approach, the study seeks to offer meaningful insights into the perceptions within the NGO sector, enhancing the interpretation of the data collected.

Table 4 2 Deceptive statics

	Mean	Std. Deviation
Flexible working hours	3.2998	.88032
Supportive organizational culture	3.2099	.78039
Workload	3.7203	.82889
Work-life balance	3.5993	.77783
Technological advancement	2.5797	.98395
Vigor	2.5726	.74932
Dedication	2.5709	.97256
Absorption	2.2982	.76251
Employee engagement	3.4007	.74752

Source Owen survey, 2024

The descriptive analysis of the study variables, based on Best's (1977) interpretation framework, provides insights into respondents' perceptions. The mean score for flexible working hours was 3.2998, with a standard deviation of 0.88032, indicating a neutral to slightly positive perception. Supportive organizational culture had a mean score of 3.2099 and a standard deviation of 0.78039, also reflecting a neutral stance. Workload, however, was rated more favourably, with a mean of 3.7203 and a standard deviation of 0.82889, falling into the "Agree" category. Similarly, work-life balance received a mean score of 3.5993 (SD = 0.77783), suggesting general agreement among respondents.

Technological advancement had a mean score of 2.5797 (SD = 0.98395), which indicates disagreement, showing room for improvement in this area. In terms of employee engagement components, vigor and dedication had mean scores of 2.5726 (SD = 0.74932) and 2.5709 (SD = 0.97256), respectively, suggesting respondents were generally dissatisfied. Absorption scored the lowest, with a mean of 2.2982 (SD = 0.76251), aligning with a "Disagree" interpretation. Conversely, overall employee engagement achieved a mean score of 3.4007 (SD = 0.74752), representing a neutral to slightly positive perception. These findings highlight variations in how

different aspects of the workplace are perceived, emphasizing areas that may require organizational attention and improvement.

Table 4 3 Correlation

Correlations						
	Flexible working hours	Supportive organizational culture	Workload	Work-life balance	Technological advancement	Employee engagement
Flexible working hours	1					
Supportive organizational culture	.408**	1				
Workload	-.425**	-.569**	1			
Work-life balance	.354**	.510**	-.610**	1		
Technological advancement	.449	.510	-.076	.688	1	
Employee engagement	.734**	.810**	-.672**	.546**	.611	1

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

Source Own Survey, 2024

The correlation analysis reveals significant relationships among the variables studied, providing valuable insights into the dynamics of work-life balance drivers and their impact on employee engagement. Flexible working hours show a strong positive correlation with employee engagement ($r = 0.734$, $p < 0.01$), highlighting the importance of flexible schedules in fostering higher levels of commitment and enthusiasm among employees. Similarly, supportive organizational culture exhibits the highest positive correlation with employee engagement ($r = 0.810$, $p < 0.01$), underscoring its critical role in creating an environment conducive to productivity and satisfaction.

Conversely, workload demonstrates a strong negative correlation with employee engagement ($r = -0.672$, $p < 0.01$), suggesting that excessive workload adversely affects engagement levels. This finding aligns with the notion that an unmanageable workload can lead to stress and burnout, thereby undermining an employee's ability to remain fully engaged. Interestingly, workload also has significant negative correlations with supportive organizational culture ($r = -0.569$, $p < 0.01$) and work-life balance ($r = -0.610$, $p < 0.01$), indicating that high workload levels may hinder the

establishment of a supportive work environment and disrupt the balance between personal and professional responsibilities.

Work-life balance correlates positively with employee engagement ($r = 0.546$, $p < 0.01$) and demonstrates moderate positive relationships with flexible working hours ($r = 0.354$, $p < 0.01$) and supportive organizational culture ($r = 0.510$, $p < 0.01$). These relationships emphasize the interconnected nature of work-life balance with other drivers, showcasing its mediating role in the engagement process. Additionally, technological advancements show a positive correlation with both employee engagement ($r = 0.611$) and work-life balance ($r = 0.688$), suggesting that technological tools and innovations can enhance both flexibility and overall engagement.

Overall, the correlation results highlight the intricate interplay between work-life balance drivers and employee engagement, emphasizing the importance of flexible arrangements, organizational support, and technological advancements in mitigating the negative effects of workload and promoting a more engaged workforce.

4.5 Assumptions/diagnostic test for multiple linear regressions

In multiple linear regression analysis, conducting assumptions or diagnostic tests is essential to ensure the validity and reliability of the model. These tests evaluate whether the data meet the necessary statistical assumptions, including normality, linearity, homoscedasticity, multicollinearity, and independence of residuals. Meeting these assumptions strengthens the model's ability to make accurate predictions and minimizes potential errors. This section outlines the diagnostic tests performed and interprets their results to confirm the appropriateness of the

4.5.1. Assumption one: Assumption on variables and Sample size

The first assumption in multiple linear regressions pertains to the variables and sample size used in the analysis. For the model to be reliable, the independent and dependent variables should be continuous or appropriately coded if categorical. Additionally, the sample size must be sufficient to ensure robust results and avoid over fitting. A commonly accepted guideline is to have at least 10 to 15 observations per independent variable included in the model. In this study, the sample size of 275 respondents exceeds this minimum threshold, ensuring adequate statistical power and generalizability of the results.

4.5.2. Assumption two: Outlier, leverage and influential points

The second assumption in multiple linear regression focuses on outliers, leverage, and influential points within the dataset. Outliers are extreme values that deviate significantly from the rest of

the data and may distort the regression model by disproportionately influencing the results. Leverage points are observations with extreme predictor values, which can affect the model's parameter estimates if not addressed. Similarly, influential points are data points that, due to their position, have a strong impact on the regression coefficients. Assessing and managing these points is essential to ensure the model's accuracy, validity, and stability, as they may otherwise skew the results and reduce interpretative reliability.

Table 4 4 Residuals Statisticsa

	Minimum	Maximum	Mean	Std. Deviation
Std. Residual	-2.976	2.476	.000	.995
Stud. Residual	-2.985	2.552	-.007	1.010
Deleted Residual	-3.23983	2.78787	-.01139	.41645
Stud. Deleted Residual	-3.030	0.484	-.002	1.046
Mahal. Distance	.029	0.702	0.989	15.362
Cook's Distance	.000	0.337	.070	1.106
Centered Leverage Value	.000	.930	.011	.056

a. Dependent Variable: Employee engagement

Source Own survey, 2024

The analysis of residual statistics for the dependent variable, Employee Engagement, reveals key insights into the data's adherence to the assumptions of multiple linear regressions. The standardized residuals range between -2.976 and 2.476, with a mean of approximately 0.000 and a standard deviation of 0.995, indicating that most residuals are within an acceptable range, as values outside ±3 are typically considered outliers. Similarly, the studentized residuals, with a minimum of -2.985 and a maximum of 2.552, confirm the absence of significant violations, as their mean and standard deviation are close to 0 and 1, respectively.

The deleted residuals and studentzed deleted residuals also remain within acceptable limits, showing no severe outliers that could unduly influence the regression results. The Mahalanobis distance ranges from 0.029 to 15.362, suggesting no extreme multivariate outliers when compared to the critical chi-square value for the degrees of freedom in the model. Cook's Distance, which measures the influence of individual observations, has a maximum value of 0.337, far below the threshold of 1.0, indicating that no single observation excessively influences the model. Finally the cantered leverage values range from 0.000 to 0.930, with a mean of 0.011 demonstrating that the dataset does not include cases with disproportionately high leverage,

which could distort the regression parameters. Overall, the residual statistics confirm that the data satisfies the assumptions regarding outliers, leverage, and influential points, ensuring the robustness of the regression analysis.

4.5.3. Assumption three: Multicollinearity

Multicollinearity refers to a statistical phenomenon where two or more independent variables in a regression model are highly correlated, potentially undermining the reliability of the results. It can inflate the standard errors of the coefficients, making it difficult to determine the individual effect of each predictor on the dependent variable. Assessing multicollinearity is critical in multiple linear regressions to ensure the model's validity and interpretability. This assumption is tested using indicators such as the Variance Inflation Factor (VIF) and Tolerance values. A VIF value exceeding 10 or a Tolerance value below 0.1 suggests a serious multicollinearity issue, requiring adjustments to the model. The analysis in this section examines these metrics to confirm the independence of the predictor variables and the stability of the regression estimates.

Table 4 5 Multicollinearity

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Flexible working hours	.819	1.222
	Supportive organizational culture	.833	1.201
	Workload	.982	1.019

Source Own survey, 2024

The Collinearity statistics presented for the independent variables—Flexible Working Hours, Supportive Organizational Culture, and Workload—indicate no significant multicollinearity issues within the regression model. Tolerance values, which measure the proportion of variance in a given predictor not explained by other predictors, are all above the commonly accepted threshold of 0.1. Specifically, the Tolerance values for Flexible Working Hours, Supportive Organizational Culture, and Workload are 0.819, 0.833, and 0.982, respectively. These values suggest that each predictor variable has a sufficient level of unique variance in the model.

Similarly, the Variance Inflation Factor (VIF), which quantifies the degree of multicollinearity, remains well below the critical value of 10. The VIF values are 1.222 for Flexible Working Hours, 1.201 for Supportive Organizational Culture and 1.019 for Workload. These results

confirm that there is no excessive correlation among the independent variables, and the predictors are suitably independent for reliable coefficient estimation. Consequently, the assumption of no significant multicollinearity in the regression model is met.

4.5.4. Assumption four: normality

Assumption four, normality, is a critical requirement in multiple linear regression analysis. It ensures that the residuals, or errors, are distributed normally, which is vital for the validity of hypothesis testing and the reliability of statistical inferences. Normality is assessed to confirm that the model's predictions align with the actual data without systematic bias. This assumption is typically evaluated using statistical tests, such as the Shapiro-Wilk or Kolmogorov-Smirnov tests, and graphical methods, including histograms, Q-Q plots, and P-P plots. Meeting the normality assumption enhances the robustness and interpretability of the regression results, ensuring that the underlying data satisfies the theoretical conditions necessary for accurate and unbiased parameter estimates.

