

EFFECTS OF HIGH-PERFORMANCE WORK SYSTEMS (HPWS) ON ORGANIZATIONAL AMBIDEXTERITY: MEDIATING EFFECT OF EMPLOYEE FUNCTIONAL FLEXIBILITY

Jameel Afsar^{*1}, Dr Anum Tariq²

^{*1}PhD Scholar National Business School, The University of Faisalabad;

²Assistant Professor National Business School, The University of Faisalabad

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ABSTRACT

The motive of this study is to identify the relationship among high-performance work systems (HPWS) of manufacturing sector in Pakistan with organizational ambidexterity within the companies, the mediating effect of functional flexibility has also been measured. This research is based on AMO theory, which has been extended by adding workforce agility and technology adoption. Quantitative research methods have been applied in order to fulfill the purpose of this study, data has been collected from the top and middle level management of the textile industry of the Pakistan. Stratified sampling technique has been used and adopted questionnaires has been distributed among 500 employees of the companies, 450 responses were returned in which 416 responses were found valid. The findings shown that HPWS has positive relationship with organizational ambidexterity but motivation and opportunity have no relationship with OA. Moreover, functional flexibility partially mediates the relationship of workforce agility, technology adoption, ability with organizational ambidexterity, while no mediation has been proved among the relationship of motivation and opportunity with organizational ambidexterity.

Keywords: High Performance Work System (HPWS), motivation, ability, opportunity, workforce agility, technology adoption, organizational ambidexterity

INTRODUCTION

1.1. Background of the Study

Pakistan's textile sector employs a sizable employee and is essential to the nation's exports, making it a major economic contributor (Azam, 2021). The sector has seen many difficulties over the years, such as increased rivalry on a worldwide scale, advances in technology, and changing consumer preferences (Hussain et al., 2020). Organizations in the Pakistani textile industry have been using strategic HRM approaches, like High-Performance Work Systems (HPWS), more and more in response to these difficulties in order to improve their flexibility and competitiveness (Javed et al., 2023). According to Alfes et al. (2020), HPWS is a collection of HR procedures designed to maximize worker performance, motivation, and skills in order to meet *organizational* goals. Research carried out in a worldwide setting has demonstrated how HPWS improves a range of organizational outcomes, such as financial performance, productivity, and creativity (Batt, 2021). However, in the context of Pakistan's textile sector, the connection among HPWS and

organizational ambidexterity the capacity to strike an equilibrium among investigation and manipulation of operations to ensure long-term success remains relatively understudied (Raisch & Birkinshaw, 2021).

Organizational ambidexterity is especially important for businesses operating in dynamic environments, like the textile industry, where the capacity to pursue both exploitation and exploration at the same time—for example, efficiency and cost reduction—is necessary for long-term competitiveness (Helfat & Raubitschek, 2020). Achieving ambidexterity is difficult despite its significance; firms must strike a balance between competing needs and create adaptable structures and procedures (Gibson & Birkinshaw, 2022).

Within this framework, the relationship between HPWS and organizational ambidexterity may be mediated by employee functional flexibility. Functional flexibility pertains to an employee's capacity to execute various duties and adjust to evolving job demands (Youndt et al., 2020).

Employee functional flexibility can help firms react swiftly to changes in the market and technical improvements, particularly in the textile industry where manufacturing processes are frequently complicated and subject to regular adjustments (Pandey & Shrivastava, 2022).

Although functional flexibility is thought to play a mediating effect, there is still a dearth of empirical data from Pakistan's textile industry. Consequently, in the situation textile sector of Pakistan, this research project aims to close this gap by examining the connection among HPWS, organizational ambidexterity, and mediating role of employee functional flexibility. This study looks at these links in an effort to give practitioners and policymakers useful information about how to improve the sustainability and competitiveness of businesses in Pakistan's textile industry.

Various research work have been seen on identifying the connection among HPWS with organizational ambidexterity. By taking in account several HPWS practices such as ability, motivation, opportunity by reviewing the literature on HPWS it is found that technology adoption and workforce agility have not been studied yet (Al-Agry, 2021) while identifying the relationship among HPWS and organizational ambidexterity. Previous study proposed that the swiftness of process can be viewed as attribute of HPWS (Kaushik & Mukherjee). This is a latest attribute that was not defined in old research. Previously, connection of HPWS was variously studied with the innovation and knowledge sharing (Bhatti et al., 2020), also with employee perceptions (Park et al., 2023), employee work performance (Ijigu et al., 2023; Park, Ok, & Ryu, 2023), ambidextrous leadership and employee ambidexterity (Ijigu et al., 2023). Moreover, HPWS was also studied with OA, intellectual capital, and knowledge absorption capacity (Gürlek, 2021) and he suggested to assess the HR work flexibility with these variables. Previously, the relationship of HPWS and OA has been assessed in the presence of social capital as a mediator (Kaka Khel & Khalil, 2022). Previous studies have been conducted on different sectors like hospitality industry (Gürlek, 2021; Kloutsiniotis & Mihail, 2020; Abotaleb & Elnagar, 2022), project based organizations (Bhatti et al., 2020), health-care organizations (Al-Agry, 2021), banking sector (Kaka Khel & Khalil, 2022) while no research has been found on manufacturing sector of Pakistan.

Based on the aforementioned research gaps this study identify the effect of HPWSs and OA in the presence of two mediators that are employee functional flexibility. Moreover, HPWS and OA relationships have been studied for other sectors like banking, hospitality, health, SMEs and Services sectors but less attention has been paid to manufacturing sector in Pakistan. In manufacturing sector of Pakistan specifically in textile industry, lack of innovation at organizational level is a big dilemma and top management feel difficulty in fulfilment of current demand and future uncertainties due to change in environmental conditions. HPWSs are a set of HR practices and functional areas of HR are part of HPWSs. Staffing, Training, Compensation, Performance Appraisal and Empowerment were studied as a part of HPWSs and the effects of these variables were examined on Organizational Ambidexterity. The literature indicated that workforce agility and technology adoption are also HR practices and these should be studied as a part of HPWS. Adding workforce agility and technology adoption in HPWSs, less study has been conducted yet. Moreover, with the addition of these two HR practices, the effects of HPWSs on OA have not been examined yet for manufacturing sector in Pakistan. This research includes workforce agility and technology adoption in HPWS practices and investigate their effects with the mediating role of EFF and EWE on OA. Moreover, the contributions of manufacturing sector for exports are more than other sectors' exports as per All Pakistan Textile Mills Association (APTMA) and State Bank of Pakistan (SBP) (Rahman, 2011). As per Government of Pakistan 2020-2025 vision (Pakistan 2025 One Nation - One Vision), innovation is a problem for Pakistan. There is dire need to address this problem. Explorative and exploitative are two components of Organizational ambidexterity and these components talk about organizational innovation aspects. Radical innovation and incremental innovation in manufacturing sector of Pakistan will lead to fulfillment of government vision. To enhance exports and meet international customer needs, there is dire need to address this problem. In the situation of Organizational Ambidexterity, study has paid attention on transformation of hotel (Ubeda-Garcia et al., 2017) only, HR stretchability (Ubeda-Garcia et al., 2018), and managerial innovativeness (Elnagar and Shoab, 2021). Therefore, this study will be conducted keeping in view agility, technology

adoption, innovation and exports. Ambidexterity will be contributing to bring balance in existing structure and newly designed systems in manufacturing sector.

