A CAUSAL MODEL OF HUMAN RESOURCE DEVELOPMENT ON EMPLOYEE PERFORMANCE: AN EMPIRICAL STUDY OF XIAOMI AUTO-RELATED LISTED COMPANIES

GUO ZHUANG

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Management

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DECLARATION

I, Guo Zhuang (Student ID# 6319202003), hereby certify that the work embodied in this dissertation entitled “A causal model of human resource development on employee performance: An empirical study of Xiaomi auto-related listed companies” is result of original research and has not been submitted for a higher degree to any other university or institution.

Guo Zhuang

(Mr. Guo Zhuang)

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Author	:	Mr. Guo Zhuang
Student ID	:	6319202003

Dissertation examination committees reach consensus to approve this dissertation.

Chairperson .....
(Assistant Professor Dr. Liou-Yuan Li)

Committee Member .....
(Dr. Chai Ching Tan)

Committee Member .....
(Associate Professor Dr. Chalermkiat Wongvanichtawee)

Committee Member / Advisor .....
(Dr. Pattsornkun Submahachok)

Committee Member / Co-Advisor .....
(Associate Professor Dr. Chaiyanant Panyasiri)

Graduate School of Siam University approved to accept this dissertation in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Management.

.....
(Associate Professor Dr. Chaiyanant Panyasiri)
Dean of the Graduate School of Management

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ABSTRACT

Title : A Causal Model of Human Resource Development on Employee Performance: An Empirical Study of Xiaomi Auto-related Listed Companies

By : Mr. Guo Zhuang

Degree : Doctor of Philosophy

Major : Management

Advisor : .....

(Dr. Pattsornkun Submahachok)

Co-Advisor : .....

(Associate Professor Dr. Chaiyanant Panyasiri)

This study aimed to accomplish the following: 1) examine how human resource development practices, specifically training development, career development, and organizational development, shape employee performance within Xiaomi's auto-related listed companies in China; 2) assess whether sustainable organizational performance (SOP) mediated that relationship; 3) propose a causal model that clarifies both the direct and indirect routes through which HRD initiatives produce performance gains.

A mixed-methods design underpinned the inquiry. The quantitative strand drew on 400 usable survey responses, while the qualitative strand relied on 20 in-depth interviews conducted across nine Xiaomi-affiliated automotive firms. Statistical analysis provided the primary evidence, and interview data broadened the view, revealing how HRD programs aligned with broader organizational strategies.

Results indicated that organizational development was the most influential HRD dimension. It directly bolstered job satisfaction, motivation, and leadership quality. SOP functioned as a significant mediator, and within that construct, learning and development surfaced as the strongest contributors. Leadership, meanwhile, emerged as the dominant

driver of individual performance, underscoring managerial influence on productivity and alignment. Taken together, the findings underscore the need for integrated HRD planning that aligns with long-term sustainability goals. This imperative is likely to grow as China's intelligent-vehicle sector continues to evolve.

Keyword: human resource development, sustainable organizational performance, employee performance

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CHAPTER 1

INTRODUCTION

1.1 Background of the Problem

The transformation of China's industrial economy—driven by smart manufacturing, new energy vehicles (NEVs), and digital integration—has accelerated the convergence of technology and traditional sectors. A standout example is Xiaomi Corporation's strategic entry into the automotive industry with the launch of Xiaomi Auto. In 2024, Xiaomi introduced the SU7, a smart electric vehicle that integrates AI, IOT, and mobile tech, signaling the company's intention to redefine user mobility. With more than 30 subsidiaries and suppliers now publicly listed under its automotive supply chain, Xiaomi is not merely building vehicles—it is re-engineering the auto-tech ecosystem (Wang, 2025).

While the focus on technology is evident, the foundation of this transformation lies in people. The complexity and speed of auto-tech integration have created unprecedented pressure on workforce capability, adaptability, and motivation. However, there remains a major gap in empirical evidence on how Human Resource Development (HRD) contributes to sustainable organizational performance (SOP) and employee performance (EP) in China's auto-related tech firms. This is particularly urgent in Xiaomi's case, where the fusion of electronics and industrial manufacturing demands hybrid skillsets, continuous learning, and agile workforce strategies (Rubel, 2022; Ti & Ming, 2024).

Recent studies show that HRD frameworks—comprising training, career development, and organizational learning—are critical drivers of both SOP and EP. For example, research in Chinese manufacturing firms confirmed that green HRM practices directly influence innovation, employee behavior, and organizational sustainability

(Shahzad et al., 2023; Zhao et al., 2024). Furthermore, HRD-driven sustainability practices positively affect retention, well-being, and employee output—factors essential for Xiaomi Auto's long-term viability (Ra et al., 2025; Sharma et al., 2023).

Moreover, HRD practices support the development of adaptive organizational culture, which enables resilience and competitive advantage. Manao & Senen (2024) Manao & Senen (2024) found that sustainable HRM builds inclusive cultures that support innovation, performance, and change readiness—features that Xiaomi must cultivate as it scales auto operations. In parallel, Yulanda et al. (2025) emphasized the mediating role of employee commitment in translating HRM strategies into sustainable outcomes, highlighting the psychological contract as a vital mechanism in tech-intensive industries.

Despite these findings, the auto-tech intersection—especially in the context of Xiaomi—remains underexplored. Most existing literature is based on traditional manufacturing or service sectors. Few studies isolate Xiaomi's supply chain workforce, where the integration of high-tech workflows and lean manufacturing introduces unique HRD-performance dynamics (Albloush et al., 2022; Nakra & Kashyap, 2024).

Moreover, models integrating HRD → SOP → EP remain rare in the Chinese automotive sector. A few recent works point to this causal pathway: sustainable HRM promotes job satisfaction, engagement, and long-term firm performance, but validation in China's private, listed, high-growth firms—like those affiliated with Xiaomi Auto—is still lacking (Davidescu et al., 2020; Muñoz-Pascual et al., 2021; Stareček et al., 2021).

This study seeks to fill that empirical and contextual gap by testing a causal model linking HRD to SOP and EP within Xiaomi auto-related listed companies. By examining HRD structures, sustainability metrics, and individual-level outcomes across Xiaomi's automotive value chain, this research provided targeted insights for HR strategists, investors, and policymakers working at the forefront of China's smart industrial economy.

1.1.1 Current Landscape of the Global Intelligent Vehicle Industry

After decades of technological progress and cross-industry integration, the global intelligent vehicle industry has entered a rapid growth phase and is widely recognized as one of the most transformative sectors in the mobility and digital technology landscape. Intelligent vehicles—equipped with advanced sensors, autonomous driving capabilities, AI algorithms, and networked connectivity—have become strategic indicators of a nation's innovation capacity and industrial modernization. The development of this sector not only involves traditional automotive manufacturing but also integrates critical areas such as 5G, chip design, cloud computing, electric power systems, and human-machine interaction. As such, the intelligent vehicle industry now spans a long and vertically integrated industrial chain covering automotive, ICT, transportation, urban infrastructure, and financial services.

The global market for intelligent vehicles has seen a surge in both production and adoption. According to the International Energy Agency (IEA) and industry projections, more than 75 million intelligent vehicles (inclusive of partially and fully autonomous EVs) are expected to be sold annually by 2030, with China, Europe, and North America driving the majority of this growth. In 2022, global sales of vehicles with Level 2 or higher autonomous features surpassed 12 million units, accounting for nearly 15% of all passenger vehicle sales worldwide. This figure is expected to double by 2025 as regulatory frameworks evolve and consumer trust improves.

China has emerged as the world's largest and most dynamic intelligent vehicle market, propelled by national policy support, investment in 5G-V2X infrastructure, and the rise of tech-enterprise entrants such as Xiaomi, Huawei, Baidu, and Alibaba. According to the Ministry of Industry and Information Technology (MIIT), China accounted for over 50% of all global intelligent connected vehicle (ICV) trials and commercial launches in 2022, and the nation's intelligent vehicle penetration rate exceeded 35% for new energy vehicles. Firms like Xiaomi Auto are now actively

developing L2–L4 autonomous models integrated with self-developed chips, smart cockpits, and real-time data platforms—marking a new wave of competition in the high-tech mobility sector.

The COVID-19 pandemic initially slowed supply chains in 2020–2021 but accelerated digital transformation and automation strategies across the industry. By 2023, intelligent vehicle innovation had resumed momentum, with global R&D investments surpassing USD 100 billion and over 200 startups and technology conglomerates globally entering the ICV race.

Therefore, the intelligent vehicle industry is not only reshaping global transportation systems but also recon-figuring value creation across industrial ecosystems. It represents a critical node in the evolution of smart cities, digital economies, and low-carbon mobility solutions. With China at the forefront, the industry is poised to influence employment structures, capital flows, and technological standards globally.

Table 1.1 Global Light Vehicle Production and Sales in 2025

Region	Production (Million Units)	Sales (Million Units)	Market Share (%)	Source
Global	88.7	89.6	100%	S&P Global Mobility, 2024
China	29.6	23.2	33.37%	S&P Global Mobility, 2024
United States	11.7	17.7	13.19%	Statista, 2024
Europe (total)	16.6	13.2	18.72%	S&P Global Mobility, 2024
Germany	4.15	2.84	4.68%	VDA, 2024
Japan	~8.5	~8.2	~9.6%	OICA, 2024
India	~5.9	~5.6	~6.6%	OICA, 2024
South Korea	~4.5	~4.3	~5.1%	OICA, 2024
Mexico	~4.0	~3.8	~4.5%	Statista, 2024
Brazil	~2.3	~2.1	~2.6%	OICA, 2024
Others	~2.6	~2.6	~2.9%	Combined from Southeast Asia, Turkey, Russia, Middle East, Africa

(Source: Researcher, 2025)

In 2025, global light vehicle production is projected at 88.7 million units, with sales reaching 89.6 million units. China is expected to produce 29.6 million vehicles, maintaining its position as the world's largest automotive producer. The U.S. is projected to produce 11.7 million vehicles, with sales estimated at 17.7 million units. Europe's production is forecasted at 16.6 million units, with sales around 13.2 million vehicles. Germany anticipates producing 4.15 million vehicles, with domestic sales projected at 2.84 million units. The exact figures fluctuate year to year, but the remaining ~35% is broadly distributed across Asia-Pacific (excluding China), Latin America, Eastern Europe, and Middle East &Africa. The exact figures fluctuate year to year, but the remaining ~35% is broadly distributed across Asia-Pacific (excluding China), Latin America, Eastern Europe, and Middle East & Africa.