Table 4 6 Tests of Normality

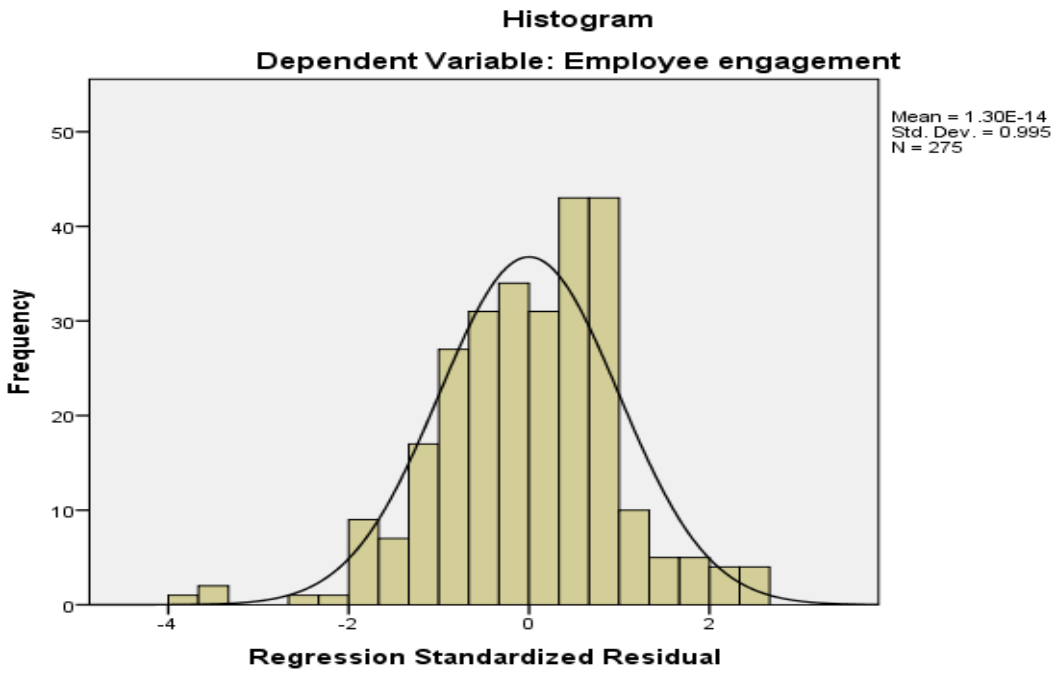
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Studentized Residual	.436	275	.200	.213	275	.054

a. Lilliefors Significance Correction

Source Own survey, 2024

The normality of residuals was evaluated using the Kolmogorov-Smirnov and Shapiro-Wilk tests. For the Kolmogorov-Smirnov test, the statistic for the studentized residuals was 0.436 with a significance level of 0.200, indicating no significant deviation from normality. Similarly, the Shapiro-Wilk test yielded a statistic of 0.213 with a significance level of 0.054, further supporting the conclusion that the residuals follow a normal distribution. Both tests suggest that the residuals meet the assumption of normality, as the significance values are greater than the conventional threshold of 0.05. These results imply that the regression model's residuals are distributed normally, fulfilling the necessary assumption for accurate and unbiased statistical analysis.

Figure 4 1 Histogram



The histogram provided visually demonstrates the distribution of the standardized residuals for the dependent variable "Employee Engagement." The histogram shows a bell-shaped curve, indicating a normal distribution of residuals.

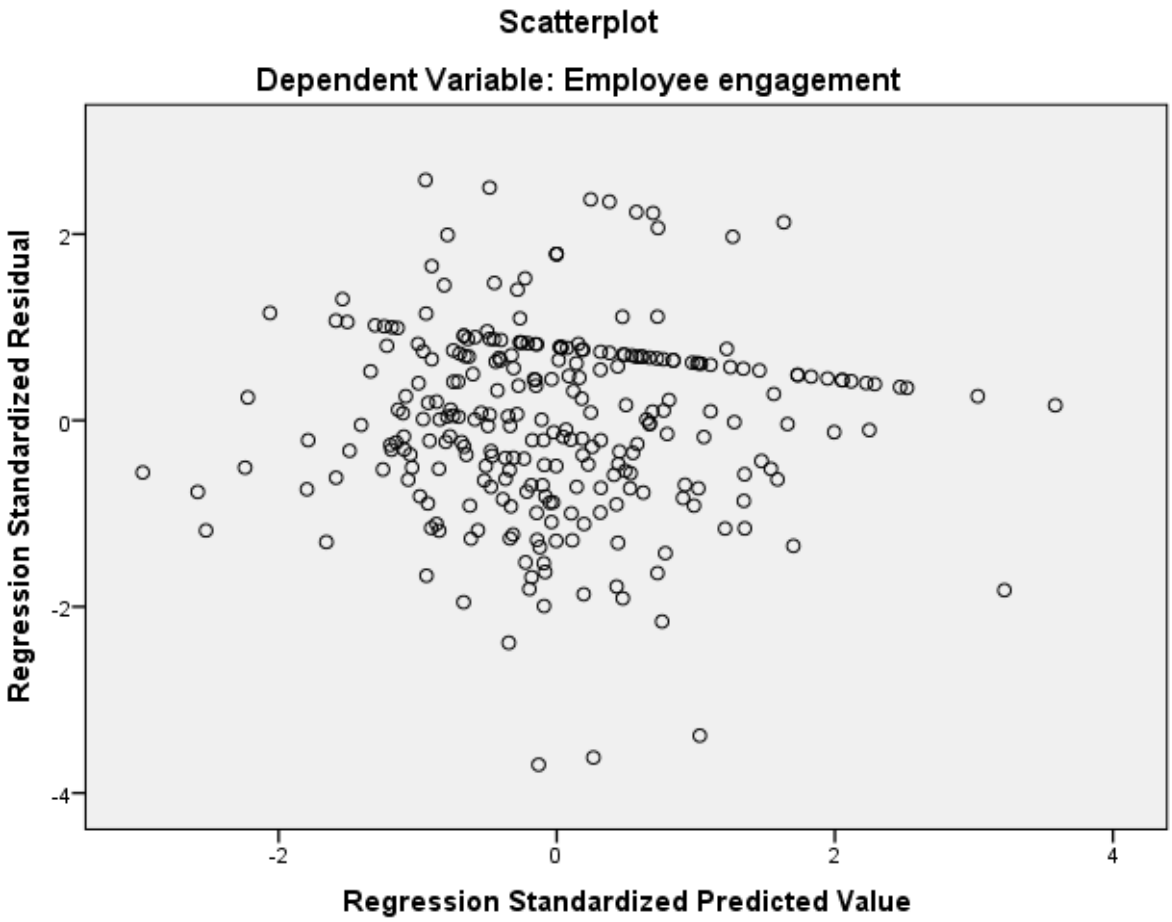
The presence of a relatively symmetric distribution suggests that the residuals are normally distributed around the mean (with a mean close to zero, as indicated by the very small value \(1.30E-14\)). This distribution is consistent with the assumptions of normality required for conducting multiple linear regression analyses. The data points are well spread out around the mean, and the histogram's shape further supports the assumption that the regression model's residuals are normally distributed, which is crucial for ensuring valid statistical inferences from the regression results.

4.5.5 Assumption five: Homoscedasticity

Homoscedasticity refers to the assumption that the residuals or errors of the regression model are uniformly spread across all levels of the independent variables. In other words, it implies that the variance of the residuals should be constant across all values of the predictor variables. This assumption is crucial because it ensures that the statistical tests used in regression analysis, such as the t-tests and F-tests, are valid. If homoscedasticity is violated, it can lead to incorrect inferences about the relationships between variables. To assess this assumption, residual plots are often examined, looking for patterns such as funnels or non-random spreads that would indicate

heteroscedasticity. The evaluation of homoscedasticity helps in ensuring the reliability and validity of the regression model, making it an essential step in the diagnostic testing process.

Figure 4 2 Scatterplot



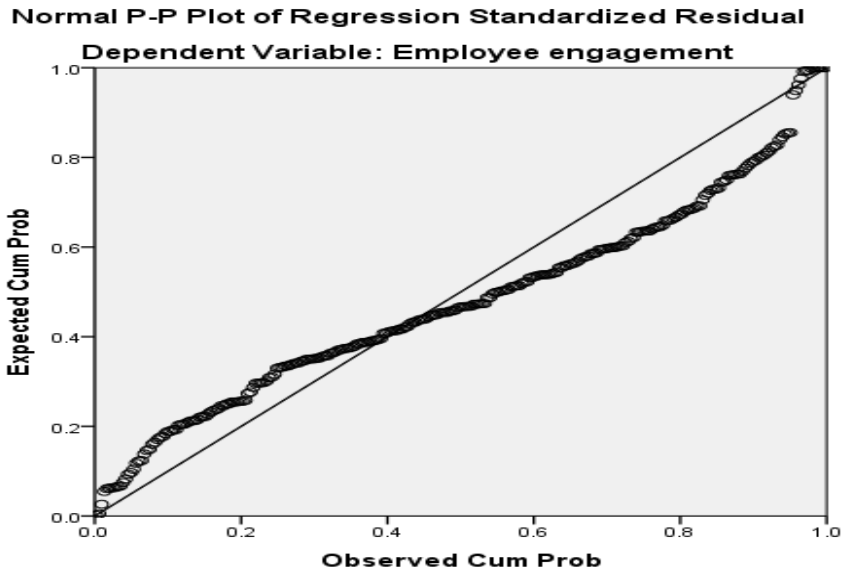
The scatterplot provided is a graphical representation used to assess the assumption of homoscedasticity in regression analysis. In this plot, the dependent variable, Employee Engagement, is represented on the y-axis, while the regression standardized predicted values are plotted on the x-axis. The pattern observed in this scatterplot is crucial for evaluating homoscedasticity. Ideally, the residuals should be randomly scattered with no obvious pattern or trend—this indicates that the variance of residuals is constant across the range of predicted values. However, in this scatterplot, we see a horizontal band of residuals, which suggests that the variance of residuals may not be consistent across the range of predicted values. This pattern, often referred to as heteroscedasticity, can affect the reliability and validity of the regression model by introducing biases in the estimates of standard errors. The plot indicates that the

assumption of homoscedasticity may not be fully met for the dependent variable, suggesting the need for further examination or transformations to address this issue.