This research put forward that high-performance work systems (HPWS) are guidance practices that can enhance employees' functional flexibility, which then increases the organizational ambidexterity.

This research problem is important to address because the manufacturing sector specifically textile industry of Pakistan has great contribution in the GDP of Pakistan. To achieve the high economic growth of Pakistan there is need to improve the operations of textile industry which can be done through implementing the different innovative techniques specifically through explorative and exploitative innovation in textile companies. In textile companies, this can be done by implementing the high-performance work system practices because HR has a vital character in the acquisition of innovative technologies as well as skilled workforce.

1.2. Research Objectives

The followings are aims of the research:

RO₁: To examine the effect of HPWS on Organizational Ambidexterity. On the basis of this research objective, the specific objectives are:

- RO_{1a}: To identify the effect of Workforce Agility on organizational ambidexterity.
- RO_{1b}: To identify the effect of Technology Adoption on organizational ambidexterity.
- RO_{1c}: To identify the effect of Ability on organizational ambidexterity.
- RO_{1d}: To identify the effect of Motivation on organizational ambidexterity.
- RO_{1e}: To identify the effect of Opportunity on organizational ambidexterity.

RO₂: To identify the mediating role of EFF on effect of HPWSs on OA.

- RO_{2a}: To identify the mediating role of EFF on effect of workforce agility on OA.
- RO_{2b}: To identify the mediating role of EFF on effect of technology adoption on OA.
- RO_{2c}: To identify the mediating role of EFF on effect of ability on OA.
- RO_{2d}: To identify the mediating role of EFF on effect of motivation on OA.
- RO_{2e}: To identify the mediating role of EFF on effect of opportunity on OA.

1.3. Research Questions

The followings are questions of the study:

RQ₁: What is effect of HPWS on Organizational Ambidexterity? On the basis of this research question, the specific questions are:

- RQ_{1a}: What is effect of Workforce Agility on Organizational Ambidexterity?
- RQ_{1b}: What is effect of Technology Adoption on Organizational Ambidexterity?
- RQ_{1c}: What is effect of Ability on Organizational Ambidexterity?
- RQ_{1d}: What is effect of Motivation on Organizational Ambidexterity?
- RQ_{1e}: What is effect of Opportunity on Organizational Ambidexterity?

RO₂: What is the mediating role of EFF on the effect of HPWSs on Organizational Ambidexterity

- RQ_{2a}: To identify the mediating role of EFF on effect of workforce agility on OA.
- RQ_{2b}: To identify the mediating role of EFF on effect of technology adoption on OA.
- RQ_{2c}: To identify the mediating role of EFF on effect of ability on OA.
- RQ_{2d}: To identify the mediating role of EFF on effect of motivation on OA.
- RQ_{2e}: To identify the mediating role of EFF on effect of opportunity on OA.

Theoretical Framework and Hypothesis Development

Jiang et al. (2012) recommend that the HR exercises establishing the HPWS variable have to be classified in to various subfields. Thus, by establishing the "Ability-Motivation-Opportunity" (AMO) structure (Appelbaum et al., 2000), a supplementary focus of this research is to divide HPWS into bunch of three exercises. Appelbaum, et al., (2000) developed the AMO theory, which offers a theoretical framework for comprehending the ways in which HPWS affect organizational results. The AMO framework states that the following three essential elements are necessary for HPWS to be effective: opportunity, motivation, and ability. In this study researcher enhance the focus of AMO Theory by adding the workforce agility and technology.

The term "ability" describes the competencies, knowledge, and skills that workers acquire and improve as a result of job enrichment programs, training, and education integrated within HPWS. According to Appelbaum et al. (2000), these

improved skills allow workers to complete activities more efficiently and adjust to changing job needs.

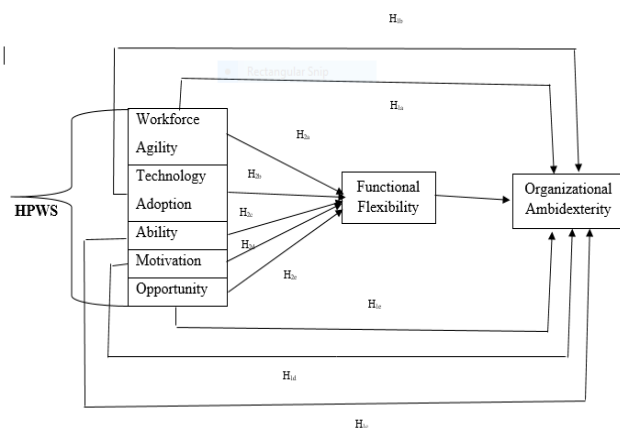
Employee motivation refers to their willingness and desire to put in effort and participate in activities that advance organizational objectives. By creating a positive work atmosphere, giving employees the chance to participate in decision-making, and rewarding and recognizing exceptional work, HPWS increase employee engagement (Appelbaum et al., 2000).

Opportunity encompasses the organizational structures, processes, and resources that facilitate the effective utilization of employee abilities and motivation. HPWS create opportunities for employees to apply their skills and knowledge in meaningful ways, promote collaboration and teamwork, and provide access to necessary resources and information (Appelbaum et al., 2000).

This study suggests that Functional Flexibility act as mediator in the relation among HPWS and Organizational Ambidexterity, stand on the AMO supposition. Increased functional flexibility result from HPWS's enhancement of employees' skills, opportunities, and motivation. These factors ultimately support the growth of organizational ambidexterity.

To summarize, this study's theoretical framework combines the AMO theory with the ideas of organizational ambidexterity, functional flexibility, and high-performance work systems to clarify the ways in which HPWS affect organizational outcomes in Pakistan's manufacturing industry.

Figure 1: Theoretical Framework



1.5 Hypotheses

- H₁: High-Performance Work Systems (HPWS) has a significant effect on organizational ambidexterity
- H_{1a}: Workforce Agility has a significant effect on organizational ambidexterity
- H_{1b}: Technology Adoption has a significant effect on organizational ambidexterity
- H_{1c}: Ability has a significant effect on organizational ambidexterity
- H_{1d}: Motivation has a significant effect on organizational ambidexterity
- H_{1e}: Opportunity has a significant effect on organizational ambidexterity
- H₂: Employee Functional Flexibility mediates the significant effect of HPWS on Organizational Ambidexterity
- H_{2a}: Employee Functional Flexibility mediates the significant effect of Workforce Agility on organizational ambidexterity.
- H_{2b}: Employee Functional Flexibility mediates the significant effect of Technology Adoption on organizational ambidexterity.
- H_{2c}: Employee Functional Flexibility mediates the significant effect of Ability on organizational ambidexterity.
- H_{2d}: Employee Functional Flexibility mediates the significant effect of Motivation on organizational ambidexterity.
- H_{2e}: Employee Functional Flexibility mediates the significant effect of Opportunity on organizational ambidexterity.