1.1.2 Current Landscape of the Chinese Intelligent Vehicle Industry

China’s intelligent vehicle industry is experiencing rapid growth, driven by strong government support, technological innovation, and strategic economic positioning. The sector, particularly in intelligent connected vehicles (ICVs), has seen significant advancements in technologies like ADAS and V2X, placing China among global leaders (Wang, 2021). Major cities such as Beijing and Shanghai have developed extensive testing zones and pilot programs, reinforcing the country’s commitment to becoming a hub for autonomous and connected vehicle development (Feng et al., 2024). A hybrid regulatory model—combining national guidelines with local government policies—has fostered innovation while addressing legal and safety challenges (Liu, 2021). At the same time, cyber security and user data protection are becoming key concerns as vehicles become more connected (Zhao et al., 2021). Overall, the intelligent vehicle industry is not only a pillar of China’s automotive transformation but also a central player in its broader digital economy agenda (Kuang et al., 2018).

Table 1.2 Intelligent Vehicle Sales Volume of Brands in China

Brand	China Market Share (2025)	Global Sales Share (2025)	Source
BYD	16.20%	6.70%	Car News China, 2025
Geely	7.70%	2.00%	Car News China, 2025
FAW-Volkswagen	7.00%	4.40%	Car News China, 2025 S&P Global, 2025
Changan	6.00%	1.50%	Car News China, 2025
Chery	5.80%	1.20%	Car News China, 2025
SAIC Volkswagen	5.20%	3.00%	Car News China, 2025
SAIC-GM-Wuling	3.60%	1.00%	Car News China, 2025
FAW Toyota	3.50%	2.50%	Car News China, 2025
GAC Toyota	3.40%	2.00%	Car News China, 2025
Tesla	2.90%	2.00%	Car News China, 2025 S&P Global, 2025
Xiaomi	~1.4%	~0.0%(China-only)	Automobility, 2025 Car News China, 2025
Others (Nio, XPeng, foreign brands, etc.)	~37.3%	~73.7%	Reuters, 2025 S&P Global, 2025

(Source: Researcher, 2025)

According to the 2025 market data in Table 1.2, BYD dominates China's automotive landscape with a commanding 16.2% market share—more than double any other brand—and holds 6.7% of global auto sales. This reflects its strong performance both domestically and internationally, primarily in electric vehicles. Geely, FAW-Volkswagen, Changan, and Chery follow with Chinese market shares ranging from 5.8% to 7.7%, showing that domestic brands remain highly competitive. Most of them have modest global shares between 1.2% and 4.4%, suggesting their focus is still more regional than global. Tesla, despite its global brand power, holds a 2.9% share in China, reflecting growing pressure from Chinese EV makers. Its global sales share is similar at 2.0%, showing consistent international presence but not dominance in China. Xiaomi, a newcomer to the auto industry, has quickly reached an estimated 1.4% of the Chinese market in 2025, entirely from domestic sales. It has no global market share yet, as its

international expansion is planned for 2027.The "Others" category, accounting for ~37.3% of the Chinese market and ~73.7% of global sales, includes legacy foreign automakers like Toyota, Honda, Ford, and BMW, as well as smaller Chinese brands like Nio, XPeng, Li Auto, and Zeekr. This wide distribution highlights the fragmented nature of the global auto industry and the continued presence of international brands in China, though many are losing ground to local competitors.

China is increasingly led by domestic brands, especially BYD and Geely. Foreign brands are losing share, with many grouped under Others. Xiaomi is rising fast and may become a major player in the near future. The global auto market remains diverse, but China's influence is expanding rapidly.

1.1.3 The Importance of the Intelligent Vehicle Industry in China

The intelligent vehicle industry plays a vital role in China's national strategy for technological innovation, economic upgrading, and employment development. Intelligent vehicles not only represent technological advancement but also directly and indirectly influence employment performance through their contributions to human resource development and sustainable organizational growth.

Firstly, intelligent vehicles are identified as a core component of China's transition toward a smarter, greener, and more sustainable economy. The industry promotes high-value employment by demanding skilled professionals in AI, data analytics, cyber security, and systems engineering (Feng et al., 2024; Zheng & Yao, 2023) . Secondly, intelligent vehicles enhance organizational sustainability through the integration of eco-friendly technologies, traffic efficiency, and data-driven management. These advances not only reduce environmental impact but also improve the long-term viability and competitiveness of enterprises, which in turn creates a sustainable framework for employment performance growth (Zhang et al., 2022; Zhu et al., 2025), Moreover, the deployment of intelligent vehicles across cities like Beijing and Qingdao has shown tangible improvements in traffic efficiency, safety, and emissions, reinforcing their

economic and social value (Liu et al., 2024; Wang, 2021). The resulting performance outcomes among firms and public sector units validate. Finally, the strategic importance of the industry is evident through strong governmental support, local test zones, and advanced policy ecosystems designed to enhance both innovation and labor quality (Li et al., 2024; Wang, 2021; Zhang et al., 2025).

1.2 Significance of the Problem

As Xiaomi transitions from its core identity as a consumer electronics company into the electric vehicle (EV) and smart mobility sector, it brings with it a high degree of technological sophistication but limited institutional experience in managing large-scale, industrial human resources. Xiaomi Auto's entry into China's highly competitive EV industry—with its complex production cycles, safety regulations, and labor-intensive operations—has highlighted emerging challenges in workforce integration, retention, and adaptability. While the company has made significant investments in R&D and product development, less is known about the readiness and alignment of its human capital systems with long-term performance needs. Recent market observations suggest increasing pressure on Xiaomi's auto workforce to adapt to both the speed of innovation and the demands of stable industrial output, leading to risks of role ambiguity, burnout, and performance inconsistency (Wang, 2025).

Despite the critical role that human resource development (HRD) plays in employee effectiveness and sustainable organizational performance (SOP), there is a lack of empirical research that specifically addresses how HRD functions within auto-tech hybrids like Xiaomi. Most existing literature on HRD and performance either focuses on traditional manufacturing firms or digital startups, but rarely on companies that sit at the intersection of these two sectors. This creates a clear research gap: the absence of validated models showing how HRD exerts influences and mediates performance outcomes—especially in the context of emerging Chinese firms undergoing strategic industrial diversification (Zhao et al., 2024). Xiaomi's auto-related subsidiaries operate in a high-pressure, high-expectation environment, where conventional HR models may not suffice and adaptive, sustainability-focused HRD strategies are urgently needed.

This study addresses that gap by proposing and testing a causal model linking HRD practices to employee performance (EP), with sustainable organizational performance as a mediating variable. The model is grounded in three hypotheses: (H1) HRD directly improves EP; (H2) HRD indirectly enhances EP through SOP; and (H3) SOP has a direct effect on EP. By focusing on Xiaomi's auto-affiliated listed companies, the study not only situates itself within a real-world, high-stakes context but also offers a theoretical innovation that blends performance theory, sustainability frameworks, and strategic human capital management. This contribution is particularly significant given China's push toward intelligent manufacturing, where human capability is just as important as technological infrastructure(Ra et al., 2025; Ti & Ming, 2024).

The contribution to theory is twofold. First, this study expands the applicability of HRD-performance models by contextualizing them within a tech-industrial convergence environment. Second, it demonstrates the mediating role of SOP, an often overlooked but theoretically rich construct, which connects human development initiatives to systemic organizational outcomes. These findings are not only academically relevant but also provide actionable insights for managers, HR leaders, and policymakers navigating the future of automotive innovation in China. By bridging this empirical and theoretical gap, the research advances both HRM literature and the practical discourse on workforce strategy in tech-led industrial transformation.

1.3 Research Questions

The study, while finding theoretical support to the research questions stated above, also find possible answers to the following questions:

1. What are the factors of HRD affecting the employee performance of Xiaomi auto-related list companies in China?

2. What is the impact of sustainable organizational performance as the mediating factor on employee performance of Xiaomi auto-related list companies in China?

3. How should the model of human resource development affecting employee performance of Xiaomi auto-related list companies in China be developed?

The study, "A Causal Model of Human Resource Development on Employee Performance: An Empirical Study of Xiaomi Auto-Related Listed Companies," was conducted due to the increasing importance of integrating HRD strategies with sustainability goals in dynamic and competitive industries. Xiaomi, as a global technology leader diversifying into the auto sector, represents an ideal case study for exploring this alignment. The study introduces a causal model to investigate how HRD practices directly impact Sustainable Organizational Performance (SOP) and indirectly impact Employee Performance (EP). This novel framework expands on existing literature by examining HRD's role in fostering SOP within a specific industrial context, addressing the gap in research on HRD in technology-driven auto-related companies. Additionally, the study emphasizes the implementation of green HRD practices, career development, and employee engagement, offering actionable insights for organizations aiming to achieve sustainability.

1.4 Research Objectives

1. To determine the factors of human resource development that significantly impact the sustainable organizational performance of Xiaomi auto-related listed companies in China.

2. To determine how sustainable organizational performance as a mediator, significantly impacts the employee performance of Xiaomi auto-related listed companies in China.

3. To develop a model of human resource development influencing the employee performance of Xiaomi auto-related listed companies in China.

1.5 Scope of the Study

In this study, the scope is classified as follows:

1) Scope of Area

This study was mixed methods research using questionnaire and interview to Xiaomi auto-related listed companies, including auto companies invested by Xiaomi and members of Xiaomi's value chain. For one thing, although research targeted companies are listed companies related with the new energy auto market, Xiaomi auto is still a new brand for Chinese new energy autos, so the target organizations have various human resource development emphases. For another, the number of questionnaire distribution was 400, and interview was conducted with 10 interviewees, so the research scale is not very large, which may result in limitations of research area.

2) Scope of Content

The limitation of content refers to the potential constraints in providing comprehensive, up-to-date, and relevant learning materials and resources for the development of individuals' knowledge and skills within an organization. This could be due to factors such as limited resources, outdated content, and inability to address individual differences and specific job requirements.

The limitation of content in employee performance refers to the potential constraints in providing comprehensive and effective resources and materials for improving employee performance within an organization. This could include limitations in the availability of relevant training programs, lack of personalized learning opportunities, insufficient feedback and coaching mechanisms, and inadequate alignment between learning content and job requirements. These limitations can hinder the development of employees' skills, knowledge, and abilities, thus impacting their overall performance.

The limitation of content in the context of sustainable organizations refers to the potential constraints in providing comprehensive and accurate information and resources related to sustainability practices and initiatives. This could include limitations in the availability of up-to-date data and research, lack of standardized guidelines and metrics, insufficient awareness and understanding of sustainability concepts, and difficulty in addressing the unique challenges and contexts of different industries and organizations.