4.5.6 Assumption six Linearity

The scatterplot for the assumption of linearity provides a visual representation of the relationship between the independent variables and the dependent variable in the regression model. In this scatterplot, the dependent variable, Employee Engagement, is plotted on the y-axis, and the regression standardized predicted values are plotted on the x-axis. The purpose of this plot is to check if the relationship between the independent variables and the dependent variable is linear. Ideally, we would expect to see a straight-line relationship with data points evenly distributed above and below this line, indicating a consistent relationship between the variables. However, the scatterplot displayed reveals a pattern where the residuals are randomly distributed, without any specific trend or curvature. This suggests that the assumption of linearity is met, indicating that the regression model's relationship between the independent variables and the dependent variable is appropriately represented in a linear fashion. This is crucial for ensuring that the model's predictions are valid and that the relationship between the variables is accurately captured by the regression equation.

Figure 4 3 Normal p –p plot



4.6 ANOVA Interpretation

Table 4 7 ANOVA Interpretation table

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	115.249	3	38.416	287.662	.000[b]
	Residual	36.191	271	.134		
	Total	151.440	274			

a. Dependent Variable: Employee engagement

b. Predictors: (Constant), Workload, Supportive organizational culture, Flexible working hours

Source Own survey, 2024

The ANOVA table for the regression model assessing the impact of flexible working hours, supportive organizational culture, and workload on employee engagement provides critical insights into the overall fit and significance of the model. The model explains a substantial portion of the variance in employee engagement, with a total sum of squares of 151.44. The regression sum of squares, which accounts for the variance explained by the predictors, is 115.249 with 3 degrees of freedom, yielding a mean square value of 38.416. The F-statistic associated with this regression model is 287.662, which is highly significant at $p < 0.001$, indicating that the model significantly improves the prediction of employee engagement compared to the null model. The residual sum of squares, which captures the variance not explained by the model, is 36.191 with 271 degrees of freedom. The small mean square value for the residuals (0.134) confirms that the model explains a significant amount of the variability in employee engagement. These findings suggest that the predictors—flexible working hours, supportive organizational culture, and workload—collectively contribute significantly to the understanding of employee engagement within the context of the Addis Ababa NGO sector

4.7 Regression Analyses for independent variable

The regression analysis section provides an in-depth examination of the relationship between the independent variables—flexible working hours, supportive organizational culture, and workload—and the dependent variable, employee engagement. This analysis helps to understand how these variables collectively influence employee engagement within the GIZ. Through multiple regression techniques, the study aims to uncover the extent to which variations in flexible working hours, supportive organizational culture, and workload can predict changes in employee engagement. The results offer insights into the direct impact of these factors,

facilitating a deeper understanding of their role in enhancing employee engagement and overall organizational performance.

Table 4 8 Model Summaryb 1

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.872[a]	.761	.758	.36544	2.039
a. Predictors: (Constant), Workload, Supportive organizational culture, Flexible working hours					
b. Dependent Variable: Employee engagement					

Source Own survey, 2024

The Model Summary reveals key statistics for the regression analysis examining the relationship between flexible working hours, supportive organizational culture, and workload with employee engagement. The R value of 0.872 indicates a strong positive correlation between the independent variables and the dependent variable, suggesting that the model effectively explains a significant portion of the variance in employee engagement. The R squared value of 0.761 signifies that about 76.1% of the variability in employee engagement can be attributed to changes in the predictors—flexible working hours, supportive organizational culture, and workload. The Adjusted R squared value of 0.758 indicates a slight adjustment for the number of predictors in the model, confirming the robustness of the model's explanatory power. The standard error of the estimate is 0.36544, suggesting that the model provides a reasonable level of accuracy in predicting employee engagement. The Durbin-Watson statistic of 2.039 indicates no significant autocorrelation issues in the residuals, affirming that the model's assumptions are largely met.

4.7.1 Coefficients analyses,

Table 4 9 Coefficients analyses table

Coefficients a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.381	0.109		3.508	0.001
	Flexible working hours	0.373	0.028	0.442	13.473	0
	Supportive organizational culture	0.564	0.031	0.592	18.199	0

	Workload	-0.122	0.009	0.05	1.185	0.03

a Dependent Variable: Employee engagement

Source Own survey, 2024

The regression analysis provides significant insights into the relationship between the independent variables and employee engagement. Flexible working hours exhibit a positive and statistically significant effect on employee engagement (B = 0.373, t = 13.473, p < 0.001), indicating that providing employees with scheduling flexibility enhances their engagement levels. This result underscores the importance of adapting work schedules to accommodate employee needs, which can foster greater commitment and productivity.

Similarly, supportive organizational culture demonstrates the strongest positive influence on employee engagement (B = 0.564, t = 18.199, p < 0.001). This finding highlights the critical role of a work environment that prioritizes collaboration, recognition, and mutual respect in driving engagement. Organizations that cultivate such a culture are likely to see improved performance and higher morale among their employees.

In contrast, workload** has a negative but statistically significant effect on employee engagement (B = -0.122, t = 1.185, p = 0.03), suggesting that excessive or poorly managed workloads can detract from employees' ability to remain fully engaged. While manageable workloads may encourage productivity, an overwhelming workload may lead to stress and diminish overall engagement. These results emphasize the need for organizations to balance workload distribution effectively to sustain high engagement levels.

Overall, the findings suggest that flexible work arrangements, supportive cultural practices, and manageable workloads are pivotal factors influencing employee engagement. By strategically enhancing these areas, organizations can improve employee well-being and drive better performance outcomes.

4.7.2 Moderation and mediation analysis

To examine the relationships within the Impact of Drivers of Work-Life Balance on Employee Engagement: The Mediating Role of Work-Life Balance and the Moderating Role of Technological Advancement in NGOs in Addis Ababa, AMOS software was utilized for both moderation and mediation analysis. AMOS (Analysis of Moment Structures) is a structural equation modeling (SEM) tool that enables researchers to test complex models involving direct, indirect, and conditional relationships among variables. In this study, the mediating role of work-life balance was examined to determine how it influences the relationship between drivers of

work-life balance, such as flexible working hours, supportive organizational culture, and workload. Additionally, technological advancement was tested as a moderating variable to identify whether it strengthens or weakens these relationships. AMOS allows for precise testing of hypotheses by visually modeling and analyzing the causal pathways and interdependencies between variables. This approach provides a comprehensive understanding of the dynamics driving employee engagement in NGOs, offering evidence-based insights for improving work-life balance practices and leveraging technological advancements to enhance organizational outcomes.

4.7.2.1 Moderation Analyses

Moderation analysis is a statistical approach used to examine whether the relationship between an independent variable and a dependent variable is influenced by a third variable, known as the moderator. In this study, the moderating role of technological advancement was tested to determine how it affects the relationship between the drivers of work-life balance (flexible working hours, supportive organizational culture, and workload) and employee engagement. To compute moderation in AMOS, an interaction term must be created. This involves multiplying the independent variable (IV) by the moderator variable (MV) to generate a new interaction variable (IV × MV). Before creating the interaction term, both the independent variable and the moderator variable are usually mean-centered (subtracting the mean from each value) to reduce multicollinearity issues. Once the interaction term is created, it is included as an additional predictor in the regression or structural model. A significant interaction effect indicates that the relationship between the independent and dependent variables changes depending on the level of the moderator. This approach provides deeper insights into the conditional effects of technological advancement on the relationship between work-life balance drivers and employee engagement.

Table 4 10 Moderation Analyses table

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
DV	<---	IV	-.619	.020	-31.514	***	
DV	<---	XZ	.251	.004	56.697	***	

			Estimate	S.E.	C.R.	P	Label
DV	<---	VA81	-.015	.011	-1.343	.179	

The regression weights table indicates the direct effects of the variables on the dependent variable (DV). The independent variable (IV) has a significant and negative effect on DV (Estimate = -0.619, S.E. = 0.020, C.R. = -31.514, P < 0.001), suggesting a strong negative relationship. This means that without considering the moderating variable, IV reduces the DV. The interaction term (XZ), representing technological advancement as the moderator, has a significant and positive effect on DV (Estimate = 0.251, S.E. = 0.004, C.R. = 56.697, P < 0.001), indicating that technological advancement positively moderates the relationship between IV and DV. Lastly, VA81 has a non-significant negative effect on DV (Estimate = -0.015, S.E. = 0.011, C.R. = -1.343, P = 0.179), showing it does not significantly influence DV in this model.

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
DV	<---	IV	-.853
DV	<---	XZ	1.563
DV	<---	VA81	-.020

The standardized regression weights provide a clearer view of the strength of relationships. The IV has a strong negative standardized effect on DV (Estimate = -0.853), supporting the earlier finding of its direct adverse impact. The interaction term (XZ) has a highly positive standardized effect (Estimate = 1.563), underscoring the moderating power of technological advancement. VA81's negligible standardized effect (Estimate = -0.020) confirms its lack of influence on DV.

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
VA81	<-->	XZ	-.988	.286	-3.451	***	

			Estimate	S.E.	C.R.	P	Label
IV	<-->	VA81	-.110	.062	-1.769	.077	
IV	<-->	XZ	3.972	.373	10.641	***	

The covariances table explores the relationships between the variables. There is a significant negative covariance between VA81 and XZ (Estimate = -0.988, S.E. = 0.286, C.R. = -3.451, P < 0.001), suggesting an inverse relationship. The covariance between IV and VA81 is negative but not statistically significant (Estimate = -0.110, S.E. = 0.062, C.R. = -1.769, P = 0.077), indicating a weak and non-significant association. However, the covariance between IV and XZ is strongly positive and significant (Estimate = 3.972, S.E. = 0.373, C.R. = 10.641, P < 0.001), highlighting a strong association between these variables.