Literature Review

2.1. High Performance Work System

Scholars have noted in the literature that there is no set list of HPWS characteristics and that choosing the dimensions is contingent upon the nature of the business or the organizational strategy (Boxall, 2012; Han et al., 2019; Shin and Konrad, 2014). A firm that uses HPWS will have a robust hiring procedure that will enable it to select the top candidates from the market. By offering suitable training and development, decentralized decision making, employment design, employment security, and employee friendly practices, these firms will inspire their workforce. These workers' efforts at work will be rewarded with appropriate appraisal and remuneration procedures (such as profit sharing). It is anticipated that these groups will get increased levels of dedication from the workers.

Adopting a strategy of complimentary work practices on people' capacity to generate value is the path to high performance (Karadas and Karatepe, 2018; Zhai and Tian, 2019). The combined effect will increase each of these separate activities' efficacy. Employee ability, motivation, and opportunity are activated as a result, improving performance (Karadas and Karatepe, 2018).

However, because the concept of high-performance work systems is relatively new, scholars have not yet come to a consensus on what it means (Takeuchi et al. 2007). Generally speaking, HPWS refers to a group of HR tactics meant to raise worker productivity, loyalty, and competencies—turning human capital into a source of sustained competitive advantage (Pak and Kim 2016).

Numerous scholars have integrated several HR methods and proposed numerous innovations. within HPWS to investigate any possible connections between employees' performance and organizational effectiveness (Jiang et al., 2015). Additionally, the majority of research on HPWS is principally on the premise that HPWSs give the company and its employees the to achieve reciprocal cooperation so that, if corporate goals are met, employees would definitely benefit as well through enhanced human resources financial incentives and capital were used (Liao et al., 2009).

According to the authors mentioned, an effective mix of individual HR practices is a key component of high-performance work systems, which are depended on choice of hiring worker growth and surveillance. Performance can be improved through individual techniques, but incorporating by combining these techniques, a synergy will be created that will result in a far larger success than performing these principles separately would. AMO theory is recommended for a good apprehension of high-performance work systems for HR (Bailey 1993, Appelbaum 2000).

"Ability, Motivation, and Opportunity to Perform" is what "Ability, Motivation, and Opportunity" (AMO) stands for. The terms "abilities" and "motivation" refer to "individual skills necessary to perform" (advanced human resource selection, opportunities for skill development in the workplace, training), "opportunity" and "the opportunity to perform" (work autonomy, decentralization stand). Motivation stands for "the desire of the employee to perform" (which includes

opportunities for pay, benefits, and incentives, as well as the chance to advance).

2.1.1 Ability

The business psychology perspective (Lawshe, 1945, for example) and the social psychology perspective (Wyatt, 1934), both identified that output was a basis of workers' capacity to deliver (A) and employee motivation (M), respectively, are where the AMO model's roots can be found. Later studies expanded on this approach by including the construct "opportunity" (O) (Blumberg and Pringle, 1982). The ability of the employees to fullfil their work is defined as the A dimension (Jiang et al., 2013). The employment self-efficacy construct, explained asevaluation of workers capacity to strongly execute their duties (Rigotti et al., 2008), is closely related to the aspect of analysis at the individual level (Knies and Leisink, 2014). The A dimension can be explained as the abilities, knowledge, and skills that particular personnel have.

2.1.2 Motivation

According to Touré-Tillery and Fishbach (2011), motivation is a psychological force or contract that can increase a person's effort and perseverance in pursuing and achieving a goal.

According to Barrick et al. (2002), intrinsic variables that can help people become more motivated include intrinsic (such as autonomy, involvement, and teamwork) and extrinsic (such as evaluation, recognition, and rewards) elements (Reiss, 2012). Additional studies (e.g., Rich et al., 2010, Christian et al., 2011, Alfes et al., 2013) have demonstrated the importance of workers' motivation (M) to enhance their job performance and have hypothesized that workers' willingness to apply their talents at work determines how productive they will be. When workers are motivated, they display the appropriate behaviors at work and go above and beyond to accomplish operational objectives (Jiang et al., 2012a).

2.1.3 Opportunity

Previous studies using the AMO framework have shown a relationship between HPWS and organizational performance (Fu et al., 2015; Elbaz et al., 2018). The foundation of the AMO framework is the notion that effective HRM practices have a substantial influence on the capacities, expertise, and knowledge of employees as

well as the opportunities that are provided to them to guarantee that they are able to demonstrate their abilities (Armstrong et al., 2010). Staffing and training procedures prepare employees for promotions (Gardner et al., 2001) and increase an organization's human capital (Minbaeva et al., 2003; Youndt and Snell, 2004). Staffing and training can benefit from the "make" and "buy" strategies for raising workers' KSAs (knowledge, skills, and abilities) that have been proposed by writers such as Youndt and Snell (2004) (Subramony, 2009).

On the other hand, offering workers the chance to grow within the organization could inspire them (Tharenou et al., 2007; Liao et al., 2009). Employees who receive the skill-enhancing HR bundle are able to grow professionally and take on more tasks. Employees are motivated through this approach because it offers more opportunities for growth and personal development (White and Bryson, 2013). The literature shows a relationship between employee motivation and participation and the motivation-enhancing HR package. Companies encourage employees by providing incentives or prospects for promotion, according to the social exchange approach (Blau, 1964) (Allen et al., 2003). Workers have a sense of duty to support the goals of the company and put in more effort (Rhoades et al., 2001; Minbaeva et al., 2003).

2.1.4 Workforce agility

The earliest research on workforce agility was inspired by the finding that a company's workforce is a key factor in the organization's agility (Goldman & Nagel, 1993; Breu et al., 2001). After that, researchers tackled the issue and put up a number of theoretical accounts of workforce agility (Muduli & Muduli 2016)

Sherehiy and Karwowski (2014) divided agile workforce behavior into the following three categories, there is no single definition of workforce agility. Being proactive involves foreseeing issues. Organizations that want to be agile must learn how to develop the agility of their staff (Breu et al., 2001). Alavi, et al., (2014); Doeze et al., 2019 are few studies that have concentrated on the organizational aspects that can influence worker agility. They have demonstrated, for instance, that putting agile strategies into practice, organizing the way work is done, and putting different policies into place, like salary-skill-based pay improvement incentives, or

supporting power sharing, are all elements that help the development of workforce agility (Alavi et al., 2014). According to a recent study, agility is facilitated by giving staff members agile goals and tools to track their accomplishments (Doeze Jager-van Vliet et al., 2019).

2.1.5 Technology adoption

Employees who accept and successfully use technology in their organizations must have the requisite technical skills and competences. Information technology (IT) system acceptance and implementation are significantly influenced by employee competence, particularly in terms of technological competency, according to research by Chen and Huang (2009). According to Venkatesh et al. (2003)'s Unified Theory of Acceptance and Use of Technology (UTAUT), people's behavioral intention to use technology is influenced by a number of factors, including social influence, performance expectancy, effort expectancy, and facilitating conditions. These motivating factors influence employees' readiness to accept and make use of new technical tools in the workplace by interacting with their opinions of the advantages and usefulness of technology.

The efficient use of technology in the workplace can be aided or hindered by organizational structures and procedures. According to Rogers' 2003 research, effective technology adoption is facilitated by organizational preparedness for change, which includes elements like resource availability, leadership support, and communication channels. Furthermore, when technology is in line with organizational goals and strategic objectives, it becomes more likely to be used effectively and integrated into current processes (Chen & Huang, 2009).