These limitations can hinder organizations' efforts in adopting sustainable practices, measuring their impact, and making informed decisions towards achieving long-term environmental, social, and economic goals.

3) Scope of Time

This study started in March 2024 and finished in July 2024.

1.6 Expected Results

The expected results of this research include the validation of a causal model that demonstrates the direct and indirect impacts of Human Resource Development (HRD) on Employee Performance (EP) through Sustainable Organizational Performance (SOP). It is anticipated that HRD practices, such as training development, career management, and organizational development, significantly enhance leadership, motivation, and job satisfaction, leading to improved employee performance. This, in turn, is expected to drive sustainability outcomes by aligning organizational goals with environmental, social, and economic objectives. The findings are also expected to offer industry-specific insights for Xiaomi's auto-related listed companies, providing actionable recommendations to integrate HRD strategies with sustainability initiatives.

1.7 Definition

1. Human Resource Development means multifaceted process that works to enhance the capabilities, knowledge, and skills of individuals within an organization consisting organizational development career development and training a development (Torraco, 2002). It is also an important position in the company. The company's personnel recruitment, training, assessment, compensation, and transfer are related to personnel. Human resource refers to the sum of the population of working age, under working age, and over working age but capable of working in a country or region (Chalofsky, 2010). Human resource also refers to the general term of education, ability, skills, experience and physical strength possessed by people in an organization in a

certain period of time, which can be used by enterprises and contribute to value creation (Collins, 2022). Human resource is also the ability of the personnel required by the independent management group of enterprises and public institutions.

2. Sustainable Organizational Performance means an organization's ability to consistently achieve long-term strategic goals while maintaining economic, social, and environmental responsibility. In today's competitive landscape, SOP is increasingly linked to how effectively organizations manage their human capital. Key dimensions such as talent attraction, talent retention, learning and development, and career management play a vital role in driving sustainable outcomes. Studies have shown that while attracting and retaining talent are important, it is the investment in employee development and clear career pathways that most strongly impact long-term performance (Al Aina & Atan, 2020). Effective talent management strategies—such as succession planning and supportive organizational culture—further reinforce SOP by fostering employee engagement and loyalty (Atieno et al., 2023). Moreover, aligning talent initiatives with continuous learning and data-driven development enhances both employee satisfaction and organizational resilience (Zamri & Halim, 2024). Thus, SOP is not just about outcomes, but also about how organizations grow and sustain the people who drive them forward.

Sustainable Organizational Performance consists of four interrelated dimensions: talent attraction, talent retention, learning and development, and career management. According to Al Aina & Atan (2020), SOP is significantly influenced by learning and development initiatives and career management practices, while talent attraction and retention alone showed limited direct impact, highlighting the need for deeper employee engagement through growth opportunities. Muma et al. (2023) further supported this by demonstrating that talent attraction and succession planning positively affect SOP, though career management may have varied effects depending on the organizational context. Joof & Olanipekun (2022) emphasized that talent attraction, retention, and development each significantly improve employee performance—a key component of sustainable performance—especially when integrated with organizational

values. Zamri & Abd Halim (2024) contributed a systematic review, showing that retention strategies, learning development, and talent attraction must be data-driven and tailored to workforce needs to support SOP. Finally, Mujtaba & Mubarik (2022) highlighted the critical role of talent acquisition, development, and retention in enabling SOP through both organizational systems and employee behaviors that align with sustainability values. Together, these studies emphasize that SOP is not merely a measure of productivity, but a multidimensional outcome driven by strategic talent management that fosters growth, loyalty, and long-term resilience.

3. Employee Performance means how a member of staff fulfils the duties of their role, completes required tasks and behaves in the workplace. Employee performance refers to the efforts and contributions made by employees within the organization. Barrena‐Martinez et al. (2019) identified three levels of performance: organizational performance, team performance, and individual employee performance. For an organization, performance is the performance of people in terms of quantity, quality and efficiency. For employees, performance is the evaluator's evaluation of their work status. The realization of organizational performance should be based on the realization of individual performance, but the realization of employee's individual performance does not necessarily guarantee that the organization has performance. According to Walumbwa et al. (2011), performance is a set of behaviors related to the goals of the organization or organizational unit in which a person works. Walumbwa et al. (2011) believed that "performance should be defined as the result of work, because these work results are most closely related to the strategic objectives of the organization, customer satisfaction and investment". The definition of employee performance can be divided into two perspectives: employee behavior and employee work results.

4. Xiaomi Auto-related Listed Companies means Xiaomi's participation in auto-related companies and Xiaomi auto industry chain companies, a total of 69 listed companies. Xiaomi Auto is not publicly traded, so it does not have a public stock symbol. However, as Xiaomi's layout in the automotive field is gradually clear, investors' attention to Xiaomi auto related stock is also continuing to heat up. Xiaomi auto-related

listed companies are viewed as the concept stock with the stock number of GN11082271, such as Aotejia and BAIC Blue Valley. These companies, as upstream and downstream enterprises of the Xiaomi Auto industry chain, provide all-round support for the research and development and production of Xiaomi Auto. With the development of Xiaomi Auto, the market performance of its concept stock has also attracted more and more attention. As a giant in the technology industry, Xiaomi auto's industrial chain will cover many enterpris.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the literature, concepts, and theories related to the study's topic, "A Causal Model of Human Resource Development on Employee Performance: An Empirical Study of Xiaomi Auto-Related Listed Companies". A summary of studies relevant to this topic, as well as a conceptual framework, are presented in this chapter.

This chapter is divided into 6 sections as follows:

2.1 Theoretical Framework, Critique and Synthesis

2.2 Human Resource Development (HRD) Theory

2.3 Sustainable Organization Theory

2.4 Employment Performance Theory

2.5 Relevant Research

2.6 Conceptual Framework, Operational Definition, Hypotheses and Explanation of Hypothesis.

2.1 Theoretical Framework, Critique and Synthesis

2.1.1 Theoretical Foundations and Integration

This study draws on an integrated theoretical framework grounded primarily in Human Capital Theory, enriched by concepts from Resource-Based View (RBV) and Sustainable Human Resource Management (SHRM). This triadic theoretical structure allows the research to assess how Human Resource Development (HRD) not only directly influences employee performance (EP), but also does so indirectly by enhancing Sustainable Organizational Performance (SOP).

Human Capital Theory, originally conceptualized by Becker (1964), posits that investments in employee development—such as training, education, and career planning—lead to enhanced worker productivity and organizational output. In alignment with Hypothesis 1, this theory provides a direct rationale: when organizations like Xiaomi invest in HRD initiatives, they effectively increase their employees' knowledge, competencies, and performance capacity. Empirical support for this relationship has been robust in traditional sectors but is less examined in emerging auto-tech hybrid firms (Zhao et al., 2024b).

However, critiques of Human Capital Theory often point to its limited attention to contextual and systemic mediators. This is where Resource-Based View (RBV) provides an important extension. RBV asserts that organizational performance stems from the strategic management of internal resources, especially those that are rare, inimitable, and non-substitutable (Barney, 1991). In Hypothesis 2, SOP functions as such a resource—emerging from HRD and enabling long-term performance sustainability. Scholars have increasingly positioned SOP as a strategic capability, encompassing environmental adaptability, innovation orientation, and human-centric value systems (Liu et al., 2023).

Further strengthening this framework is the incorporation of Sustainable Human Resource Management (SHRM), which emphasizes the long-term alignment between HR practices and organizational resilience. SHRM theorists argue that sustainable practices—such as ethical leadership, continuous learning, and talent retention—create a supportive ecosystem for enduring employee engagement and effectiveness(Ra et al., 2025). Hypothesis 2 reflects this process, where SOP acts as a conduit linking HRD to improved EP.

Hypothesis 3 further reinforces this integrated model by testing the direct impact of SOP on EP. Drawing from Organizational Effectiveness Theory, sustainable organizational systems—marked by clarity of goals, resource alignment, and long-term planning—are essential for unlocking employee potential. Yet, current literature lacks sufficient empirical models that evaluate this sequence within China's intelligent vehicle

sector. This represents a clear research gap, especially given Xiaomi's transformation from a tech firm to a smart manufacturing entity with limited historical precedent in HRD-system alignment.

Table 2.1 Theoretical Integration Overview

Hypothesis	Related Theory
H1: HRD → EP	**Human Capital Theory** – HRD increases skills, productivity, and performance
H2: HRD → SOP → EP	**Sustainable HRM + Resource-Based View (RBV)** – SOP acts as a mediating intangible resource
H3: SOP → EP	**Organizational Effectiveness Theory** – Sustainable systems support performance

2.1.2 Synthesis of Theoretical Gaps and Contributions

While each of the above theories contributes valuable insights, they are rarely synthesized into one cohesive causal framework, particularly within high-growth, tech-industrial Chinese firms. Most existing models remain siloed—focusing on either individual performance (Human Capital), strategic capabilities (RBV), or systemic sustainability (SHRM). This study offers a novel contribution by integrating these theoretical strands into a three-path model specifically designed to investigate the Xiaomi Auto case.

Moreover, the literature often emphasizes HRD's role in stable environments. Xiaomi's entry into EV manufacturing represents a volatile, uncertain, and complex context—an ideal setting to test whether classic HR theories remain valid or require adaptation. This study therefore contributes to theory by updating traditional constructs for application in agile, tech-driven ecosystems.

2.2 Human Resource Development (HRD) Theory

Human Resource Development (HRD) is a strategic and systematic process designed to enhance individual, team, and organizational performance through structured

practices, including training, performance management, and career development. It aims to optimize employee capabilities and align their contributions with organizational goals, fostering both personal and institutional growth (Dorta-Afonso et al., 2021; Kaushik& Mukherjee, 2022). HRD includes shaping values, skills, and behaviors through learning initiatives, enabling organizations to meet dynamic challenges and improve overall effectiveness (Rasool et al., 2019; Banmairuoy et al., 2022). It also integrates resource-based strategies to provide sustainable competitive advantages while ensuring adaptability during crises (Sims, 2023; Dirani et al., 2020). Fragoso et al. (2022) emphasized the role of HRD in meeting employee needs, promoting motivation, and maximizing organizational benefits, while Suttapong et al. (2014) highlighted HRD practices like internal mobility, result-oriented appraisals, and work-life balance as crucial for fostering a productive workforce. Swanson (2022) framed HRD as a process for developing and unleashing expertise to improve individual and organizational performance, positioning it as an essential component of modern enterprises. Furthermore, global and contextual variations in HRD practices reveal its adaptability and underscore the importance of culturally tailored approaches (Werdhiastutie et al., 2020; Piwowar-Sulej, 2021). Overall, HRD serves as a foundation for building resilient, innovative, and sustainable organizations in a rapidly evolving global environment.