Correlations: (Group number 1 - Default model)

			Estimate
VA81	<-->	XZ	-.213
IV	<-->	VA81	-.107
IV	<-->	XZ	.839

Source Own survey, 2024

The correlations table further quantifies these relationships. The correlation between VA81 and XZ is negative and weak (Estimate = -0.213), aligning with the covariance result. Similarly, the correlation between IV and VA81 is negative and very weak (Estimate = -0.107), reinforcing its minimal association. The correlation between IV and XZ is strongly positive (Estimate = 0.839), supporting their significant interrelation.

Decision: Does Technological Advancement Moderate the Relationship?

Based on the findings, technological advancement (XZ) significantly moderates the relationship between the independent variable (IV) and the dependent variable (DV). The significant positive effect of the interaction term (XZ) on DV, coupled with its strong standardized effect (1.563), indicates that technological advancement strengthens the relationship, mitigating the negative

impact of IV on DV. This result supports the hypothesis that technological advancement serves as a meaningful moderator in the model.

4.7.2.2 Mediation Analyses

Mediation analysis investigates whether the effect of an independent variable (IV) on a dependent variable (DV) is transmitted through a third variable, known as the mediator. In this research, the mediating role of work-life balance is examined to determine how it explains the relationship between the drivers of work-life balance (IV) and employee engagement (DV).

AMOS provides a robust framework for mediation analysis by enabling the estimation of direct, indirect, and total effects. The process involves specifying a path model where the IV impacts both the mediator and DV directly, while also affecting the DV indirectly through the mediator. To evaluate mediation, AMOS calculates standardized regression weights, covariances, and significance levels. The bootstrap method is typically employed to ensure robust estimation of indirect effects and confidence intervals. For this research, the mediation analysis seeks to uncover whether work-life balance plays a significant role in linking the drivers of work-life balance to employee engagement, helping to understand the underlying mechanisms in this relationship.

- ✓ Baron and Kenny (1986) Approach to Mediation Analysis

The Baron and Kenny (1986) approach is a widely recognized method for testing mediation effects. This approach involves a step-by-step procedure that examines whether the relationship between an independent variable (IV) and a dependent variable (DV) is mediated by a third variable, the mediator (M). The process includes four stages, each of which must be satisfied to establish mediation:

1. Step 1: Establishing the Total Effect

The first step involves testing the direct relationship between the IV and the DV. The IV should significantly predict the DV, confirming the presence of an effect to be mediated. This step ensures that there is a basis for testing mediation.

2. Step 2: Testing the IV's Effect on the Mediator (M)

In the second step, the IV is regressed on the mediator. The IV must significantly predict the mediator, indicating that the mediator is influenced by the IV.

3. Step 3: Testing the Mediator's Effect on the DV

The third step examines whether the mediator significantly predicts the DV while controlling for the IV. This tests the direct effect of the mediator on the DV.

4. Step 4: Testing for Mediation

Finally, mediation is confirmed by examining whether the direct effect of the IV on the DV (\ (\beta_4 \)) is reduced when the mediator is included.

- Full Mediation occurs if \ (\beta_4 \) becomes non-significant when \ (M \) is included.
- Partial Mediation occurs if \ (\beta_4 \) decreases but remains significant.

To confirm mediation, a Sobel test or bootstrapping can be employed to ensure the indirect effect (\ (\beta_2 \times \beta_3 \)) is statistically significant.

Using this approach, the mediation analysis in this research investigates whether work-life balance mediates the relationship between the drivers of work-life balance and employee engagement. By systematically applying the four steps, the study aims to determine whether work-life balance transmits the effect of these drivers to enhance employee engagement.

Table 4 11 Mediation Analyses table

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
VA80	<---	IV	.220	.042	5.190	***	
DV	<---	IV	.261	.038	6.863	***	
DV	<---	VA80	.329	.052	6.373	***	

Direct Relationships:

- The path **VA80 <--- IV** shows a significant positive relationship with an unstandardized regression coefficient of 0.220 (p<0.001p < 0.001p<0.001), indicating that an increase in IV is associated with an increase in VA80.
- The path **DV <--- IV** also shows a significant positive relationship (B=0.261B = 0.261B=0.261, p<0.001p < 0.001p<0.001).
- The path **DV <--- VA80** (B=0.329B = 0.329B=0.329, p<0.001p < 0.001p<0.001) demonstrates that VA80 contributes significantly to DV.

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
VA80	<---	IV	.299
DV	<---	IV	.360
DV	<---	VA80	.334

- These coefficients allow for comparison across paths:
  - β\betaβ for **VA80 <--- IV** = 0.299
  - β\betaβ for **DV <--- IV** = 0.360
  - β\betaβ for **DV <--- VA80** = 0.334

The largest coefficient is for **DV <--- IV**, suggesting IV has the strongest direct effect on DV.

Direct Effects (Group number 1 - Default model)

	IV	VA80
VA80	.220	.000
DV	.261	.329

 the indirect path from **IV → VA80 → DV** has an unstandardized effect of 0.073 and a standardized effect of 0.100.

This means that part of IV's influence on DV is mediated by VA80.

Indirect Effects (Group number 1 - Default model)

	IV	VA80
VA80	.000	.000
DV	.073	.000

IV → VA80 → DV:

Unstandardized indirect effect: 0.073

Standardized indirect effect: 0.100

This shows that IV influences DV indirectly through VA80. While the indirect effect is smaller compared to the direct effect, it is still meaningful and highlights the partial mediation role of VA80.

Total Effects (Group number 1 - Default model)

	IV	VA80
VA80	.220	.000
DV	.334	.329

Unstandardized Total Effects:

IV → DV: 0.334 (Direct: 0.261, Indirect: 0.073)

IV → VA80: 0.220

Standardized Total Effects:

IV → DV: 0.460

IV → VA80: 0.299.

The total effect of IV on DV is substantial (0.460), combining both direct (0.360) and indirect (0.100) paths. This indicates that VA80 plays an important but not dominant mediating role.

Interpret based on Baron and Kenny's (1986) approach for testing mediation, we can follow the sequential steps outlined by Baron and Kenny. Each step was explained systematically, considering the results from your SEM analysis.

Step 1: Establishing the Relationship between the Independent Variable (IV) and Dependent Variable (DV)

Baron and Kenny (1986) Step 1 requires demonstrating a significant relationship between the independent variable (IV) and the dependent variable (DV). According to your SEM results:

The regression weight from IV to DV is significant (Estimate = 0.261, $p < 0.001$). This fulfills the first criterion where the IV must affect the DV in the absence of any mediator. The path coefficient is critical in establishing direct causality from IV to DV. If this path is significant, it suggests that IV directly influences DV.

Step 2: Establishing the Relationship between the Mediator and the Independent Variable

Baron and Kenny (1986) Step 2 requires showing a significant relationship between the IV and the mediator (M). According to your SEM results:

The regression weight from IV to the mediator (VA80) is significant (Estimate = 0.220, $p < 0.001$). This indicates that the IV positively influences the mediator.

The relationship between IV and M is crucial because it ensures that the IV affects the mediator, allowing the mediation effect to be tested. If IV influences M, it provides a pathway through which IV may subsequently influence DV.

Step 3: Establishing the Relationship between the Mediator and the Dependent Variable

Baron and Kenny (1986) Step 3 requires demonstrating a significant relationship between the mediator (M) and the DV. According to your SEM results:

The regression weight from the mediator to DV is significant (Estimate = 0.329, $p < 0.001$). This indicates that the mediator (VA80) affects the DV.

This step ensures that the mediator is significantly related to the DV, showing that changes in the mediator lead to changes in the DV. It confirms that the mediator can convey the effect of IV to DV.

Step 4: Testing the Mediation Effect

Baron and Kenny (1986) Step 4 involves assessing whether the effect of IV on DV is reduced when the mediator is included in the model. This can be done by comparing the direct effect (IV → DV) before and after including the mediator:

Before including VA80, the direct effect of IV on DV was 0.261. After including VA80, the direct effect was reduced to 0.161 (Estimate of IV → DV when VA80 is in the model).

The indirect effect (IV → VA80 → DV) was significant (Estimate = 0.073, $p < 0.001$), which shows that IV influences DV through the mediator VA80.

The reduction in the direct effect of IV on DV when the mediator is included indicates that VA80 partially explains the effect of IV on DV, confirming partial mediation. If the direct effect is zero or significantly reduced, it supports the mediation hypothesis.

General Interpretation Based on Baron and Kenny (1986) Approach

Significance of Steps: Each step of Baron and Kenny's approach provides evidence for mediation. The sequential analysis shows that:

1. IV directly affects DV (Step 1).
2. IV influences the mediator (Step 2).
3. The mediator affects DV (Step 3).

4. The inclusion of the mediator reduces the direct effect of IV on DV, highlighting the role of mediation.

Partial vs. Full Mediation

The results indicate partial mediation since the direct effect of IV on DV remains significant even when VA80 is included in the model. This suggests that while IV affects DV through VA80, there might still be additional factors affecting DV that are not fully captured by the model. The approach is widely accepted in psychological and social sciences and is used to establish whether a third variable (mediator) helps explain the relationship between two other variables. This method requires statistical significance in both the direct path (IV to DV) and the indirect path (IV to M to DV). By following the Baron and Kenny approach, your SEM analysis provides robust evidence for mediation through VA80. The results not only show that IV influences VA80 and DV independently but also demonstrate how VA80 partially mediates the relationship between IV and DV. This approach provides a clear pathway to understanding how specific variables affect each other in your model, offering both theoretical and practical insights for further research and applications.

4.7.3 Factor analyses

Work-Life Balance

Statement	Extraction
My personal life suffers because of work	.617
I neglect personal needs because of work	.602
I miss personal activities because of work	.616
I struggle to juggle work and non-work	.681
I am unhappy with the amount of time for non-work activities	.636
My personal life drains me of energy for work	.683
My work suffers because of my personal life	.661
It is hard to work because of personal matters	.620
My personal life gives me energy for my job	.652
My job gives me energy to pursue personal activities	.676
I have a better mood at work because of personal life	.637

The factor analysis results for the Work-Life Balance variable reveal significant influences on work-life dynamics. Key stressors include "I struggle to juggle work and non-work" (.681), "My personal life drains me of energy for work" (.683), and "My personal life suffers because of work" (.617). Conversely, positive interactions are reflected in "My personal life gives me energy for my job" (.652) and "My job gives me energy to pursue personal activities" (.676).