A thorough framework for comprehending the intricate dynamics involved in organizational change and innovation is provided by the extension of the AMO theory through the addition of technology adoption. Organizations can better traverse the hurdles and seize the chances given by technological breakthroughs by taking into account the interplay between Ability, Motivation, and Opportunity in the context of technology adoption.

2.1. Organizational Ambidexterity

According to Gianzina-Kassotaki (2017), Duncan (1976) was the first academic to coin the term organizational ambidexterity. The ability of an organization to create and innovate in order to address the problems of future markets, while also taking advantage of current market opportunities, is known as organizational ambidexterity, or OA (Andriopoulos & Lewis, 2009; Benner & Tushman, 2003; Gibson & Birkinshaw, 2004). The terms "exploration" and "exploitation" were later added by March (1991), who defined them as separate activities with inherent trade-offs between the two.

Exploration and exploitation are the two halves of open access (OA), according to Papachroni et al. (2015). Exploration is the process of creating new ideas, methods, products, and services, whereas exploitation is the process of improving already-existing commodities and services and making effective use of already-existing skills. Achieving a balance between the two forms of learning is crucial for the long-term sustainability of the business. According to Ubeda-Garcia et al. (2017), three approaches have been proposed to strike a compromise between exploratory and exploitative learning:

1. According to this viewpoint, OA is carried out by partitioning or structurally splitting the exploration and exploitation activities into different organizational units.
2. Sequential or cyclical ambidexterity: Exploration and exploitation can occur inside the same business unit, but they do so in a cyclical manner: exploration occurs first (with the appropriate structure), followed by exploitation (with the needed structural modification).
3. In the framework of contextual ambidexterity, also known as harmonic ambidexterity, exploration and exploitation are optional. Contextual ambidexterity is the ability to combine context-specific exploration and exploitation into a single business unit so that equal effort can be put into each.

According to OA research, an organization's ability to identify substantial changes in its external environment can result in strategic flexibility, allowing it to either utilize resources in response to these changes or halt and reverse earlier resource commitment. Therefore, flexibility stems from strategic ambidexterity (Raisch and Birkinshaw, 2008). As a result, the value of ambidexterity is determined by how well it affects a variety of

performance metrics and how long an organization can survive in a constantly changing environment (Rojo et al., 2016).

An OA can therefore react and adjust to changes more effectively. The value of open access has been recognized in a number of fields, including organizational behavior, strategic management, learning, and adaptability (Jansen et al. 2009). Furthermore, their benefits are not industry-specific; rather, they are evident in a wide range of settings, including network development, organizational alignment and flexibility, efficiency and flexibility, and strategy renewal (Rialti et al., 2020).

According to Patel et al. (2013), a potential firm capacity that promotes organizational growth and ambidexterity is high-level HR procedures. Beda-Garca et al. (2018) posit that high-performance work systems, such as comprehensive staffing, in-depth training, development performance appraisal, and an equitable reward system, are important predictors of organizational ambidexterity because their implementation facilitates the creation of a work environment that fosters ambidexterity by enhancing employees' ability to utilize current knowledge and generate new ideas.

The capacity of employees to get lead of current trade realities and explore new opportunities is improved by high-involvement HR practices (Fu et al., 2015; Garaus et al., 2015; Beda-Garca et al., 2017). These procedures are an assortment of thorough procedures that cooperate to establish an organizational framework.

Comprehensive training enables staff members and managers to perform tasks outside of their primary responsibilities inside the company, thereby fostering ambidexterity across a larger range of roles and activities (Chen, 2017; Molm et al., 2019). Consequently, companies may now more readily implement two distinct methods. Individuals can learn new information, repurpose old material, improve their organizational skills and inventiveness, and acquire professional knowledge that they can share with others through comprehensive training (N. Fu et al., 2017). Extensive training is necessary to ensure that employees possess the necessary skills to perform duties connected to exploration and exploitation (Prieto-Pastor & Martin-Perez, 2015).

2.2. Mediating Role of Employee Functional Flexibility

According to Beltran-Martin et al. (2013), functional flexibility is defined as the process via which employees do numerous activities at diverse positions with the support of knowledge, skills, and capabilities. Roca-Puig et al. (2008) state that for businesses that operate in dynamic environments, flexible work arrangements (FF) of employees serve as an essential mechanism related to the completion of varied and numerous job needs. Beltran-Martin and Roca-Puig (2013) state that FF integrates its employees' diverse skill sets, behaviors, and attitudes to handle a variety of jobs into the company's culture. The study examined the hypothesis that employees' functional flexibility (FF) plays a role that may be defined as a mediator in the context of the interaction between high-performance work systems (HPWS) and organizational ambidexterity (OA) (Park et al., 2017). The backdrop for this relationship is the connection between OA and HPWS. Researchers have demonstrated that OA is determined by the combination of these three factors. Because of their close relationship to FF, these characteristics are seen as capabilities that are based on the employees themselves.

"This increased FF empowers employees to effectively utilize their competencies across diverse tasks, fostering creativity and ultimately resulting in an enhanced level of innovation within the specific workplace (Preenen et al., 2017)" "This increased FF empowers employees to effectively utilize their competencies across diverse tasks" "As a result of this increased FF, employees are given the ability to effectively utilize their competencies across a variety of tasks."

1. Research Methodology

The research methods used to conduct and to achieve the objectives of this research were discussed in this section. Research methods included the detail of populations of the study, sampling techniques and size, data collection instrument, data analysis tool for the accomplishment of the research objective.

3.1 Research Design

In this study, primary research design is used that offers path and structure to complete research study. The research design is potential exploration strategy in which researcher will evaluate that whether functional flexibility mediates the connection among

high performance work system and organizational ambidexterity or not. The logic of research is deductive and cross sectional quantitative in nature. The population is taken from textile sector of Pakistan. The data on workforce agility, technology adoption, ability, motivation, opportunity, functional flexibility and organizational ambidexterity have been collected from the top-level management of textile companies through a questionnaire. The research paradigm for this research has been positivism. In order to determine the causal linkages between variables, positivism placed a strong emphasis on using empirical data and scientific methodologies (Guba & Lincoln, 1994).

3.2 Population and Sampling for Study

The population for this study will consist of employees working in the manufacturing sector of Pakistan. This population includes individuals employed across various organizational levels within manufacturing firms. The sampling technique utilized has been stratified random sampling. In this technique population is divided into segments according to its attributes (e.g., organizational level) and then randomly selecting samples from each stratum (Bryman, 2016). Stratified random sampling allows for the representation of different organizational levels within the manufacturing sector, ensuring that each subgroup is adequately represented in the sample. This enhances the generalizability of the findings to the overall population (Bryman, 2016).

The size of sample has been identified by the formula for calculating sample size for a cross-sectional survey (Cochran, 1977). The sample size of the study was 450 employees of textile companies. Data has been collected through online survey and in-person visits to companies in Faisalabad, Pakistan and 416 responses were obtained from the top and middle level managers.