Table 2.2 Human Resource Development Concepts

Author(s)	Concept	Advocacy/ Criticism
Dorta-Afonso, González-de-la-Rosa, Garcia-Rodriguez, & Romero-Domínguez, 2021	HRD is defined as systems of interrelated unique HRD practices intended to enhance workers' skills, participation, and effort.	Advocacy

Author(s)	Concept	Advocacy/ Criticism
Kaushik & Mukherjee, 2022	HRD stands for a series measures through the implementation of performance management and incentive mechanism to mobilize the work attitude of employees, performance management not only includes simple assessment scores, but also includes the application of performance results, so that excellent employees can get material or spiritual encouragement, and effectively improve the enthusiasm of employees.	Advocacy
Fragoso et al., 2022	HRD can meet the requirements of employee ability, motivation and participation opportunities, then performance will be optimized and organizational benefits will be maximized.	Advocacy
Suttapong, Srimai, & Pitchayadol, 2014	HRD's practices include internal mobility, training, results-oriented appraisals, employment security, participation, work–life balance, and clear job description.	Advocacy
Sims, 2023	According to the resource-based view theory, the human resources development could be viewed as rare and inimitable assets, which provide the sustainable competitive advantage for the company.	Advocacy
Rasool et al., 2019	HRD was a mechanism in shaping individual and group values, beliefs and skilling through learning-related activities to support the desired performance of the host system	Neutral
Banmairuroy, Kritjaroen, & Homsombat, 2022	HRD was a process that occurred in the workplace settings and designed to promote individual and group learning in the context of the task, work, and careers. Secondly, HRD covered organizational learning, change and development. Finally, HRD focused exclusively on work-related issues within organizations.	Advocacy
Swanson, 2022	Human resource development is a process of developing and unleashing expertise to improve individual, team, work process and integrated parts of enterprises' businesses.	Advocacy

Author(s)	Concept	Advocacy/ Criticism
Piwowar-Sulej, 2021	Sustainable HRD development in the context of its relationships with other principles of sustainable HRD is described. Sustainable HRD development is combined with the concept of Industry 4.0.	Criticism
Dirani et al., 2020	The role of HRD becomes critical and emphasizes the significance of human capital's well-being during a crisis. Hence, in promoting their health, value, and organizational need to take care of their most valued assets, human capital.	Advocacy
Werdhiastutie, Suhariadi, & Partiwi, 2020	Although this definition of Human Resource Development is defined differently in several countries or in an international perspective, it has an understanding of the same basic concepts. This is effected because of different interpretations and roles within every State. In the beginning there was an understanding that development was identical to training, which could be understood as a form of understanding in terms of the types of activities carried outin several organizations	Criticism

2.2.1 Training Development

Training Development is a key component of human resource development, focusing on enhancing employee skills and knowledge to meet organizational goals. Studies by Tan & Newman (2013) and McGrath et al. (2016) emphasize structured training programs as critical to improving employee performance and achieving competitive advantage. Steen et al. (2016) and Knowles et al. (2014) highlighted the role of tailored training in addressing skill gaps, thereby fostering innovation and adaptability within dynamic environments. Research by Cox & Blake (1991) underscores the importance of diversity training as a way to create inclusive and high-performing teams, while Danzig-Jones (2022) emphasized leadership training as crucial for strategic decision-making. Overall, training development not only equips employees with

technical competencies but also promotes continuous improvement, enabling organizations to remain competitive and resilient in changing environments.

Kurniawati et al. (2020) highlighted the role of competency-based training in enhancing workforce adaptability and technical skills. Similarly, Bakker & Demerouti (2017) emphasized that effective training programs foster resilience and job satisfaction by addressing employee needs and reducing burnout. Research by Suttapong et al. (2014) and Sims (2023) underscores the strategic importance of training in building sustainable competitive advantages, particularly through continuous learning initiatives tailored to industry demands. Banmairuoy et al. (2022) identified training as critical for promoting innovation and collaboration within organizations, enabling employees to navigate crises effectively.

Moreover, Swanson (2022) viewed training development as a process for unleashing individual and team expertise to drive organizational growth, while Piwowar-Sulej (2021) linked training to sustainability goals, integrating it with Industry 4.0 technologies to future-proof workforce capabilities. These studies collectively demonstrate that training development not only builds technical and interpersonal skills but also fosters a culture of continuous learning and innovation, ensuring organizations remain competitive and resilient in ever-changing environments.

2.2.2 Career Development

Career Development is a fundamental component of human resource development, aiming to align individual career goals with organizational objectives to enhance employee growth, engagement, and organizational success. Kurniawati et al. (2020) emphasized the role of career programs in boosting motivation and adaptability, while Bullock & Lawler (2016) highlighted mentoring and career planning as key to retaining talent and building a skilled workforce. Bakker & Demerouti (2017) underscored career counseling's role in reducing stress and enhancing well-being,

contributing to productivity. Similarly, Uka & Prendi (2021) focused on succession planning and career progression in dynamic industries.

Research by Ehnert & Harry (2012) integrated sustainability principles into career development, aligning employee growth with long-term strategies. Waldman et al. (2015) and Korolczuk et al. (2019) emphasized performance reviews and inclusive career initiatives for fostering engagement and reducing turnover. Suttapong et al. (2014) advocated competency-based development plans to align employee potential with organizational goals, while Swanson (2022) framed career development as a strategic driver of performance. Finally, Piwowar-Sulej **(**2021) linked career development to Industry 4.0, preparing employees for future challenges. Collectively, these studies highlight career development's role in creating a motivated, skilled, and adaptable workforce essential for organizational success.

2.2.3 Organizational Development

Organizational Development (OD) is a key component of human resource development, focusing on fostering adaptability, innovation, and alignment with strategic goals. Kurniawati et al. (2020) and Cummings et al. (2016) emphasized OD's role in promoting continuous improvement and managing organizational change. Bullock & Lawler (2016) and Cox & Blake (1991) highlighted diversity and collaborative decision-making as critical to enhancing performance and innovation. Leadership development and employee well-being are central to OD, as noted by Danzig-Jones (2022) and Bakker & Demerouti (2017).

Sustainability and technological integration are also crucial. Blackman et al. (2022) and Swanson (2022) linked OD with achieving long-term goals, while Sims (2023) and Banmairuroy et al. (2022) advocated for embedding innovation and technology into OD practices. Suttapong et al. (2014) and Piwowar-Sulej (2021) further emphasized aligning OD with Industry 4.0 and sustainability to enhance organizational resilience. In

summary, OD is integral to shaping agile and innovative organizations that thrive in dynamic environments.

Table 2.3 Summary of Research Variables of Human Resource Development (HRD)

Author/Year	Organizational Development	Career Development	Training Development
Tan & Newman, 2013			√
McGagh et al., 2016			√
Steen et al., 2016			√
Knowles et al., 2014			√
Kurniawati, Siddiq, & Huda, 2020	√	√	√
Cummings et al., 2016	√		
Bullock & Lawler, 2016	√	√	
Cox & Blake, 1991	√		√
Danzig-Jones, 2022	√		
Bakker & Demerouti, 2017	√	√	√
Blackman et al., 2022	√		
Uka & Prendi, 2021		√	
Ehnert & Harry, 2012		√	
Waldman, Carter, & Hom, 2015		√	
Korolczuk, Kowalska, Remme, & Snochowska-Gonzalez, 2019		√	
Suttapong et al., 2014	√	√	√
Sims, 2023	√		√
Banmairuroy et al., 2022	√		√
Swanson, 2022	√	√	√
Piwowar-Sulej, 2021	√	√	√
Summary of my research	**12**	**10**	**12**

(Ref: Literature Review Database)

From Table 2.3 above it is found that the component of Human Resource Development (HRD) are Organizational Development, Career Development, and Training Development (Figure 2.1).

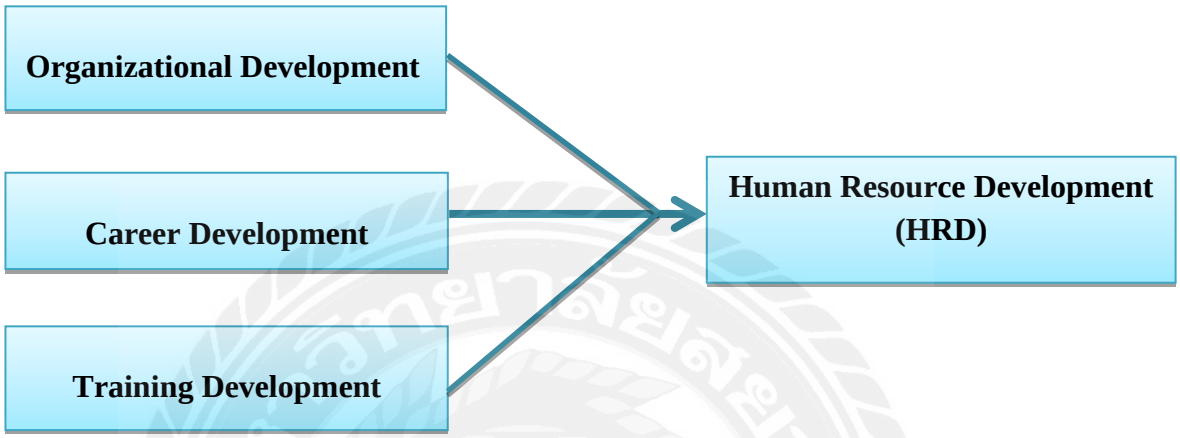

Figure 2.1 Dimensions of Human Resource Development

Based on these reviews of existing research, the concept of Human Resource Development (HRD) involves a complex web of several interconnected elements of population of an area at a given point of time. In the contemporary era of globalization human resource development is one of the vital issues and challenges for the twenty first century because the core concept of peace, prosperity and well-being of the people of a region lies in it. The notion of human resource development dimensions is very complicated as it has interconnections with several approaches and has involvement of variables of multiple natures. In terms of building resources of an area the dimensions of human resource development are of primary importance. In fact, human resource development dimensions occupy the central position in geographical study of a region and become the basis upon which other kind of development for peace and prosperity of population of a region or country depend. Yet, based on various researches from different countries, it can be summarized for three dimensions: organization development, career development and training development.