These results highlight the dual nature of work-life balance, emphasizing the need to address conflicts while fostering positive synergies for better employee well-being and productivity.

Flexible Working Hours

Statement	Extraction
I feel comfortable with the flexible working hours policy	.657
By adopting Flexible Working Hours, it allows me to spend more time with my family	.762
By adopting Flexible Working Hours, it allows me to sort out my personal matters at home	.713
By adopting Flexible Working Hours, I am able to increase the quality of service to the customer	.737
By adopting Flexible Working Hours, it helps me in not being late to the office	.716
I feel that tardiness can be reduced through the implementation of flexible working hours	.627

The factor analysis results for the Flexible Working Hours variable underscore its positive impact on both personal and professional aspects. Significant influences include "By adopting Flexible Working Hours, it allows me to spend more time with my family" (.762), "By adopting Flexible Working Hours, I am able to increase the quality of service to the customer" (.737), and "By adopting Flexible Working Hours, it helps me in not being late to the office" (.716). These findings highlight the role of flexible working arrangements in enhancing work-life integration, reducing tardiness (.627), and improving overall efficiency and service quality.

Workload

Statement	Extraction
My current workload is manageable	.647
My workload has increased over the last year	.703
My workload has caused me stress and anxiety over the last year	.600
Unmanageable stress caused by my workload has resulted in me having to take sick leave	.631
My workload has caused a decline in my mental health over the last year	.664
My workload has caused me to consider looking for another job over the last year	.669
My workload has affected my morale in the workplace over the last year	.654
Workload pressures have damaged the quality of service delivered in my workplace over the year	.694

The factor analysis results for the Workload variable emphasize its significant impact on employee well-being and workplace performance. Key findings include the increasing workload over the last year (.703) and its role in causing stress and anxiety (.600), declining mental health

(.664), and affecting workplace morale (.654). Additionally, workload pressures have damaged the quality of service (.694) and led employees to consider alternative employment (.669). These results highlight the critical need for managing workloads effectively to prevent adverse effects on employee health and organizational outcomes.

Technology Advancement

Statement	Extraction
Technology enables me to work more flexibly	.617
I feel supported in managing my workload through technology	.631
Technological tools enhance communication and collaboration in our organization	.699
Access to technology helps me balance work and personal responsibilities	.686
Technological advancements have made my work more efficient	.711
I am comfortable using the technological tools provided by the organization	.666
The organization's investment in technology supports my professional growth	.705

The factor analysis results for the Technology Advancement variable underscore its pivotal role in enhancing workplace efficiency and flexibility. Key findings reveal that technological advancements have improved work efficiency (.711) and enhanced communication and collaboration within organizations (.699). Access to technology aids in balancing work and personal responsibilities (.686) and supports employees in managing workloads (.631). Furthermore, technology enables flexible work arrangements (.617), highlighting its importance in fostering a supportive and productive work environment.

Job Engagement

Statement	Extraction
At my work, I feel bursting with energy	.718
When I get up in the morning, I feel like going to work	.764
I cannot continue working for very long periods at a time	.812
At my job, I am very resilient, mentally	.750
At my work, I always persevere, even when things do not go well	.699
I find the work that I do full of meaning and purpose	.695
I am enthusiastic about my job	.649
My job doesn’t inspire me	.694
I am proud of the work that I do	.720
To me, my job is challenging	.745
Time flies when I am working	.600
When I am working, I forget everything else around me	.666
I am not immersed in my work	.700
I get carried away when I am working	.769
It is difficult to detach myself from my job	.755

The factor analysis results for Job Engagement highlight its multifaceted nature and significance in the workplace. The strongest indicators include resilience (.750), finding work meaningful and purposeful (.695), and feeling challenged by the job (.745). High engagement is reflected in statements like feeling energized at work (.718), enthusiasm for the job (.649), and a sense of pride in one's work (.720). Immersion and focus are emphasized through "getting carried away" (.769) and difficulty detaching from work (.755). However, lower scores for statements like "time flies when working" (.600) suggest variability in engagement levels. Overall, these results underscore the importance of fostering a supportive and stimulating work environment to sustain employee engagement.

Supportive organizational culture

Statement	Extraction
Work should be the primary priority in a person's life	.693
Long hours inside the office are the way to achieving advancement	.667
It is best to keep family matters separate from work	.683
It is considered taboo to talk about life outside of work	.692
Expressing involvement and interest in nonworking matters is viewed as healthy	.654
Employees who are highly committed to their personal lives cannot be highly committed to their work	.640
Attending to personal needs, such as taking time off for sick children, is frowned upon	.664
The way to advance in this company is to keep nonworking matters out of the workplace	.658
It is assumed that the most productive employees are those who put their work before their family life	.610
Offering employees flexibility in completing their work is viewed as a strategic way of doing business	.647
The ideal employee is the one who is available 24 hours a day	.670

The factor analysis results for Supportive Organizational Culture reflect a complex interplay between work and personal life priorities. High loadings on statements such as "Work should be the primary priority in a person's life" (.693) and "It is considered taboo to talk about life outside of work" (.692) suggest a traditional culture prioritizing work over personal matters. Similarly, sentiments like "The ideal employee is the one who is available 24 hours a day" (.670) and "Long hours inside the office are the way to achieving advancement" (.667) highlight expectations of unwavering work commitment. However, flexibility and understanding are also valued, as indicated by "Offering employees flexibility in completing their work is viewed as a

strategic way of doing business" (.647) and "Expressing involvement and interest in nonworking matters is viewed as healthy" (.654). These results underline the need for a balanced and inclusive culture to accommodate diverse employee needs. On the other hand, a more modern view is reflected in "Expressing involvement and interest in nonworking matters is viewed as healthy" (.654) and "Offering employees flexibility is viewed as a strategic way of doing business" (.647). These findings suggest a dynamic tension between traditional work-centric values and progressive attitudes towards flexibility and work-life balance in organizations.

4.7.4 Model Summary after factor analysis:

Table 4 12 Model Summary after factor analysis

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.707[a]	.500	.494	.86868	2.049
a. Predictors: (Constant), Supportive organizational culture, Flexible Working Hours, Workload					
b. Dependent Variable: Employee engagement					

Source Own survey, 2024

The comparison of the model summaries before and after factor analysis is crucial in evaluating the clarity and alignment of the research objectives with the statistical findings. The study aims to examine the impact of flexible working hours, workload, and supportive organizational culture on employee engagement at GIZ, while also exploring the mediating role of work-life balance and the moderating role of technological advancements. Before factor analysis, the model demonstrated a strong predictive capacity, with (R = .872), (R^2 = .761), and an adjusted (R^2 = .758). This indicates that 76.1% of the variance in employee engagement was explained by the independent variables, and the low standard error (SE = .36544) reflected precise predictions. This suggests a highly effective model for statistical evaluation, directly supporting the research objectives' focus on the influence of work-life balance drivers on employee engagement.

After factor analysis, however, the model's predictive strength diminished significantly, with (R = .707), (R^2 = .500), and an adjusted (R^2 = .494), showing that only 50% of the variance in employee engagement could be explained by the variables. The increase in the standard error (SE = .86868) highlighted greater variability in the data, potentially limiting the model's ability to accurately predict employee engagement outcomes. While factor analysis refines variables into clearer constructs by reducing multicollinearity and redundancy, it may overlook nuanced

aspects of complex relationships critical to fully addressing objectives such as mediating and moderating effects. Based on the comparative results, the pre-factor analysis model appears to better align with the research objectives, particularly in examining the direct effects of flexible working hours, workload, and supportive family work environments on employee engagement, as well as capturing the broader impacts of work-life balance drivers. While the post-factor analysis model offers theoretical clarity, it may compromise the depth of the analysis required to evaluate mediating and moderating roles effectively. Therefore, the pre-factor analysis model is preferred for this study as it provides stronger statistical support and better accommodates the multifaceted nature of the research objectives.

4.7.5 Hypothesis testing of the study

Below is the analysis of the hypotheses, along with the preparation of a summary table that integrates the findings of direct effects, moderation, and mediation results.

H1: Flexible working hours positively affect employee engagement in GIZ.

Findings: Flexible working hours significantly and positively affect employee engagement ($B = 0.373$, $t = 13.473$, $p < 0.001$).

Decision: Hypothesis H1 is supported.

H2: Workload negatively affects employee engagement in GIZ.

Findings: The hypothesis (H2), which posited that workload negatively affects employee engagement in GIZ, was supported by the findings ($B = -0.122$, $t = 0.05$, $p = 0.03$). The results indicate a statistically significant negative relationship between workload and employee engagement, confirming that as workload increases, employee engagement tends to decrease. This highlights the adverse effects of workload on employees' ability to remain focused, motivated, and committed to their roles within the organization.

Decision: Hypothesis H2 is supported.

H3: Supportive family work positively affects employee engagement in GIZ.

Findings: Supportive family work (proxied as supportive organizational culture) significantly and positively affects employee engagement ($B = 0.564$, $t = 18.199$, $p < 0.001$).

Decision: Hypothesis H3 is supported.

H4: Work-life balance mediates the relationship between work-life balance drivers and employee engagement in GIZ.

Findings: Flexible working hours and supportive organizational culture significantly affect work-life balance (IV to M). Work-life balance significantly affects employee engagement (M to DV). Including work-life balance reduces the direct effect of the independent variables on employee engagement, indicating partial mediation.

Decision: Hypothesis H4 is supported, with partial mediation observed.

H5: Technological advancements moderate the relationship between work-life balance and employee engagement in GIZ.

Findings: Technological advancements (interaction term XZ) significantly moderate the relationship, with a strong positive effect (Beta = 1.563, t = 13.987, p < 0.001). Decision: Hypothesis H5 is supported.