3.3 Data Collection Tool and Process

The primary data collection tool has been a structured questionnaire administered to the participants. The questionnaire has been adopted based on existing validated scales related to High-Performance Work Systems (HPWS), Organizational Ambidexterity (OA), and functional flexibility. The process of data collection will involve distributing the questionnaires to the sampled individuals either in person, via email, or

through an online survey platform. The constructs of study have been measured through the adopted questionnaires on 7 points Likert Scale which starts from 1= Strongly Disagree to 5= Strongly Agree.

3.1 Variable Measurement

The questionnaire has two parts which firstly includes demographic information of managers of textile industry of Pakistan and secondly it has 75 items to measure the variables of the study. The first part consists of demographic that includes age, gender, highest qualification, job experience, and job tenure in current organization.

1. High Performance Work System

Workforce agility, technology adoption, ability, motivation, and opportunity are the five dimensions of HPWS. The HPWS AMO theory, which has been expanded to include worker agility and technology adoption, has been utilized as a measurement tool. Workforce agility was assessed using a questionnaire developed by Muduli (2017) that asked respondents to rate their own agility attributes, attitude, and behavior using seven subscale items: adaptability, flexibility, development, collaboration, competence, speed, and informative, or the capacity to take an active interest in gathering information. Ability, motivation, and opportunity were measured using the AMO framework scale (Tian et al., 2016). These were all scored using a 5-point Likert scale.

To measure the technology adoption the TAM has been used (Davis, 1989) which consist of three dimensions intention to use, perceived usefulness, and perceived ease of use. This construct is also measured through 5-point Likert scale.

2. Organizational Ambidexterity

Organizational ambidexterity is the dependent variable and measure by the adopted questionnaire which is developed by Jansen et al., (2006; 2009). Organizational ambidexterity has two areas exploratory and exploitative innovation that are measured together.

3. Functional Flexibility

Functional flexibility is the mediating variable which has been measured through the 13 items adopted measurement scale (Molleman & Beukal, 2007; Wojtczuk-Turek & Turek, 2015).

2. Data Analysis

This section contains analysis of collected data and its explanation that helps the researcher to achieve results of the research. The software used for data analysis were Statistical Package for Social Sciences Version 20 (SPSS) and Smart PLS version 3.0. A survey was conducted through which responses were gathered from workers working in textile industry of Pakistan through questionnaire. Descriptive analyses were conducted through SPSS version 20. Furthermore, SMART PLS version 3.0 has used to determine the following tests: i) Construct Reliability and Validity, ii) Outer Loadings, iii) discriminant validity, iv) predictive relevance of the model (Q^2), v) measuring the value of R^2 , vi) measuring the effect size (f^2), and viii) Structural Equation Model.

4.1 Descriptive Analysis

Descriptive statistics was used to measure the frequency of demographical elements that includes age group in years, gender, qualification, job tenure in current organization, and overall work experience.

Table 1: Demographics of Respondents

Demographics	Frequency	Percent
Age in Years		
20 to 25 years	26	6.3
26 to 31 years	126	30.3
32 to 37 years	116	27.9
38 to 43 years	48	11.5
44 to 49 years	62	14.9
50 years or above	38	9.1
Gender		
Female	20	4.8
Male	396	95.2
Qualification		
Graduation	90	21.6
Masters	168	40.4
Post-Graduation	122	29.3
Doctorate	22	5.3
Other	14	3.4
Experience		
1 to 5 years	110	26.4
6 to 10 years	32	7.7
11 to 15 years	134	32.2
16 to 20 years	78	18.8
More than 21 years	62	14.9
Job Tenure in an Organization		
1 to 5 years	360	86.5
6 to 10 years	38	9.1
11 years or more	18	4.3

Table 1 depicts the frequency statistics of respondents where 396 respondents are male and remaining 20 are female, 26 employees are lying in the range of 20 to 25 years, 126 respondents in range of 26 to 31 years, 116 respondents fall in range of the age between 32 to 37 years, 48 respondents are among the age of 38 to 43 years, 62 respondents are between the age of 44 to 49 years and remaining 38 are above 50 years. Data was collected from the middle and top-level management and their qualification is categorized from graduation to doctoral, results reveal that 90 respondents are lying under the qualification of graduation, 168 employees are masters, 122 are post-graduates, 22 respondents have doctorate degree, and remaining 14 respondents have other qualification.

Table 1 also depicts that 110 respondents have the experience of 1 to 5 years, 32 respondents have 6 to 10 years of work experience, 134 have 11 to 15 years of experience, 78 respondents have 16 to 20 years of experience, while remaining 62 respondents have more than 21 years of overall work experience. Moreover, 360 respondents have served 1 to 5 years in the same textile company, while 38 have served 6 to 8 years, and 18 respondents have served more than 11 years.

4.1 Construct Reliability and Validity
Table 2: Construct Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Ability	0.897	0.929	0.766
Employee Functional Flexibility	0.952	0.963	0.812
Motivation	0.817	0.878	0.643
Opportunity	0.937	0.952	0.800
Organizational Ambidexterity	0.904	0.928	0.721
Technology Adoption	0.912	0.935	0.741
Workforce Agility	0.942	0.958	0.852

Table 2 depicts the Cronbach's Alpha of ability, employee functional flexibility, motivation, opportunity, organizational ambidexterity, technology adoption, and workforce agility i.e., 0.897, 0.952, 0.817, 0.937, 0.904, 0.912 and 0.942, respectively which means all constructs are reliable because Cronbach's Alpha is greater than 0.70.

The composite reliability (CR) of ability, employee functional flexibility, motivation, opportunity, organizational ambidexterity, technology adoption, and workforce agility i.e., 0.929, 0.963, 0.878, 0.952, 0.928, 0.935 and 0.958, respectively.

The AVE of all the variables is greater than 0.50 which means all the variables have convergent validity.

4.2 Outer Loadings
Table 3: Outer Loadings

	Ab	EFF	EWE	M	Opp.	OA	TA	WA
Ab1	0.808							
Ab2	0.935							
Ab3	0.922							
Ab4	0.828							
EFF1		0.952						
EFF2		0.928						
EFF3		0.910						
EFF4		0.960						

EFF5	0.928		
EFF6	0.703		
MOT1		0.847	
MOT2		0.854	
MOT3		0.755	
MOT4		0.746	
OA1		0.843	
OA2		0.878	
OA3		0.879	
OA4		0.824	
OA5		0.821	
OP1			0.902
OP2			0.861
OP3			0.905
OP4			0.917
OP5			0.885
TA1			0.872
TA2			0.876
TA3			0.879
TA4			0.883
TA5			0.791
WA1			0.943
WA2			0.952
WA3			0.899
WA4			0.898



Table 3 depicts the outer loadings of items which are greater than 0.70 which means measurement model is well built and reliable.

4.3 Discriminant Validity

Discriminant validity measures the extent to which a construct under review

differs from the other similar construct. Henseler et al. (2015) suggested that the variables have discriminant validity if the HTMT cut-off value is less than 0.90. Since every value in Table 4 is less than 0.90, every variable has discriminant validity.