2.3 Sustainable Organizational Performance Theory

Sustainable Organizational Performance (SOP) refers to the ability of organizations to achieve long-term financial, social, and environmental goals through strategic practices that balance efficiency, stakeholder needs, and sustainability principles. Amrutha & Geetha (2020) and Banker et al. (2014) defined SOP as an organization's capability to meet stakeholder expectations while enhancing profitability, reducing costs, and supporting social and environmental welfare. Pollanen et al. (2017) emphasized the role of strategic performance measures in aligning efficiency and effectiveness within public organizations, contributing to sustainability.Lee & Ha-Brookshire (2017) linked SOP to the triple bottom line—financial, social, and environmental outcomes—highlighting its relevance in improving employee attitudes and reducing turnover. Similarly, Rehman et al. (2021) outlined SOP as an integration of economic, social, and environmental dimensions. Hossin et al. (2022) described SOP as a combination of long-term financial and non-financial outcomes, emphasizing reduced turnover and enhanced environmental performance.Criticisms of SOP arise from concerns about its practical implementation. Pantelic et al. (2016) argued that sustainability risks being treated as a superficial strategy rather than a genuine transformation. Pham (2020) and Leonidou et al. (2015) highlighted challenges in implementing SOP, such as addressing systemic barriers and balancing competing priorities. However, Amui et al. (2017) and Contini & Peruzzini (2022) viewed SOP as an evolving managerial approach that integrates sustainability into strategy, enabling dynamic adaptability. Shahzad et al. (2020) emphasized SOP as the integration of ecological principles into organizational processes, allowing companies to enhance sustainability knowledge and gain competitive advantages. Similarly, Leonidou et al. (2015) highlighted SOP as a capability to adapt, innovate, and respond to environmental and social demands, though they critique the superficial implementation of sustainability in some organizations. Tseng (2014) linked SOP to cost-efficiency, energy use, and environmental sustainability, highlighting its potential to strengthen economic performance while reducing ecological impacts. McCormick et al. (2016) described SOP

as a paradigm shift that involves profound changes in organizational systems, production processes, and societal contributions to ensure long-term ecological and human well-being. Finally, Alsayegh et al. (2020) defined SOP as a comprehensive framework for managing and measuring organizational performance across multiple dimensions, including efficiency, strategic decision-making, and the integration of economic, social, and environmental objectives.

In summary, SOP reflects an organization's capacity to balance economic growth with social responsibility and environmental stewardship through innovative strategies and sustainable practices. Despite its growing adoption, challenges such as superficial implementations and systemic barriers highlight the need for more robust and genuine efforts to align SOP with global sustainability standards.

Table 2.4 Sustainable Organizational Performance Concepts

Author (s) and Year	Conception of Sustainable Organizational Performance (SOP)	Advocacy / Criticism
Amrutha & Geetha, 2020	A sustainable organization performance is said to be the capability of the foundation to attain the requirements of its stakeholders while, at the same time, constantly increasing investment and managerial policies and strategies to guarantee future profitability, social welfare, and environmental responsibility.	Advocacy
Banker, Mashruwala & Tripathy, 2014	An organization performance is considered sustainable when executives are able to plan strategies aimed at increasing market share, talent, and profits of stakeholders, while decreasing both costs and employee turnover.	Advocacy
Pantelic, Sakal, & Zehetner, 2016	Sustainability performance is considered to be somewhere between a “feel-good buzz word” and a genuine attempt to save mankind’s future, between a genuine marketing doctrine and a mere “sales-pitch-trick”.	Criticism
Pollanen, Abdel-Maksoud, Elbanna, & Mahama, 2017	SOP involves strategic performance measures impacting both strategy implementation and assessment, encompassing efficiency and effectiveness measures in public organizations.	Advocacy

Author (s) and Year	Conception of Sustainable Organizational Performance (SOP)	Advocacy / Criticism
Lee & Ha-Brookshire, 2017	SOP in the fashion retail industry is impacted by the ethical climate, affecting employees' job attitudes and turnover intentions, and encompasses the triple bottom lines of financial, social, and environmental performance.	Advocacy
Rehman, Kraus, Shah, Khanin, & Mahto, 2021	SOP consists economic, social and environmental performance, also aligns with the triple bottom line concept.	Advocacy
Pham, 2020	SOP in construction focuses on overcoming barriers to sustainable construction, including managerial competence, sustainable materials and technologies, government incentives, and implementation of sustainable practices.	Criticism
Shahzad, Qu, Zafar, Rehman, & Islam, 2020	The ecologist and naturalist have applauded the organizations for assimilating advanced knowledge and green thinking into their production processes to gain the advantages to enhance corporate sustainability	Advocacy
Leonidou, Fotiadis, Christodoulides, Spyropoulou, & Katsikeas, 2015	This situation particularly formed a pull on the supply of natural resources prompting environmental deprivation. The increasing demand has resulted in aggravating the issue even further.	Criticism
Hossin, Chen, Hosain, & Asante, 2022	SOP is viewed as a combination of long-term financial and non-financial positive outcomes, measured by indicators like lower employee turnover, higher corporate and environmental performance, lower customer complaints, and sustained growth over a long period.	Advocacy
Tseng, 2014	SOP is mainly related to cost-efficiency, revenue generation, energy efficiency, use of waste for revenues, etc. Organizations that paid attention to enhancing environmental sustainability regarding diminishing unfortunate outputs from manufacturing procedures will, in reality, also strengthen their economic sustainability.	Criticism
Amui, Jabbour, de Sousa Jabbour, & Kannan, 2017	Sustainability is a managerial trend that plays an important role in the contemporary organizational strategy. A company’s capability to make sustainability more dynamic and integrated with strategies, transforming it into a business asset.	Advocacy

Author (s) and Year	Conception of Sustainable Organizational Performance (SOP)	Advocacy / Criticism
McCormick, Hoellein, London, Hittie, Scott & Kelly, 2016	This new paradigm of management for sustainable development implies the need for profound changes in the current production systems, human societal organization, and utilization of natural resources essential to human life and other living beings.	Advocacy
Leonidou, Fotiadis, Christodoulides, Spyropoulou & Katsikeas, 2015	A number of studies have tried to understand how sustainability can become a capability, enabling an organization to adapt, change, and innovate toward new, sustainable paradigms.	Criticism
Contini & Peruzzini, 2022	SOP is defined as the ability to measure sustainability performance using proper indicators throughout the lifecycle and value chain, considering environmental, economic, and social impacts.	Advocacy
Alsayegh, Abdul Rahman, & Homayoun, 2020	SOP involves a comprehensive approach to measuring and managing organizational performance through various dimensions, integrating both efficiency and effectiveness and considering the impact of strategic decision-making on these aspects.	Advocacy

Sustainable Organizational Theory has become a crucial lens through which scholars and practitioners view the role of organizations in society. This literature review provides an in-depth analysis of key themes, frameworks, and challenges, offering a foundation for further research and guiding organizations toward more sustainable practices. SOP means that the enterprise will include the whole project process, project resources, project deliverables and environmental, economic and social factors that affect the project life cycle, and in this process, all stakeholders will be encouraged to participate, and complete all project work in an open, fair and just situation, and ultimately all stakeholders can get the maximum satisfaction.

2.3.1 Talent Attraction

Talent attraction refers to the strategies and practices organizations employ to attract highly skilled and suitable candidates to meet their workforce needs, ensuring long-term organizational success. Dydiv (2023) emphasized talent attraction as a strategic

process influenced by organizational reputation and the alignment of job roles with candidate expectations. Similarly, Turker & Ozmen (2022) highlighted the role of employer branding and a positive organizational culture in attracting top talent. Korolczuk et al. (2019) identified diversity and inclusion practices as critical factors in widening the talent pool and appealing to a broad range of candidates. Ehnert& Harry (2012) described talent attraction as part of sustainable Human resource development, linking it to practices that align with long-term organizational goals and ecological sustainability. Stefanelli et al. (2020) emphasized the role of digital tools and social media platforms in enhancing recruitment efforts and reaching potential talent effectively. Hossin et al. (2022) connected talent attraction with employee retention strategies, underscoring the importance of offering development opportunities and competitive benefits.From a sustainability perspective, Tseng (2014) and McCormick et al. (2016) viewed talent attraction as a process that incorporates ecological and social responsibility to appeal to ethically conscious candidates. Leonidou et al. (2015) further stressed the importance of aligning talent attraction strategies with environmental and social standards to enhance organizational credibility. Lastly, Contini & Peruzzini (2022) highlighted the use of technology and lifecycle-oriented approaches to recruitment, ensuring that talent attraction supports sustainable and innovative organizational practices.

In summary, talent attraction is a multifaceted process that combines strategic branding, sustainability, and modern recruitment technologies to appeal to skilled individuals while aligning with organizational goals and values.

2.3.2 Talent Retention

Talent retention refers to the strategies and practices organizations implement to retain highly skilled and valuable employees, ensuring long-term organizational stability and success. Stefanelli et al. (2020) emphasized the importance of creating supportive work environments and offering career development opportunities to retain top talent. Similarly, Turker & Ozmen (2022) highlighted the role of effective leadership,

recognition, and competitive compensation in fostering employee loyalty. Godsey (2022) stressed the impact of personalized development plans and flexible work arrangements in addressing the diverse needs of employees, thereby enhancing retention. Uka & Prendi (2021) linked talent retention to succession planning, emphasizing the importance of aligning employee aspirations with organizational goals. Ehnert & Harry (2012) advocated for sustainable retention strategies that incorporate ecological and social considerations to align with long-term organizational objectives. Cox & Blake (1991) underlined the role of diversity and inclusion in talent retention, noting that inclusive practices foster a sense of belonging and engagement among employees. Tseng (2014) and Amui et al. (2017) highlighted the integration of sustainability and innovation in retention strategies, ensuring employees are motivated by meaningful work and alignment with ethical organizational values. McCormick et al. (2016) further described retention as a continuous process of adapting workplace policies to meet employee expectations and societal changes. Lastly, Contini & Peruzzini (2022) emphasized the role of technology and data-driven approaches in creating personalized retention strategies that address individual employee needs and support organizational sustainability.

In summary, talent retention is a holistic approach that combines career development, recognition, inclusion, and sustainability to retain top performers while ensuring alignment with organizational values and long-term goals.

2.3.3 Learning and Development

Learning and Development (L&D) refers to the systematic processes and strategies organizations employ to enhance employee skills, knowledge, and competencies, ensuring both individual growth and alignment with organizational objectives. Dydiv (2023) defined L&D as a strategic tool for preparing employees to meet evolving business challenges by fostering adaptability and innovation. Similarly, Turker & Ozmen (2022) emphasized the role of L&D in creating a culture of continuous learning, which enhances both employee engagement and organizational performance.