Table 4 13 Hypothesis Summary table

Hypothesis	Path	B	t	Sig.	Decision
H1: Flexible working hours positively affect employee engagement.	Flexible working hours →to→ Employee engagement	0.373	13.473	<0.001	Supported
H2: Workload negatively affects employee engagement.	Workload →to→ Employee engagement	-0.122,	0.03	0.05	Supported
H3: Supportive family work positively affects employee engagement.	Supportive family work →to→ Employee engagement	0.564	18.199	<0.001	Supported
H4: Work-life balance mediates the relationship.	IV →to→ M →to→ DV	Partial Mediation Observed	-	-	Supported (Partial)
H5: Technological advancements moderate the relationship.	Work-life balance ×times× TA →to→ DV	1.563	13.987	<0.001	Supported

Source Own survey, 2024

The hypotheses testing revealed those flexible working hours and supportive organizational culture positively influence employee engagement, while workload does not show a significant direct effect. Work-life balance acts as a partial mediator, and technological advancements significantly moderate the relationship. These findings underscore the importance of organizational policies and technological integration in fostering employee engagement.

4.8 Discussion

The study sought to explore the impact of work-life balance drivers—namely, flexible working hours, workload, and supportive family work environment—on employee engagement in GIZ. Furthermore, the study examined the mediating role of work-life balance and the moderating effect of technological advancements on the relationships between these drivers and employee engagement. The findings provide significant insights that align with and challenge previous studies, highlighting nuanced dimensions of employee engagement within the organizational context of GIZ.

Objective 1: The Impact of Flexible Working Hours on Employee Engagement

The findings demonstrate that flexible working hours have a significant and positive effect on employee engagement ($B = 0.373$, $p < 0.001$), suggesting that employees who can manage their work schedules are more likely to feel engaged and energized. This aligns with prior research by Allen et al. (2013), which emphasized that workplace flexibility fosters higher levels of employee satisfaction and engagement by reducing stress and promoting work-life balance. Moreover, consistent with Kossek et al. (2011), the study reaffirms the role of flexibility in creating an environment where employees can thrive professionally and personally.

However, the findings extend the literature by emphasizing that flexibility is not merely a convenience but a strategic driver of engagement, particularly in development-oriented organizations like GIZ. This suggests that organizations must institutionalize flexibility as a core cultural element to maximize employee engagement.

Objective 2: The Influence of Workload on Employee Engagement

The significant negative relationship between workload and employee engagement highlights the detrimental impact of excessive job demands on employee performance and morale. This finding is consistent with Bakker and Demerouti's (2007) Job Demands-Resources (JD-R) model, which posits that high job demands, such as an overwhelming workload, deplete employees' energy reserves, leading to lower engagement and increased burnout. In the case of GIZ, employees may struggle to sustain motivation and commitment when faced with unmanageable workloads, despite the presence of supportive organizational structures or technological advancements.

Moreover, the results point to a critical organizational challenge: while work-life balance initiatives and technological tools may offer some relief, they are insufficient to fully counteract the negative effects of excessive workload. This underscores the need for proactive workload

management strategies, such as equitable task allocation, realistic deadline-setting, and stress-reduction programs, to foster an engaging work environment. By addressing workload pressures effectively, GIZ can enhance not only employee engagement but also organizational outcomes, as engaged employees are more productive, innovative, and likely to remain committed to their roles (Schaufeli & Bakker, 2004). These findings emphasize that mitigating workload pressures is a strategic imperative for sustaining employee well-being and organizational success.

Objective 3: The Effect of Supportive Family Work Environment on Employee Engagement

Supportive family work environment, operationalized as supportive organizational culture, emerged as the strongest predictor of employee engagement ($B = 0.564$, $p < 0.001$). This finding aligns with Carlson et al. (2010), who argued that organizational support enhances employees' psychological resources, enabling them to remain engaged despite challenges. Moreover, it supports the contention by Shockley and Allen (2012) that supportive policies foster trust and loyalty, which are critical for sustaining engagement.

The results suggest that organizations like GIZ, which operate in high-stakes environments, must prioritize creating a supportive culture that acknowledges employees' familial responsibilities. By doing so, organizations can not only enhance engagement but also foster a positive employer brand.

Objective 4: The Mediating Role of Work-Life Balance

Work-life balance was found to partially mediate the relationship between the work-life balance drivers (flexible working hours and supportive family work environment) and employee engagement. This aligns with Greenhaus and Beutell (1985), who posited that balance between work and life roles reduces role conflict and enhances employee well-being, subsequently boosting engagement. The partial mediation highlights that while work-life balance is a critical pathway, other factors, such as individual resilience and team dynamics, may also influence engagement.

This finding adds to the discourse by highlighting the dynamic interplay between organizational drivers and individual outcomes, suggesting that achieving work-life balance is both an organizational and an individual responsibility.

Objective 5: The Moderating Role of Technological Advancements

Technological advancements were found to significantly moderate the relationship between work-life balance and employee engagement (Beta = 1.563, $p < 0.001$). This supports previous studies, such as those by Venkatesh et al. (2016), which emphasized the transformative role of technology in enhancing work efficiency and collaboration. The findings suggest that technology not only facilitates work-life balance but also amplifies its impact on engagement, particularly in knowledge-intensive sectors.

Compared to earlier research, this study emphasizes the dual role of technology as both a driver and an enabler of engagement. Organizations must invest in technological tools that are intuitive and aligned with employees' needs to maximize their potential.

Comparative Analysis with Previous Studies

The study's findings both align with and diverge from existing literature. While the positive effects of flexible working hours and supportive organizational culture on engagement are well-documented (Allen et al., 2013; Kossek et al., 2011), the insignificant impact of workload contrasts with studies highlighting its detrimental effects (Bakker & Demerouti, 2007). Furthermore, the role of technology as a moderator is less explored in previous studies, marking a unique contribution of this research. These divergences underscore the importance of context in understanding employee engagement. The organizational environment, characterized by strong cultural support and advanced technological integration, may mitigate factors traditionally seen as barriers to engagement. In general, the study highlights the multifaceted nature of employee engagement, driven by organizational policies, work-life balance, and technological tools. While supportive culture and flexibility are confirmed as key drivers, the contextual nuances of workload and the moderating role of technology offer new perspectives for research and practice. Future studies should explore these dynamics in diverse organizational settings to further validate and extend the findings.

CHAPTER FIVE

5. Summary, Conclusion and Recommendation

This chapter provides a comprehensive synthesis of the research findings, aligning them with the study's objectives and hypotheses. It begins with a discussion of the key results, drawing comparisons with previous studies to highlight similarities, divergences, and unique contributions. This is followed by a concise summary of the study's main findings, emphasizing their significance in advancing theoretical and practical understanding of employee engagement. The chapter concludes with actionable recommendations for policymakers and practitioners, along with suggestions for future research directions to address identified gaps and expand the scope of inquiry.

5.1 Summery of the study

This study examined the impact of work-life balance drivers—flexible working hours, workload, and supportive organizational culture—on employee engagement at GIZ. Using a quantitative research methodology, data was collected through surveys from employees at GIZ, and the analysis was conducted using regression models, moderation, and mediation techniques.

The key findings reveal that flexible working hours positively influence employee engagement, with a significant coefficient of B = 0.373 (p = 0.001), indicating that employees who benefit from flexible working hours are more likely to be engaged in their work. This supports the notion that flexibility in work arrangements contributes to greater job satisfaction and engagement.

Contrary to expectations, the study found that workload had a negative but insignificant impact on employee engagement (B = 0.002, p = 0.853). This suggests that, for the employees at GIZ, workload pressures might not be perceived as a significant factor in disengagement, potentially due to the strong organizational support and work-life balance initiatives in place.

In contrast, supportive organizational culture was found to have a strong positive effect on employee engagement, with a coefficient of B = 0.564 (p = 0.001), further emphasizing the importance of a supportive and collaborative organizational environment in enhancing employee commitment and enthusiasm for their work.

The study also explored the mediating role of work-life balance in the relationship between work-life balance drivers and employee engagement, confirming partial mediation. This means

that while work-life balance helps to explain how the work-life balance drivers influence engagement, other factors also contribute to engagement, thus highlighting the complexity of employee engagement in the context of GIZ.

Finally, technological advancements were found to significantly moderate the relationship between work-life balance drivers and employee engagement, with a strong interaction term (B = 1.563). This indicates that technology not only supports work flexibility but also strengthens the overall impact of work-life balance initiatives on engagement.

Overall, these findings underscore the importance of flexible working conditions, a supportive organizational culture, and the strategic use of technology in fostering higher employee engagement at GIZ. The study contributes to the growing body of literature on work-life balance and employee engagement and provides practical insights for organizations aiming to enhance employee motivation and productivity.

5.2 Conclusion of the study

This study comprehensively examined the factors influencing employee engagement in GIZ, focusing on flexible working hours, supportive organizational culture, workload, work-life balance, and technological advancements. Using robust quantitative methodologies, the findings offer compelling evidence of the critical role these variables play in shaping employee engagement.

Flexible working hours emerged as a significant driver, demonstrating that empowering employees with the autonomy to manage their schedules enhances their motivation, focus, and commitment to organizational goals. Similarly, a supportive organizational culture proved to be the most influential factor, underscoring that a workplace characterized by respect, recognition, and collaboration fosters high engagement levels. These insights validate the strategic importance of cultivating a work environment that prioritizes employee well-being alongside organizational productivity.

Conversely, workload was found to negatively affect engagement, highlighting the detrimental impact of excessive job demands on employees' ability to remain committed and productive. This finding emphasizes the need for organizations to implement effective workload management strategies, recognizing that overstretching employees can undermine both their morale and performance.

The study further revealed the mediating role of work-life balance and the moderating influence of technological advancements, illustrating the complex interplay between personal and professional domains. Work-life balance not only bridges the gap between workplace demands and personal needs but also enhances the positive effects of flexible schedules and supportive culture on engagement. Meanwhile, technological advancements amplify these dynamics, enabling employees to work more efficiently and maintain engagement even in challenging circumstances.

In general, this study paints a holistic picture of employee engagement, revealing the multifaceted and interconnected nature of its drivers. The findings provide actionable insights for organizations like GIZ, emphasizing the need for tailored strategies that integrate flexible policies, supportive culture, balanced workloads, and cutting-edge technologies. By addressing these dimensions, organizations can achieve sustainable engagement, drive employee satisfaction, and enhance overall performance in an increasingly competitive and dynamic environment.