Table 4: Heterotrait-Monotrait Ratio (HTMT)

	Ability	EFF	Mot	Opp	OA	TA	WA
Ability							
EFF	0.309						
Mot	0.792	0.326					
Opp	0.421	0.693	0.483				
OA	0.384	0.242	0.765	0.355			
TA	0.323	0.481	0.541	0.504	0.524		
WA	0.233	0.376	0.402	0.403	0.432	0.284	

4.4 Measuring the Value of R2

R square, sometimes referred to as the coefficient of determination, calculates the structural model's total effect size.

Table 5: Measurement of R²

		R ²	R ² Adjusted
Employee Functional Flexibility		0.286	0.277
Organizational Ambidexterity		0.509	0.502

In Table 5, for the mediating variable Employee Functional Flexibility, the adjusted R-square value is .277 with the R²=.286, which means that about 28.6% of the variance in Employee Functional Flexibility is explained by the model. For dependent variable Organizational Ambidexterity, the adjusted R² is .502, which means that about 50.2% of the variance in Organizational Ambidexterity is explained by the model.

4.5 Measuring the Effect Size (f2)

Table 6: Effect size (f²)

	EFF	OA
Ab	0.021	0.013
EFF		0.364
Mot.	0.000	0.004
Opp.	0.009	0.000
TA	0.155	0.023
WA	0.083	0.015

In Table 6, Ability has a small effect on Employee Functional Flexibility (f² = 0.021) and very minor effect on organizational ambidexterity (f² = 0.013). Employee Functional Flexibility has high effect on Organizational Ambidexterity (f² = 0.364). Motivation has no effect on any variable. Opportunity has very minor effect on employee functional flexibility and has no effect on organizational ambidexterity. Technology Adoption and Workforce Agility has medium effect on functional flexibility while no effect on organizational ambidexterity. Workforce Agility has small effect on small effect on functional flexibility and very minor effect on organizational ambidexterity.



4.6 Hypothesis Testing

Table 7: Path Coefficient (Direct Effect)

Hypotheses	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values	
H _{1a} WA -> OA	0.100	0.099	0.043	2.323	0.020	Accepted
H _{1b} TA -> OA	0.133	0.132	0.056	2.387	0.017	Accepted
H _{1c} Ab -> OA	0.114	0.116	0.058	1.985	0.047	Accepted
H _{1d} M -> OA	0.078	0.074	0.062	1.265	0.206	Rejected
H _{1e} Opp -> OA	0.019	0.021	0.047	0.405	0.686	Rejected

H_{1a}: Workforce Agility has a significant effect on organizational ambidexterity

H_{1a} predicts that Workforce Agility has significant effect on organizational ambidexterity. The findings in Table 7 confirmed that Workforce Agility has significant effect on Organizational Ambidexterity (b=.100, T=2.323, p<0.05). Hence H_{1a} was accepted.

H_{1b}: Technology Adoption has a significant effect on organizational ambidexterity

H_{1b} predicts that Technology Adoption has significant effect on organizational ambidexterity. The findings in Table 7 confirmed that Technology Adoption has significant effect on Organizational Ambidexterity (b=-0.014, T=2.387, p<0.05). Hence, H_{1b} was accepted.

H_{1c}: Ability has a significant effect on organizational ambidexterity

H_{1c} predicts that Ability has a significant effect on organizational ambidexterity. The findings in Table 7 confirmed that Ability has a significant effect on Organizational Ambidexterity (b=.114, T=1.985, p<0.05). Hence, H_{1c} was accepted.

H_{1d}: Motivation has a significant effect on organizational ambidexterity

H_{1d} predicts that Motivation has significant effect on organizational ambidexterity. The findings in Table 7 confirmed that Motivation has no significant effect on Organizational Ambidexterity (b=0.078, T=1.265, p<0.05). Hence, H_{1d} was rejected.

H_{1e}: Opportunity has a significant effect on organizational ambidexterity

H_{1e} predicts that Opportunity has significant effect on organizational ambidexterity. The findings in Table 7 confirmed that Opportunity has no significant effect on Organizational Ambidexterity (b= 0.019, T=0.405, p<0.05). Hence, H_{1e} was rejected.

4.1 Mediation Effect

Mediation effect of variables was measured through the path analysis. Table 11 shows the specific indirect effect through which mediation effect has assessed.

Table 8: Specific Indirect Effect

Hypotheses	B	T Statistics	P Values	
H _{2a} WA -> EFF-> OA	0.134	4.694	0.000	Accepted
H _{2b} TA -> EFF -> OA	0.195	5.225	0.000	Accepted
H _{2c} Ab -> EFF -> OA	0.088	2.753	0.006	Accepted
H _{2d} Mot -> EFF -> OA	-0.015	0.382	0.702	Rejected
H _{2e} Opp -> EFF -> OA	-0.055	1.836	0.066	Rejected

H_{2a}: Employee Functional Flexibility mediates the significant effect of Workforce Agility on organizational ambidexterity.

H_{2a} depicts that Employee Functional Flexibility mediates the significant effect of workforce Agility and Organizational Ambidexterity. Table 8 showed that that Employee Functional Flexibility mediates the effect of Workforce Agility on Organizational Ambidexterity. (b = 0.134, T = 4.694, p = 0.000). Hence, H_{2a} was accepted.

H_{2b}: Employee Functional Flexibility mediates the significant effect of Technology Adoption on organizational ambidexterity.

H_{2b} depicts that Employee Functional Flexibility mediates the significant effect of Technology Adoption on Organizational Ambidexterity. Table 8 showed that that Employee Functional Flexibility mediates the significant effect of Technology Adoption on Organizational Ambidexterity. (b = 0.195, T = 5.225, p=0.000). Hence, H_{2b} was accepted.

H_{2c}: Employee Functional Flexibility mediates the significant effect of Ability and organizational ambidexterity.

H_{2c} depicts that Employee Functional Flexibility mediates the significant effect of Ability on Organizational Ambidexterity. Table 8 showed that that Employee Functional Flexibility mediates the effect of Ability on Organizational Ambidexterity. (b = 0.088, T = 2.753, p < 0.05). Hence, H_{2c} was accepted.

H_{2d}: Employee Functional Flexibility mediates the significant effect of Motivation on organizational ambidexterity.

H_{2d} depicts that Employee Functional Flexibility mediates the relationship between Motivation and Organizational Ambidexterity. Table 8 showed that Employee Functional Flexibility does not mediate the effect of Motivation on Organizational Ambidexterity. (b = -0.033, T = 0.382, p < 0.05). Hence, H_{2b} was accepted.

H_{2e}: Employee Functional Flexibility mediates the effect of Opportunity on Organizational Ambidexterity.

H_{2e} depicts that Employee Functional Flexibility mediate the effect of Opportunity on Organizational Ambidexterity. Table 8 showed that Employee Functional Flexibility mediate the effect of Opportunity on Organizational Ambidexterity. ($b = -0.055$, $T = 1.836$, $p < 0.05$). Hence, H_{2e} was rejected.

5. Findings and Discussions

This research takes in to account the connection among organizational ambidexterity (OA) and high-performance work systems (HPWS), specifically focusing on the intermediary role of functional flexibility in Pakistani textile industries. This research adds up to the body of literature regarding the dynamics at work in the organizational context by integrating aspects of workforce agility and technology adoption into the AMO theory.