Korolczuk et al. (2019) highlighted the integration of diversity and inclusion into L&D practices, ensuring equitable access to growth opportunities. Godsey (2022) focused on personalized learning paths and flexible training programs that meet the unique needs of employees, improving their productivity and satisfaction. Uka & Prendi (2021) linked L&D to succession planning, emphasizing its role in preparing future leaders by developing key competencies. Hossin et al. (2022) emphasized the alignment of L&D initiatives with organizational goals to drive innovation and ensure sustainable growth.From a sustainability perspective, Amui et al. (2017) and Leonidou et al. (2015) stressed the importance of embedding social and environmental responsibility into L&D programs, cultivating a workforce committed to ethical practices. Lastly, Contini & Peruzzini (2022) highlighted the use of advanced technologies and data-driven insights to personalize L&D programs, enhancing both individual performance and organizational agility.

In summary, learning and development is a multifaceted approach that equips employees with the tools they need for personal and professional growth, while fostering innovation, sustainability, and alignment with organizational goals.

2.3.4 Career Management

Career Management refers to the collaborative processes and frameworks through which organizations and employees co-create, guide, and sustain professional growth trajectories, aligning individual aspirations with long-term organizational needs. Stefanelli et al. (2020) highlighted its adaptive role during disruptive events, noting that structured career support mechanisms are critical for mitigating career disruptions, such as those faced by marine graduate researchers during the pandemic and unlocking emerging professional opportunities. Similarly, Turker & Ozmen (2022) emphasized that robust career management systems foster a culture of proactive professional development, which in turn enhances employee engagement and strengthens organizational performance by retaining talent invested in long-term growth.

Korolczuk et al. (2019) stressed the imperative of integrating diversity and inclusion into career management practices, advocating for equitable access to advancement pathways and development resources to ensure no demographic group is marginalized in professional growth. Godsey (2022) focused on personalized career planning tools, drawing from HR operational expertise to argue that tailored guidance—aligned with individual skills and aspirations—boosts employee satisfaction and retention by making growth trajectories tangible and achievable. Ehnert & Harry (2012) framed career management as a cornerstone of sustainable human resource management, explaining that it bridges individual career sustainability (e.g., skill renewal, work-life balance) with organizational sustainability goals, creating mutually beneficial long-term value.

Stefanelli et al. (2020) further elaborated on the need for flexible career management strategies, particularly in academic and research contexts, where adaptive support systems help professionals navigate shifting institutional priorities and global disruptions. Hossin et al. (2022) underscored the role of organizational career support in mitigating barriers to professional growth, such as psychological stress from external crises and emphasize its alignment with organizational innovation objectives by enabling employees to contribute their full potential. McCormick et al. (2016) linked effective career management to leadership succession, citing examples of structured advancement pathways (like the executive promotion frameworks at global corporations) that identify and nurture high-potential talent for key leadership roles. From an ethical and sustainability perspective, Leonidou et al. (2015) stressed the importance of embedding social responsibility principles into career management programs, ensuring that professional growth trajectories are tied to ethical practice and organizational commitments to societal impact.

In summary, Career Management is a collaborative and multifaceted framework that synchronizes individual professional aspirations with organizational sustainability,

resilience, and growth objectives fostering adaptability, equity, and talent retention through personalized, inclusive, and strategically aligned support.

Table 2.5 Summary of Research Variables of Sustainable Organizational Performance

Author/Year	Talent Attraction	Talent Retention	Learning and Development	Career Management
Stefanelli, Teixeira, Caldeira De Oliveira, Antonio Ferreira & Sehnem, 2020		✓		✓
Dydiv, 2023	✓		✓	
Turker & Ozmen, 2022	✓	✓	✓	✓
Korolczuk, Kowalska, Remme & Snochowska-Gonzalez, 2019	✓		✓	✓
Godsey, 2022		✓	✓	✓
Uka & Prendi, 2021		✓	✓	
Ehnert & Harry, 2012	✓	✓		✓
Cox & Blake, 1991		✓		
Hossin, Chen, Hosain & Asante, 2022	✓		✓	✓
Tseng, 2014	✓	✓		
Amui, Jabbour, de Sousa Jabbour & Kannan, 2017		✓	✓	
McCormick, Hoellein, London, Hittie, Scott & Kelly, 2016	✓	✓		✓
Leonidou, Fotiadis, Christodoulides, Spyropoulou & Katsikeas, 2015	✓		✓	✓
Contini & Peruzzini, 2022	✓	✓	✓	
Summary of Research Variables	**9**	**10**	**9**	**8**

(Ref: Literature Review Database)

From Table 2.5 above it is found that the dimensions of Sustainable Organizational Performance are Talent Attraction, Talent Retention, Learning and Development and Career Management, and the relationship is shown in Figure 2.3. To sum up, scholars have researched the relevant theories of Sustainable Organizational Performance. Successful organizations are always searching for new ways to develop, improve, and sustain their organizations. Successful managers know how to help their organizations survive and overcome obstacles, including how to aim to achieve improvements.

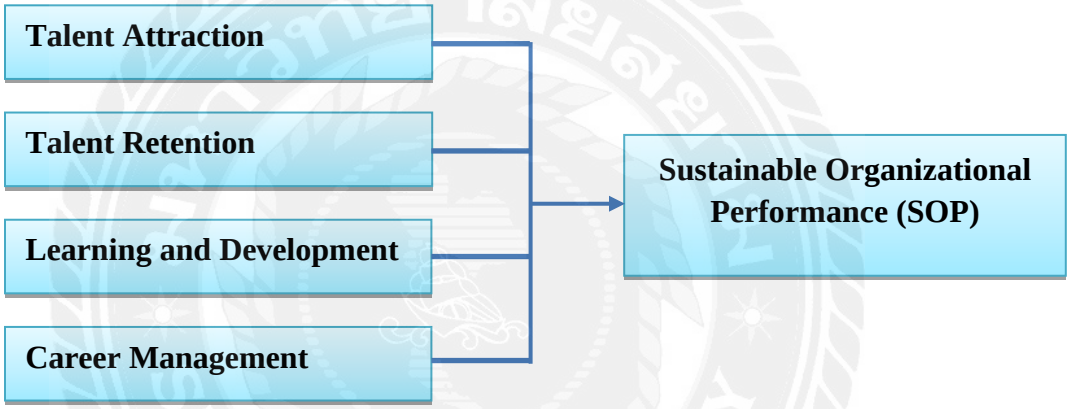

Figure 2.2 Dimensions of Sustainable Organizational Performance

From Table 2.7 above it is found that the dimensions of Sustainable Organizational Performance are Talent Attraction, Talent Retention, Learning and Development and Career Management, and the relationship is shown in Figure 2.2. To sum up, scholars have researched the relevant theories of Sustainable Organizational Performance. Successful organizations are always searching for new ways to develop, improve, and sustain their organizations. Successful managers know how to help their organizations survive and overcome obstacles, including how to aim to achieve improvements.

2.4 Employee Performance Theory

Employee performance is the outcome of individual work efforts, behaviors, and achievements within a specific period, reflecting alignment with organizational goals and expectations. De Menezes & Kelliher (2017) defined performance as the quality, quantity, and effort exerted during work tasks, while DeNisi & Murphy (2017) criticized this view, emphasizing that performance should focus on results obtained during specific periods rather than purely task execution. Ali & Anwar (2021) and Amussah (2020) highlighted performance as meeting job requirements while adhering to organizational policies and responsibilities. Kalogiannidis (2020) and Ridwan et al. (2020) emphasized performance as the achievement of organizational objectives through planned tasks and production goals. Suprayitno (2024) and Paais & Pattiruhu (2020) expanded the definition by considering employee performance as a combination of work results, behaviors, attitudes, and leadership achieved within a specific timeframe. Similarly, Kuswati (2020) described performance as fulfilling expectations and formalized organizational roles, focusing on behaviors that align with organizational regulations. Hartika et al. (2023) critiqued narrow definitions of performance as task completion, arguing that such views neglect broader contributions like motivation and engagement. Rivaldo & Nabella (2023) integrated behavior and results theories, framing performance as goal attainment achieved in a specific period through targeted efforts and behaviors.

In summary, employee performance is a multidimensional concept encompassing measurable outcomes, behaviors, attitudes, and adherence to organizational standards, reflecting an individual's contributions to achieving strategic objectives within defined parameters.

Table 2.6 Employee Performance Concepts

Author(s)	Concept	Advocacy / Criticism
De Menezes & Kelliher, 2017	Employee performance consists of the quality of performance, the quantity of performance and the degree of effort to work	Advocacy
De Nisi & Murphy, 2017	Defined employee performance as the results obtained by employees during the execution of work in a specific period.	Criticism
Ali & Anwar,2021	Employee performance refers to engaging in specific behaviors to achieve job requirements and maintaining or complying with the conditions, policies and procedures of the organization.	Advocacy
Amussah, 2020	Employee performance is referred as the output created by employees in a certain period of time in a specific work nature and responsibility.	Advocacy
Hartika, Fitridiani, & Asbari, 2023	The essence of employee performance as defined by the above scholars is that job performance is the result of completing tasks.	Criticism
Kuswati, 2020	Employee performance is the behavior of people as members of an organization when they fulfill the expectations, regulations or formalized role needs of the organization.	Neutral
Rivaldo & Nabella, 2023	Employee performance is the situation in which an employee or an organization achieves a goal in a certain period of time in a specific way, which undoubtedly integrated the theory of behavior and the theory of result.	Advocacy
Ridwan, Mulyani, & Ali, 2020	Employee performance is the results achieved by an individual or organization in a specific way in a specific period of time.	Advocacy

Author(s)	Concept	Advocacy / Criticism
Kalogiannidis, 2020	Employee performance is the work performance and work results obtained by employees in accordance with the production strategic objectives of the enterprise and the work tasks arranged by superiors within a specified period of time.	Advocacy
Suprayitno,2024	Employee performance refers to the sum of employees' work results, behaviors and attitudes in a certain period of time.	Advocacy
Paais & Pattiruhu, 2020	Employee performance is the reflection of motivations, attitudes and leadership as well as working results obtained by employees during the execution of work in a specific period.	Advocacy

In conclusion, optimizing employee performance requires a comprehensive approach that addresses various factors influencing motivation, skills, and management styles. Organizations that invest in fostering a positive work environment, providing continuous training, and recognizing employee contributions are likely to witness sustained high performance levels. Understanding and implementing these strategies can contribute not only to individual employee success but also to the overall success and competitiveness of the organization in the dynamic business landscape.