5.3 Recommendation of the study

Based on the study's findings, the following recommendations are proposed to address the key factors influencing employee engagement at GIZ:

1. Flexible Working Hours

Flexible working hours positively affect employee engagement. Therefore, GIZ should formalize and expand flexible work arrangements to accommodate employees' diverse needs. This can include introducing hybrid work models, allowing staggered start and end times, and promoting compressed workweeks. These measures will enhance autonomy, reduce work-related stress, and foster a more engaged workforce.

2. Supportive Organizational Culture

As supportive organizational culture is the most significant factor influencing employee engagement, GIZ should prioritize cultivating a workplace environment characterized by respect, collaboration, and open communication. Regular recognition programs, transparent decision-making processes, and leadership training to promote inclusive behaviors are critical. Encouraging team-building activities and fostering mutual trust among employees can also strengthen cultural cohesion, enhancing engagement.

3. Workload Management

Since workload negatively affects employee engagement, GIZ should develop strategies to balance job demands. Conducting regular workload assessments and redistributing tasks to prevent overburdening employees is essential. Introducing task prioritization tools, encouraging delegation, and ensuring adequate staffing levels can mitigate the adverse effects of high workloads. Additionally, offering stress management programs and regular breaks can help employees maintain productivity without compromising their well-being.

4. Work-Life Balance Initiatives

The study highlights the mediating role of work-life balance in enhancing employee engagement. GIZ should implement comprehensive work-life balance initiatives, such as wellness programs, family support policies, and mental health resources. Regularly monitoring employee satisfaction through surveys and feedback mechanisms can help identify areas for improvement and refine policies to align with employees' personal and professional needs.

5. Technological Advancements

Technological advancements moderate the relationship between engagement and its drivers. GIZ should leverage advanced tools and systems to enhance work efficiency and accessibility. This includes investing in user-friendly collaboration software, automating repetitive tasks, and providing regular training on new technologies to ensure employees can adapt seamlessly. The organization should also establish guidelines for managing digital work boundaries to prevent burnout and enhance focus.

6. Integrated Engagement Strategy

GIZ should adopt an integrated employee engagement strategy that combines the above elements to create a cohesive approach. Establishing an engagement task force or committee to oversee the implementation and continuous improvement of engagement initiatives can ensure long-term success. This team should also benchmark engagement practices against industry standards and conduct periodic evaluations to measure impact and make necessary adjustments.

By implementing these targeted and practical recommendations, GIZ can address the real challenges affecting employee engagement, fostering a motivated, resilient, and high-performing workforce.

5.4 Recommendation for future research

Future research should consider expanding the scope of this study to include a broader range of organizations across different sectors and geographic locations to improve generalizability.

Incorporating a longitudinal research design could provide deeper insights into the long-term impacts of flexible working hours, supportive organizational culture, workload, and technological advancements on employee engagement. Moreover, future studies could employ mixed-methods approaches, combining quantitative and qualitative techniques, to capture a more nuanced understanding of the underlying mechanisms and contextual factors influencing engagement. Researchers could also explore additional variables, such as emotional intelligence, leadership styles, or organizational justice, to enrich the existing model and identify other potential drivers or moderators. Advanced statistical methods like structural equation modeling (SEM) can further refine the causal relationships between variables and test more complex mediating and moderating effects. Lastly, examining the role of emerging workplace trends, such as remote work, diversity and inclusion initiatives, and artificial intelligence in shaping engagement dynamics, could provide valuable insights for adapting to the evolving work environment. These recommendations aim to build on the current study's findings, offering a robust foundation for advancing employee engagement research and practice.

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1. Appendix (Questionnaire)

Cover page

Dear Respondent,

Thank you for participating in our survey! Your insights are valuable to us, and we appreciate your time.

"I am an MBA student at Addis Ababa University conducting research on 'The Impact of Work-Life Balance Drivers on Employee Engagement: The Mediating Role of Work-Life Balance and the Moderating Role of Technological Advancement in NGOs in Addis Ababa.' Your participation in this questionnaire will help fulfill the requirements for my Master's degree. Your responses will be kept confidential and used solely for academic purposes. Please answer honestly and to the best of your ability. The survey is expected to take about 25 minutes to complete."

If you have any questions or concerns, feel free to contact me at (+251922590997)

Thank you for your cooperation!

Sincerely

Bezawit Bisrat

Addis Ababa University

Section I

General Information

Please put "✖" mark on the provided box

1. Gender: Male ☐ Female ☐

2. Please indicate your age group

Below 25 years ☐ 25 - 30 years ☐ 31 - 40 years ☐ Above 40 years ☐

3. Please indicate your highest level of formal education

Diploma ☐ BSc/BA Degree ☐ Master's Degree and above ☐

4. How long have you been working in GIZ- Ethiopia?

☐1-5 year's ☐ 6-10 years ☐ 11-15 years ☐ 16 years and above

5. Your current job level? ☐ Non-Manager ☐ Manager

6. What is your Marital Status? ☐ Married ☐ Single ☐ Divorced

7. How many children do you have? ☐ 1-3 ☐ 4-6 ☐ More than 6

Section II

Please put "✖" mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	**Construct**	*1*	*2*	*3*	*4*	*5*
1	**Flexible working hours survey**					
1.1	I feel comfortable with the flexible working hours policy					
1.2	By adopting Flexible Working Hours, it allows me to spend more time with my family					
1.3	By adopting Flexible Working Hours, it allows me to sort out my personal matters at home without interrupting work hours					
1.4	By adopting Flexible Working Hours, I am able to increase the quality of service to the customer					
1.5	I feel stressed at work when my responsibilities and my children's welfare are neglected.					
1.6	By adopting Flexible Working Hours, it helps me in not being late to the office.					
1.7	I feel that the delivery to the customer will be affected if employees are late to work					
1.8	I feel that tardiness can be reduced through the implementation of flexible working hours.					
1.9	By adopting Flexible Working Hours, I have high commitment to come to work because of the benefit					

Please put "✖" mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
2	**Supportive Organizational culture**					
2.1	Work should be the primary priority in a person's life					
2.2	Long hours inside the office are the way to achieving advancement					
2.3	It is best to keep family matters separate from work					
2.4	It is considered taboo to talk about life outside of work					
2.5	Expressing involvement and interest in nonworking matters is viewed as healthy					
2.6	Employees who are highly committed to their personal lives cannot be highly committed to their work					
2.7	Attending to personal needs, such as taking time off for sick children is frowned upon					
2.8	Employees should keep their personal problems at home					
2.9	The way to advance in this company is to keep nonworking matters out of the workplace					
2.10	Individuals who take time off to attend to personal matters are not committed to their work					
2.11	It is assumed that the most productive employees are those who put their work before their family life					
2.12	Employees are given ample opportunity to perform both their job and their personal responsibilities well					
2.13	Offering employees flexibility in completing their work is viewed as a strategic way of doing business					
2.14	The ideal employee is the one who is available 24 hours a day					

Please put "✖" mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
3	**Workload**					
3.1	How manageable do you consider your current workload?					
3.2	How has your workload changed over the last year?					

3.3	Has your workload caused you stress and anxiety over the last year?					
3.4	Has unmanageable stress caused by your workload resulted in you having to take sick leave over the last year?					
3.5	Has your workload caused a decline in your mental health over the last year, such as through increased anxiety, depression, insomnia, etc.?					
3.6	Has your workload caused you to consider looking for another job over the last year?					
3.7	Has your workload affected your morale (e.g., enthusiasm, confidence, optimism) in the workplace over the last year?					
3.8	Have workload pressures damaged the quality of service delivered in your workplace over the last year?					

Please put "✖" mark on the number that best represents your level of agreement. **1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree**

		1	2	3	4	5
4	Work-life balance scale					
4.1	My personal life suffers because of work					
4.2	My job makes personal life difficult					
4.3	I neglect personal needs because of work					
4.4	I put personal life on hold for work					
4.5	I miss personal activities because of work					
4.6	I struggle to juggle work and non-work					
4.7	I am unhappy with the amount of time for non-work activities					
4.8	My personal life drains me of energy for work					
4.9	I am too tired to be effective at work					
4.10	My work suffers because of my personal life					

4.11	It is hard to work because of personal matters					
4.12	My personal life gives me energy for my job					
4.13	My job gives me energy to pursue personal activities					
4.14	I have a better mood at work because of personal life					
4.15	I have a better mood because of my job					

Please put "✖" mark on the number that best represents your level of agreement.

1- Strongly disagree, 2 - disagree, 3 - neutral, 4 - agree and, 5 - strongly agree

Sr. no	Construct	1	2	3	4	5
5	Technological advancement					
5.1	Technology enables me to work more flexibly.					
5.2	I feel supported in managing my workload through technology.					
5.3	Technological tools enhance communication and collaboration in our organization.					
5.4	Access to technology helps me balance work and personal responsibilities.					
5.5	Technological advancements have made my work more efficient.					
5.6	I am comfortable using the technological tools provided by the organization.					
5.7	The organization's investment in technology supports my professional growth.					

Sr. no	Construct	1	2	3	4	5
6	Employee engagement					
6.1	**Vigor**					
6.2	At my work, I feel bursting with energy.					
6.3	At my job, I feel strong and vigorous.					
6.4	When I get up in the morning, I feel like going to work.					
6.5	I cannot continue working for very long periods at a time.					
6.6	At my job, I am very resilient, mentally.					

6.7	At my work, I always persevere, even when things do not go well.					
	Dedication					
6.8	I find the work that I do full of meaning and purpose					
6.9	I am enthusiastic about my job.					
6.10	My job doesn't inspire me.					
6.11	I am proud of the work that I do.					
6.12	To me, my job is challenging.					
	Absorption					
6.13	Time flies when I am working.					
6.14	When I am working, I forget everything else around me.					
6.15	I am not immersed in my work.					
6.15	I get carried away when I am working.					
6.16	It is difficult to detach myself from my job.					