The study's results demonstrated a number of important connections and mediating effects. First, a strong and positive relationship was found between HPWS and OA, suggesting that companies that use high-performance work practices had higher organizational ambidexterity. The results of earlier studies support this conclusion (Arthur, 2020; Jackson & Schuler, 2021).

The present study provides evidence in favor of the hypothesis that there exists a positive effect of workforce agility on organizational ambidexterity. This finding is consistent with other research that suggests ambidextrous workers in agile workforces are better able to balance exploration and exploitation tasks simultaneously (O'Reilly & Tushman, 2013). In 2022, Wang and Rafiq conducted a study which revealed that organizations with people who are highly adaptable and flexible demonstrate superior ambidextrous behaviors, which in turn allows them to respond efficiently to changing market situations.

The technology adoption has positive effect on organizational ambidexterity which is well supported by this research. Likewise, studies by Li et al. (2020) in the setting of Chinese businesses showed that ambidextrous techniques like cloud computing and data analytics greatly improved a firm's ability to use technology. Chen and Huang's (2021) study demonstrated that companies that utilized cutting-edge digital technology, like

artificial intelligence and the Internet of Things (IoT), demonstrated higher degrees of ambidexterity in comparison to their peers. The discussion also emphasizes how technology's impact on organizational ambidexterity is always changing. As cutting-edge technologies like blockchain, AI, and robotic process automation proliferate, businesses may now support ambidextrous behaviour with ever-more-advanced solutions. But in order to fully utilize technology, organizational context, culture, and competences must be carefully taken into account. The results highlight how important it is for organizations to utilize technology in order to improve their ambidexterity. Organizations can improve their flexibility, inventiveness, and competitive edge by skillfully balancing exploration and exploitation operations through the use of cutting-edge digital tools and methods.

As predicted, the study finds that ability also have positive effect on organizational ambidexterity. This implies that organizations are more suited to pursue ambidextrous strategies successfully when their members possess a high level of collective skills, knowledge, and capacities (Becker & Huselid, 1998). Ren et al.'s study from 2023, for example, indicated that organizations with talented and diversified staff profiles exhibit higher levels of ambidextrous behavior, which allows them to innovate while keeping operational efficiency.

The study rejects hypothesis 1d and 1e by finding no evidence of a substantial effect of opportunity and motivation on organizational ambidexterity. This shows that while motivation and opportunity play a significant role in the success of an organization, they might not have a direct impact on the development of ambidextrous skills. These results are in line with recent research by Patel et al. (2023), which discovered that organizational ambidexterity is not significantly influenced by internal motivation or external opportunities.

The effect of worker agility, technology adoption, ability, opportunity, and motivation on organizational ambidexterity is also examined, as is the mediating role of functional flexibility. According to our analysis, the relationship between workforce agility, technology uptake, and ability on organizational ambidexterity is significantly mediated by employee functional flexibility. In particular, companies that support workers who are adaptable and can fit into a variety of jobs and responsibilities tend to have more ambidexterity in

their workforce. This research emphasizes how crucial it is to support employees' adaptability so that businesses may successfully strike a balance between exploration and exploitation. Our findings show that employee functional flexibility does not, as predicted, act as a mediator in the relationship between organizational ambidexterity and motivation and opportunity. While opportunity and motivation are important factors in determining employee engagement and creativity, they do not directly transfer into organizational ambidexterity through functional flexibility of employees. This shows that ambidexterity, opportunity, and motivation within organizations may be linked via various means.

The mediating role of employee functional flexibility in influencing organizational ambidexterity is shown by our findings, which also highlight the significance of workforce agility and technology adoption. Through the use of agile techniques and the utilization of cutting-edge technology, organizations may enable their workforce to promptly adjust to evolving situations, investigate novel prospects, and efficiently utilize current assets. This demonstrates how personnel flexibility, organizational agility, and technology capabilities work together to promote ambidextrous behaviors (Zheng et al., 2023).

Although opportunity and motivation are crucial factors that influence employee engagement and creativity, our findings imply that these factors may also have an impact on organizational ambidexterity through channels other than the functional flexibility of employees. To learn more about how opportunity and incentive affect ambidextrous behaviours in organizations, future studies should look at several avenues such resource allocation, organizational culture, and leadership support (Lee et al., 2023).

According to the findings, functional flexibility may act as a mediator in the connections between these elements of HPWS and organizational ambidexterity Hypotheses 2. This emphasizes how crucial business procedures and structures are to supporting ambidextrous behavior (Gibson & Birkinshaw, 2004). For instance, functional flexibility enables organizations to modify their resource allocation and coordination processes to successfully support ambidextrous tasks, as shown by a study by Zhao and Colakoglu (2022).

This research offers significant perspectives on the factors that propel organizational ambidexterity and the ways in which they impact organizational effectiveness. Organizations may better use worker agility, organizational ambidexterity, functional flexibility, opportunity, motivation, and technology adoption to generate sustained competitive advantage in changing contexts by understanding these relationships.

Collectively, it was discovered that the connection between HPWS and OA was partially mediated by functional flexibility. This indicates that the application of HPWS improves organizational functional flexibility, which helps organizations become more ambidextrous. This research supports the AMO framework's (Appelbaum et al., 2023) claims and emphasizes how crucial adaptable organizational structures are for developing ambidextrous skills.

4. Conclusion

Conclusively, this research has investigated the complex link that exists between organizational ambidexterity and High-Performance Work Systems (HPWS), with a particular emphasis on the mediating role of functional flexibility. It is clear from a thorough literature review and empirical research that HPWS practices have a major impact on the organization's capacity to strike a balance between exploration and exploitation activities, which in turn promotes ambidexterity. Furthermore, it becomes clear that one of the main ways that HPWS affects organizational ambidexterity is through functional flexibility, which makes it easier for resources and capabilities to adjust to shifting environmental demands.

The analysis provides an in-depth insight into factors defining organizational ambidexterity and associated dilemma between different factors that impact organizational efficiency. The confirmed importance of workforce agility, technology adoption, and individual competencies highlights key role of educated and flexible workforce in achieving organizational ambidexterity. This emphasizes the need to invest in the employee development programs among other approaches that aim at improving the technological skills and individual competencies. Nevertheless, with regard to the question of the connections among motivation, opportunity, and ambidexterity, such 'strange' findings indicate that motivation and chances while

they are surely important in achieving goals and objectives, their direct influence on ambidexterity is minimal at best and as a result, they leave the conventional views in organizational management is a tough spot.

Further, workforce agility, technology adoption, and individual competences influence functional flexibility and thus become the most important in ensuring adaptability in the organization. This highlights the importance of enterprises in promoting initiatives that improve employee flexibility and adaptation to change. In contrast, the absence of direct impact of motivation and opportunity on employee functional flexibility implies that not all factors that are critical for organizational effectiveness may result in an increase in flexibility among the employees. This subtle comprehension highlights the intricate character of the employee engagement, and the associated interplay with organizational aspects. Further, the strong effect functional flexibility of employees has on organizational ambidexterity emphasizes the need for a workplace environment that values and promotes adaptability among the employees.