2.4.1 Leadership

Leadership is the ability to guide, influence, and inspire individuals or groups to achieve organizational goals while fostering collaboration and motivation. Allen et al. (2017) defined leadership as a process of influencing and coordinating efforts to accomplish shared objectives. Similarly, Hamad Aldoseri (2020) highlighted leadership as the capacity to make strategic decisions and motivate teams to meet organizational goals effectively. Kelly & MacDonald (2019) emphasized leadership as creating a vision and aligning individuals and teams to achieve long-term success. Liden et al. (2014)

focused on servant leadership, which emphasizes prioritizing the needs of employees and fostering an environment of support and growth. Teetzen et al. (2022) described leadership as a dynamic process that adapts to changing environments, requiring emotional intelligence and strategic foresight. Judge et al. (2020) and Diener & Tay (2015) highlighted the importance of leadership in enhancing well-being and job satisfaction through positive engagement and effective communication. Kuswati (2020) viewed leadership as the behavior and actions of individuals who guide and fulfill organizational role expectations. Ridwan et al. (2020) and Kalogiannidis (2020) emphasized leadership as an essential driver of organizational performance, shaping employee behavior and ensuring alignment with strategic goals. Paais & Pattiruhu (2020) expanded this by highlighting the role of leadership in motivating employees, improving job performance, and fostering a culture of accountability and innovation.

In summary, leadership is a multifaceted process involving influence, vision, and adaptability, enabling leaders to align individual and organizational goals while fostering employee well-being, engagement, and performance.

2.4.2 Motivation

Motivation is the internal or external drive that influences an individual's behavior, effort, and persistence in achieving goals and fulfilling responsibilities. Allen et al. (2017) described motivation as the psychological force that propels individuals to perform tasks with enthusiasm and commitment, aligning personal and organizational objectives. Similarly, Hamad Aldoseri (2020) emphasized motivation as the key factor in enhancing employee engagement and fostering a productive work environment. Liden et al. (2014) explored motivation through the lens of leadership, where servant leadership fosters intrinsic motivation by prioritizing employees' well-being and personal growth. Ernstmann et al. (2022) highlighted motivation as critical to team performance, demonstrating how supportive environments and feedback can enhance collective motivation. Hartika et al. (2023) identified motivation as the underlying driver of employee performance, with external rewards and internal satisfaction playing pivotal

roles. Kuswati (2020) viewed motivation as the behavior that aligns individual aspirations with organizational goals, enabling individuals to fulfill expectations and perform effectively.

Ridwan et al. (2020) emphasized the significance of motivation in achieving organizational outcomes, linking it to clear communication and alignment with strategic objectives. Suprayitno (2024) defined motivation as a blend of intrinsic and extrinsic factors, such as recognition, rewards, and personal development opportunities, that inspire individuals to contribute meaningfully. Teetzen et al. (2022) explored motivation as a dynamic process influenced by emotional intelligence and adaptability, particularly in challenging environments. Lastly, Yu et al. (2023) highlighted the role of cultural and organizational contexts in shaping motivation, demonstrating its variability across diverse settings.

In summary, motivation is a multifaceted concept that drives individuals to align their efforts with personal and organizational goals, influenced by internal aspirations, external rewards, leadership, and cultural contexts.

2.4.3 Job Satisfaction

Job satisfaction is the positive emotional state resulting from the appraisal of one's job experiences and alignment with individual values and organizational expectations. Allen et al. (2017) defined job satisfaction as the degree to which individuals feel fulfilled and valued in their roles, emphasizing its importance in enhancing employee commitment. Similarly, Kelly & MacDonald (2019) highlighted job satisfaction as a measure of how well workplace conditions, including relationships and rewards, meet employee expectations. Judge et al. (2020) and Locke & Latham (2015) underscored that job satisfaction arises from achieving personal goals and recognition, often mediated by effective leadership and clear objectives. Ernstmann et al. (2022) identified supportive team environments and feedback mechanisms as key drivers of job satisfaction, fostering a sense of belonging and purpose. Diener & Tay (2015) and Kuswati (2020) linked job satisfaction to individual well-being, describing it as an

essential factor in maintaining employee engagement and productivity. Rivaldo & Nabella (2023) further connected job satisfaction to organizational performance, demonstrating its role in promoting loyalty and reducing turnover. Ridwan et al. (2020) and Kalogiannidis (2020) emphasized the importance of work conditions, career growth opportunities, and compensation in determining job satisfaction levels. Suprayitno (2024) defined job satisfaction as a result of intrinsic and extrinsic factors, including meaningful work and recognition. Lastly, Paais & Pattiruhu (2020) explored how leadership and motivational practices enhance job satisfaction by aligning organizational goals with employee aspirations.

In summary, job satisfaction is a multidimensional construct influenced by personal, organizational, and environmental factors, reflecting an individual fulfillment, engagement, and alignment with workplace expectations, which are critical for organizational success and employee well-being.

2.4.4 Work Environment

Work environment refers to the comprehensive context encompassing physical conditions, organizational culture, interpersonal dynamics, and structural policies that shape employees' work experiences, attitudes, and outcomes—aligning individual well-being with organizational effectiveness.

Allen, Attoh & Gong (2017) highlighted its role in facilitating work-family balance, noting that flexible boundary policies such as adjustable schedules and remote work reduce role conflict and strengthen organizational commitment. Carnevale & Hatak (2020) framed it as a cornerstone of organizational resilience, emphasizing that adaptive settings with reliable digital tools and psychological safety norms sustain productivity amid disruptions. Liden, Wayne, Liao & Meuser (2014) focused on leadership's formative impact, arguing that transformational behaviors like trust-building, support provision, and teamwork promotion cultivate a valued workplace that enhances engagement and reduces turnover. Kelly & MacDonald (2019) stressed inclusivity as a

core dimension, advocating for practices including bias training, diverse leadership representation, and accessible policies to foster a sense of belonging for all employees. Locke & Latham (2015) linked it to goal achievement, noting that clear expectations, accessible resources, and recognition systems remove barriers to employees' commitment to performance objectives. Diener & Tay (2015) identified respectful, autonomy-supportive workplace cultures as key predictors of employee happiness, underscoring the environment's profound influence on subjective well-being. Ridwan, Mulyani & Ali (2020) extended this well-being focus, emphasizing that work environments prioritizing mental health support—such as stress management programs and workload balance initiatives—reduce burnout and boost organizational commitment. Hamad Aldoseri (2020) connected workplace conditions to organizational performance, highlighting that safe, healthy settings with ergonomic designs and robust safety protocols reduce absenteeism and enhance productivity. Teetzen, Bürkner, Gregersen & Vincent-Höper (2022) highlighted the value of tech-enabled workspaces, noting that user-friendly collaboration tools enhance connectivity and efficiency, particularly for remote teams. Kalogiannidis (2020) supplemented this by emphasizing that well-designed digital work environments improve accessibility, ensuring all employees can fully participate regardless of their location. Paais & Pattiruhu (2020) linked it to talent development, arguing that learning-oriented settings with mentorship opportunities and knowledge-sharing cultures encourage skill growth and internal promotion. Rivaldo & Nabella (2023) reinforced this, showing that growth-focused environments increase employee motivation by signaling organizational investment in their long-term professional success. Yu, Xu & Ashton (2023) focused on adaptive work environments in fast-evolving industries, noting that flexibility, innovation-friendly norms, and tolerance for experimentation are critical for retaining top talent amid market changes.

In summary, work environment is a multifaceted construct integrating physical, cultural, technological, and social elements. It shapes work-life balance, resilience, inclusivity, well-being, and growth—serving as a foundational driver of employee engagement, productivity, and sustainable organizational success.

Table 2.7 Summary of Research Variables of Employment Performance

Author/Year	Leadership	Motivation	Job Satisfaction	Work Environment
Allen, Attoh & Gong, 2017	✓	✓	✓	✓
Carnevale & Hatak, 2020				✓
Hamad Aldoseri, 2020	✓	✓		✓
Kelly & MacDonald, 2019	✓		✓	✓
Liden, Wayne, Liao & Meuser, 2014	✓	✓		✓
Teetzen, Bürkner, Gregersen & Vincent-Höper, 2022	✓	✓		✓
Yu, Xu & Ashton, 2023		✓		✓
Judge, Zhang & Glerum, 2020	✓		✓	
Locke & Latham, 2015			✓	✓
Ernstmann, Nakata, Meurer, Weiß, Geiser, Vitinius, Teufel, 2022		✓	✓	
Diener & Tay, 2015	✓		✓	✓
Hartika, Fitridiani & Asbari, 2023		✓		
Kuswati, 2020	✓	✓	✓	
Rivaldo & Nabella, 2023			✓	✓
Ridwan, Mulyani & Ali, 2020	✓	✓	✓	✓
Kalogiannidis, 2020	✓		✓	✓
Suprayitno, 2024		✓	✓	
Paais & Pattiruhu, 2020	✓		✓	✓
Summary of My Research	**11**	**10**	**12**	**13**

(Ref: Literature Review Database)

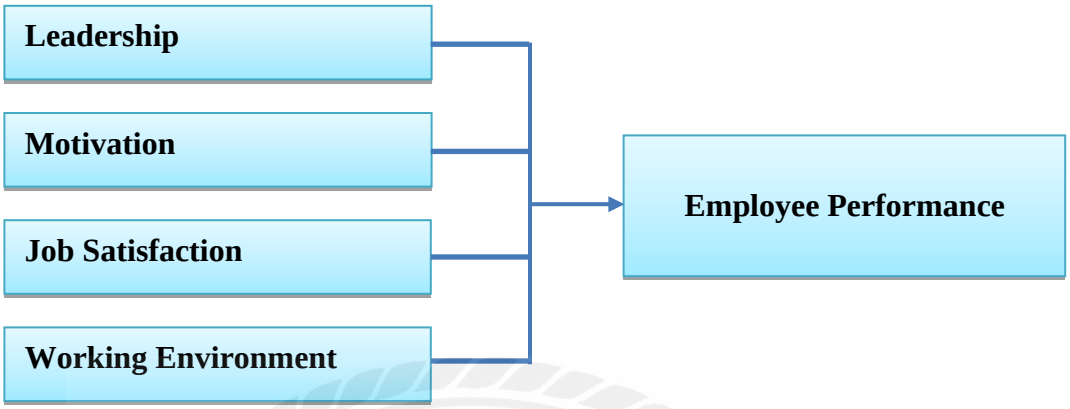

Figure 2.3 Dimensions of Employee Performance

From Table 2.7 above it is found that the dimensions of Employee Performance are Leadership, Motivation, Job Satisfaction and Work Environment, and the relationship is shown in Figure 2.3. To sum up, scholars have researched the relevant theories of Employment performance. Employee performance is a measure of how well employees perform their roles and behaviors within the workplace. It is important in every aspect of business because it may affect customer satisfaction.