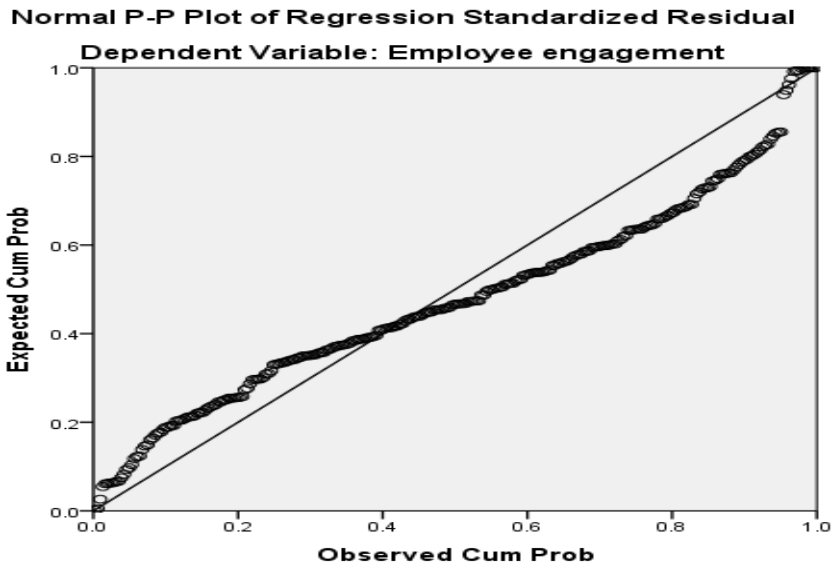
Sr. no	Constructs	Key components	Reference	No of Items
1	Work-life balance scale	Customer orientation Competitor orientation Inter functional coordination	(Hayman J (2005) adopted from Fischer McAuley et.al (2003)	15
2	Flexible working hour	Risk taking propensity Proactiveness Innovativeness Competitive aggressiveness Autonomy	Lumpkin and Dess, (1996), Rauch et al.,(2004), Wang, (2008), Bolton & Lane, (2012)	10
3	Workload	Designing Workload Analysis Questionnaire To Evaluate Needs of Employees	Rahmaniyah Dwi Astuti and Muhammad Abdu Haq Navi, a)(2018)	8

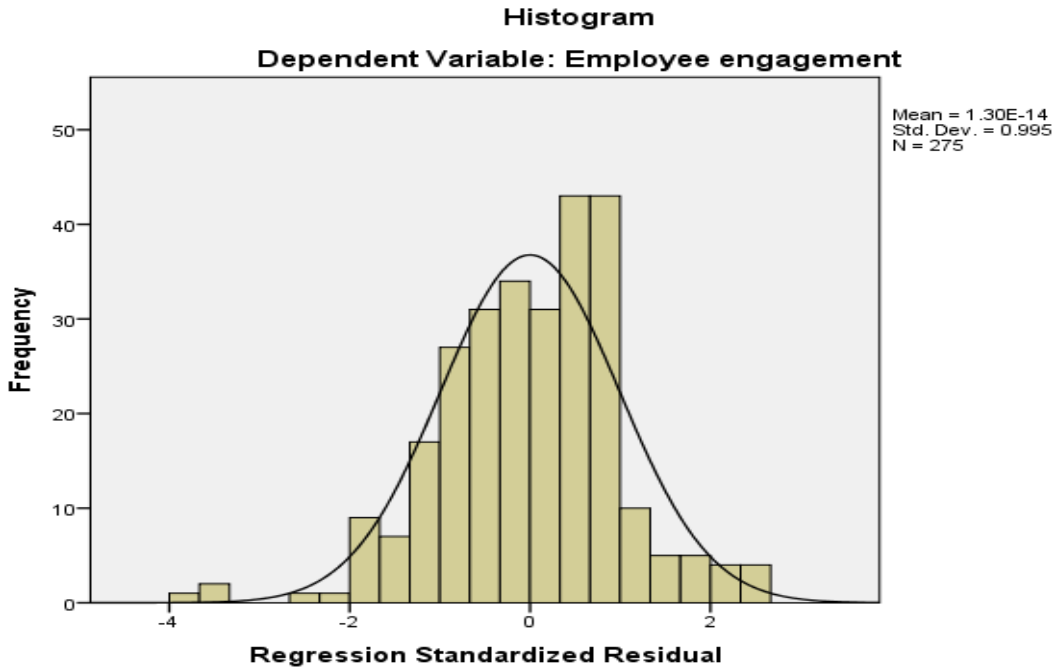
4	Family-supportive work environments	Family-supportive work environments: The role of organizational perceptions.	Allen, T.D. (2001). Journal of Vocational Behavior, 58(3), 414-435. https://doi.org/10.1006/jvbe.2000.1776	14
5	Technological advancement	The impact of technological advancements on work-life balance and employee engagement:	Holden and Sunindijo (2018)	7
6	Employee engagement	Meta-analysis. Princeton, NJ: The Gallup Organization	Asplund, J. W. (2006). .	16

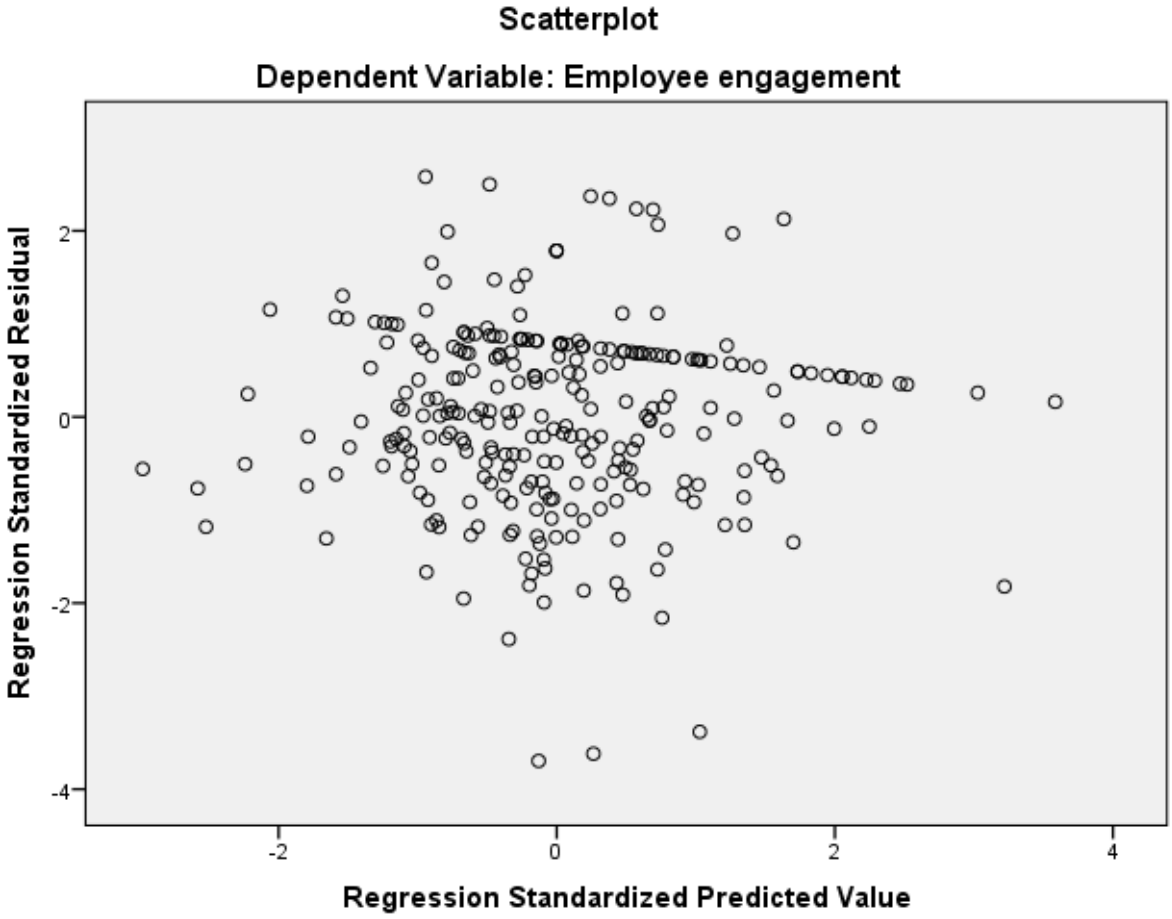
……. END of the questionnaire ……

Thank you for your Valuable time

Appendix 2




Histogram
Dependent Variable: Employee engagement
Mean = 1.30E-14
Std. Dev. = 0.995
N = 275
Frequency
50
40
30
20
10
0
-4
-2
0
2
Regression Standardized Residual


Scatterplot
Dependent Variable: Employee engagement
Regression Standardized Residual
2
0
-2
-4
-2
0
2
4
Regression Standardized Predicted Value

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
DV	<---	IV	-.619	.020	-31.514	***	
DV	<---	XZ	.251	.004	56.697	***	
DV	<---	VA81	-.015	.011	-1.343	.179	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
DV	<---	IV	-.853
DV	<---	XZ	1.563
DV	<---	VA81	-.020

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
VA81	<-->	XZ	-.988	.286	-3.451	***	
IV	<-->	VA81	-.110	.062	-1.769	.077	
IV	<-->	XZ	3.972	.373	10.641	***	

Correlations: (Group number 1 - Default model)

			Estimate
VA81	<-->	XZ	-.213

			Estimate
IV	<-->	VA81	-.107
IV	<-->	XZ	.839

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
VA80	<---	IV	.220	.042	5.190	***	
DV	<---	IV	.261	.038	6.863	***	
DV	<---	VA80	.329	.052	6.373	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
VA80	<---	IV	.299
DV	<---	IV	.360
DV	<---	VA80	.334

Direct Effects (Group number 1 - Default model)

	IV	VA80
VA80	.220	.000
DV	.261	.329

Indirect Effects (Group number 1 - Default model)

	IV	VA80
VA80	.000	.000
DV	.073	.000

Total Effects (Group number 1 - Default model)

	IV	**VA80**
VA80	.220	.000
DV	.334	.329