To sum up, the results highlight the complex relationships between the factors of organizational ambidexterity, employee agility, technology adoption and worker flexibility. This highlights the need for firms to infuse agility, technology and flexibility into their corporate culture to successfully move through the challenges of a competitive world and maintain ambidexterity over the long run. Through knowing and exploiting these interconnections, organizations can improve their innovation and flexibility, making them more successful in an environment of changing market dynamics.

The study has both theoretical and practical importance because the insights and findings it gives to organizations may be useful, and it also adds to the abundance of knowledge in the field. From a practical standpoint, the research study offers specific guidelines for companies that are looking for ways to enhance the dexterity of their organizations. By the way of highlighting that, such factors as workforce agility, technology adoption, and employee functional flexibility as key enablers of ambidexterity are instrumental in the formation of such capabilities. Providing training resources to develop the adaptability and flexibility of employees in the workplace while ensuring there is a team that

is able to respond to the demands of a rapidly changing environment is an example of allocating resources in this context. Similarly, the organization supports new technologies and their smart use, as the improvement is the innovation and agility of the organization, which in the end should give the organization that level of agility. In addition, recognizing the mediating role of employee engagement and flexibility demands an environment that is based on a positive work culture that encourages employee loyalty and flexibility. The main practical implications of the study in general are an important way for companies that desire to maintain existing trends in the business environment.

Moreover, the study is theoretically significant since it tries to establish the intricate, fine-tuned interplay between various elements and organizational ambidexterity. The research, by way of an empirical analysis of individual variables such as workforce agility, technology adoption, and individual skills, extending the concepts of organizational agility and innovation, gives a theoretical basis to this study. Furthermore, the study demonstrates a strong relationship between the mediating influence of employee engagement and functional flexibility, and ambidexterity. This enlightens the theory construction by supplying specific pictures of managerial competences and employee practices contribution to organizational ambidexterity.

6.1 Recommendations

Studying the results of the above-described research will allow for emphasizing the most reasonable suggestions to help companies develop their organizational ambidexterity and increase their productivity. Firstly, companies should come up with workforce agility plans by investing in training and development programs that will help employees uncover their strengths and weaknesses and be more flexible and responsive to change. It might involve cross-functional working training, knowledge exchange between the units, and a culture that inculcates the willingness to try and experiment. A flexible workforce can be built to help the organization deal with any business environment that is more active and volatile; hence, they have ambidexterity.

From an organizational point of view, the technology aspect should be a component of the development of the ambidexterity features. This

would involve investing in advanced machinery, namely data analytics, artificial intelligence, and automation, so as to improve operations, raise the level of decision-making, and concentrate on innovation. Along with that, companies should equally look into the workers' training competencies, as that would facilitate changes in the market and make them respond to new prospects. Additionally, organizations are encouraged to give the key role of individual competences in delivering organizational ambidexterity as the third recommendation. Thus, talent management methods should be designed to nail the process of recognition, make the most of the talents each employee possesses, and use these competencies in the corporate environment. This will involve the creation of performance management systems that demand continuous assessment and ample learning opportunities, as well as career progression paths that acknowledge the significance of on-going learning.

However, while motivation and opportunities are not the main factors that affect organizational ambidexterity directly, companies should prioritize their employees' engagement and happiness to ensure a good working atmosphere. This could involve such activities as providing incentives, being flexible regarding working hours, and developing the career path. Employee engagement, morale, and the ability to adapt can be improved by organizations if they work on employee well-being and contentment. This will enable ambidexterity. Last but not least, organizations should carry on exploring the complicated relationships between organizational and individual elements of performance that affect ambidexterity. This could involve doing further research to understand how these factors interact with each other's as well as their effects on vital organizational outcomes. Perhaps the key to the successful development of ambidextrous organizations lies in building a better perspective of these dynamics, as it will allow for more specific interventions and strategies to be devised to address the organization's ambidexterity capabilities and its competitiveness in today's quickly changing business environment.

6.2 Implications of the Study

The study results on the determinants of organizational ambidexterity are profound for both theory and practice in organizational management. To begin with, the recognition of

workforce agility, technology adoption, and personal competences as major drivers emphasizes the necessity of the flexible and competent labor. Developing approaches of enhancing technology capability in employees and individual capability as a strategy of promoting organizational ambidexterity should be made a priority by companies. This implies a change in focus to strategic workforce planning and talent development programs that are compatible with the organization's agility and innovation objectives.

In addition, the study breaks down the direct relationship between motivation, opportunities, and organizational ambidexterity, rejecting the traditional role of employee motivation in determining organizational outcomes. Although motivation and opportunities are important factors in reaching different goals of organization, however the direct effect of these factors on improving ambidexterity is very low. This raises the need to consider factors that drive organizational agility and innovation in a more sophisticated way, rather than just stimulus rewards or provision of opportunities. Further, the results of the study on employee functional flexibility points to the need for adaptability in attaining organizational ambidexterity. Businesses with focus on developing a flexible and adaptable culture among their employees are more prepared and proactive in responding to changes in the market and technological advancements. This highlights the need for creating policies and practices that help develop varied skills and adaptive capacities of the employees, so that the organization's innovation and flexibility is improved. -Secondly, the study from the aspect of employee engagement being a mediator that bridges the impact of different factors on organizational ambidexterity gives important clues from the inner mechanism of the effectiveness of the organizational. Though employee engagement does not lead directly to ambidexterity, its mediating role in the relationship between workforce agility, technology adoption, and individual capabilities suggests the need to improve the work environment for employees to be motivated and committed. This implies that aligning the employees' passion with better organizational outcomes should take precedence in the initiatives adopted by the organization regarding the broader scope of creating organizational ambidexterity.

Overall, the results of the research highlight the convoluted impact of different elements on organizational ambidexterity, which provides interesting knowledge for both scholars and practitioners working in the area of organizational management. Companies should therefore adopt a perspective that recognizes the interplay between workforce agility, technology adoption, individual capabilities, and employee engagement in the pursuit of organizational ambidexterity so that more effective strategies can be designed relevant to our current dynamic and competitive business environment.

6.3 Limitations of the Study

Though this study is valuable, it shows a number of limitations; these limitations should be acknowledged. Primarily, the study is mainly concerning a few factors that determine the organizational ambidexterity such as employee flexibility, technology usage, and individual skills, and ignoring other factors that might influence the ambidexterity in organizations. The narrow scope may cause that the findings will not be able to be generalized and not all the complexity of organizational dynamics will be caught. In addition, the use of self-reported data and a cross-sectional design creates inherent biases and limitations such as respondent bias and inability to establish causality or temporal sequence. Moreover, the idea of the research to use employee engagement as a mediator and functional flexibility as a moderator might be blindness to other mediators and moderators affecting the relationship between antecedents and organizational ambidexterity. Hence, it would be interesting in future research to look at the identified limitations and continue to develop the concept of organizational ambidexterity. First of all, it is necessary to extend the range of determinants under examination to a much greater number of factors which may affect ambidexterity within organizations such as organizational culture, leadership styles, and external environmental factors. Furthermore, implementing longitudinal research strategies and mixed-method approaches could offer more understanding regarding the time dynamics and the underlying mechanisms that promulgate ambidexterity over time. In addition, research across different industries and organizational settings would improve the generalizability of results and provide a

more detailed understanding of the context-specific factors influencing ambidextrous capabilities.

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