2.5 Relevant Research

2.5.1 The Impact of Human Resource Development on Sustainable Organizational Performance

Human Resource Development (HRD) significantly influences Sustainable Organizational Performance (SOP) by aligning employee growth with long-term organizational goals encompassing financial, social, and environmental sustainability. Amrutha & Geetha (2020) emphasized that HRD practices, such as training and development, foster employee awareness and engagement in sustainability initiatives, which enhances environmental stewardship and social responsibility. Similarly, Azizi et al. (2021) highlighted the role of HRD in equipping employees with the skills and knowledge necessary to implement sustainable practices, contributing to improved operational efficiency and sustainability outcomes. Al-Saidi & Alsaidi (2022) argued that HRD

promotes the integration of sustainable values into organizational culture, ensuring that employee behavior aligns with long-term sustainability goals. Zhang-Zhang et al. (2022) demonstrated that HRD initiatives focusing on innovation and adaptability enable organizations to respond effectively to sustainability challenges, maintaining competitive advantage. Westerman et al. (2020) further underscored the importance of HRD in fostering leadership capabilities that drive sustainable decision-making and ethical practices across the organization. Shuck & ReioJr (2014) connected HRD to employee engagement, highlighting its role in creating a motivated and committed workforce capable of advancing sustainability objectives. Briscoe et al. (2012) emphasized the global perspective of HRD, arguing that cross-cultural training and leadership development contribute to the alignment of international sustainability standards. Roscoe et al. (2019) linked HRD to organizational resilience, noting that a well-developed workforce is better equipped to navigate economic, social, and environmental uncertainties. Sroufe (2017) identified the role of HRD in embedding sustainability into supply chain and operational practices, ensuring sustainable performance across organizational systems. Lastly, Thoman & Lloyd (2018) highlighted the strategic role of HRD in fostering a culture of continuous learning, which drives innovation and ensures alignment with evolving sustainability expectations.

In conclusion, HRD plays a critical role in driving Sustainable Organizational Performance by equipping employees with the skills, knowledge, and motivation to integrate sustainability into their daily practices. Through leadership development, engagement, and fostering innovation, HRD ensures that organizations achieve long-term success while meeting their social and environmental responsibilities.

Table 2.8 Summary of Research Findings on HRD and Sustainable Organizational Performance

Author (Year)	Studied Factor	Research Finding
Amrutha & Geetha, 2020	HRD, sustainability of organizations	The findings show that human resource practices, social factors, psychological factors, employer branding, and economic factors have positive and significant effects on HRD sustainability at universities. Findings indicate that it is essential to consider the implementation of adequate HRD practices and related socio-economic and psychological supports for HRD sustainability.
Azizi, Atlasi, Ziapour, Abbas, & Naemi, 2021	HRD, organizational performance after Covid-19 pandemic	The COVID-19 pandemic posed numerous adverse consequences, such as economic shock, global health crisis, change in social behaviors, and challenges at the organization level to continue business operations. Besides, the strategies included flexibility, strengthening internal efficiency, talent acquisition, and making innovative changes based on organizational assessment and needs for smooth business activities.
Al-Saidi& Alsaidi, 2022	Sustainable HRD practice, organizational performance	This project cover the impact of sustainable HRD practices on organizational performance, and the relationship between sustainable HRD and organizational performance, and employee's awareness about sustainable HRD. The project used the secondary data to gather qualitative data and primary source like survey to gather quantitative data.

Author (Year)	Studied Factor	Research Finding
Zhang-Zhang, Rohlfer, & Varma, 2022	HRD, SOP	The review of existing researches show that HRD has effective positive influences on enterprises' SOP.
Westerman, Rao, Vanka, & Gupta, 2020	HRD practice, sustainable practice within organizations	HRD as a strategic partner in fostering sustainable practices within organizations
Shuck & Reio JR, 2014	Human resource development practices, employee engagement, and sustainable organizational performance	Both HRD and employee engagement have significant positive influences on sustainable organizational performance.
Briscoe, Schuler, & Tarique, 2012	Learning and development of HR, sustainable capabilities within the workforce	Learning and development programs are integral to building sustainable capabilities within the workforce
Roscoe, Subramanian, Jabbour & Chong, 2019	HRD, corporate culture, SOP	This study focuses on the importance of HRD in designing programs that instill a culture of sustainability among employees, which further results in the increasing of SOP
Sroufe, 2017	Performance management of HRD, organizational performance	The study emphasizes the need for performance appraisal systems that integrate sustainable metrics to ensure alignment with organizational goals.
Thoman & Lloyd, 2018	HRD, high performance organization	This paper concludes with an examination regarding how HRD can be leveraged by the modern High Performance Organization (HPO) to meet the strategic challenges of the current competitive business landscape.

(Ref: Literature Review Database)

In summary, the literature reviewed indicates a consensus on the integral role of HRD in fostering sustainable organizational performance. From strategic alignment to the development of sustainable capabilities, HRD practices are instrumental in shaping a culture of responsibility and resilience. As organizations continue to navigate the complexities of a globalized and environmentally conscious world, HRD emerges as a key driver for achieving not only short-term efficiency but long-term sustainable success.

2.5.2 The Impact of Sustainable Organizational Performance on Employee Performance

Employee performance is a critical determinant of Sustainable Organizational Performance (SOP) as it aligns individual contributions with an organization’s long-term economic, social, and environmental objectives. Kusi et al. (2021) emphasized that efficient and productive employees drive operational excellence and reduce resource wastage, directly supporting sustainability efforts. Similarly, Arda et al. (2019) highlighted that high-performing employee’s foster innovation and adaptability, essential for maintaining competitive advantage in dynamic and evolving markets. Kim et al. (2020) and Loor-Zambrano et al. (2022) underscored the importance of employee involvement in environmental and ethical initiatives, demonstrating that engaged employees actively contribute to sustainable practices and process improvements. Hossin et al. (2022) further connected employee performance with enhanced customer satisfaction, lower turnover rates, and better environmental outcomes, all of which reinforce SOP. Amjad et al. (2021) illustrated that employee engagement and motivation enable collaboration and creativity, fostering efficiency and sustainable practices across the organization. Jiang et al. (2017) highlighted the role of leadership in channeling employee performance toward sustainability objectives, ensuring that individual efforts contribute holistically to financial, social, and ecological outcomes. Finally, Samwel (2018) argued that adaptable and high-performing employees enhance an organization’s ability to respond to market changes while promoting ethical and environmentally conscious practices.

In conclusion, Employee Performance is a foundational driver of Sustainable Organizational Performance. By optimizing employee contributions through engagement, innovation, and alignment with sustainability goals, organizations can achieve long-term success while meeting social and environmental responsibilities.

Table 2.9 Summary of Research Findings on Employee Performance and Sustainable Organizational Performance

Researcher	Studied Factor	Research Finding
Kusi, Zhao & Sukamani, 2021	Employee performance, sustainable organizational performance	Corporate social responsibility (CSR), perceived organizational support (POS), Employee performance (EP) have significantly positive influences on organizational performance (OP)
Arda, Bayraktar & Tatoglu, 2019	Employee performance and SOP	Well-performing employees contribute directly to operational efficiency and effectiveness, impacting an organization's ability to integrate sustainable practices into its core functions
Kim, McGinley, Choi & Agmapisarn, 2020	Employee engagement, organizational performance	Engaged employees are not only more productive but also more likely to actively participate in and support sustainability programs
Loor-Zambrano, Santos-Roldán & Palacios-Florencio, 2022	Employee motivation, organizational performance	Employee motivation is an important component of employee performance, and the internal motivation and the impact of incentives in fostering sustained employee commitment to organizational goals, which further contributes to the organizational performance.

Researcher	Studied Factor	Research Finding
Hossin, Chen, Hosain & Asante, 2022	Employee performance, organizational support and SOP	The empirical investigation revealed that employee performance and organizational support has a significant positive relationship with SOP as well as employee performance has significant positive influences on organizational support.
Amjad, Abbas, Zia-Ur-Rehman, Baig, Hashim, Khan & Rehman, 2021	Green human resource development, environment performance, employee performance and sustainable organizational performance	This study empirically investigates the distinct mediating role of environmental performance and employee's performance between GHRM practices and organizational sustainability. The study findings support the hypothesized model of mediation.
Jiang, Zhao & Ni, 2017	Transformational leadership, employee performance, sustainable organizational performance	The findings reveal that employee sustainable performance is positively influenced by transformational leadership. In addition, more than half of that influence is mediated by their organizational citizenship behavior. These findings remind project managers of the need to pay close attention to transformational leadership, to cultivate organizational citizenship behavior, and thereby to eventually improve employee's sustainable performance.
Samwel, 2018	Employee relations, employee performance, organizational performance.	In Tanzania, employee relations have positive influences on employee performance, organizational performance, and employee performance is the mediate variable between employee relations and organizational performance.

2.5.3 The Impact of Human Resource Development on Employee Performance

Human Resource Development (HRD) significantly influences employee performance by enhancing skills, knowledge, and engagement, which align individual contributions with organizational goals. Lim & Ahmad (2021) emphasized that targeted HRD practices, such as training and development programs, equip employees with the competencies needed to adapt to dynamic work environments, directly improving productivity. Similarly, Radhakrishna & Raju (2015) highlighted the role of continuous learning and career development in fostering motivation and performance excellence. Akdere & Egan (2020) and Tarique (2014) argued that HRD initiatives, such as leadership training and coaching, not only enhance technical skills but also build interpersonal and leadership capabilities, which are critical for employee effectiveness. Swanson (2022) linked HRD with improved problem-solving and decision-making skills, emphasizing its role in fostering innovation and efficiency in employees. Kareem & Hussein (2019) further demonstrated that performance appraisals and development feedback are integral components of HRD, promoting accountability and performance improvement. Otoo & Mishra (2018) underscored the importance of aligning HRD strategies with organizational objectives, showing that a well-structured HRD framework enhances employee engagement, which in turn boosts performance. Rodjam et al. (2020) highlighted the impact of HRD on fostering a culture of continuous improvement, where employees are more committed and perform at higher levels.

In summary, HRD impacts employee performance by fostering skill enhancement, leadership development, and continuous learning, which collectively improve productivity, motivation, and alignment with organizational goals. Through strategic HRD practices, organizations can ensure sustained employee engagement and high performance.

Table 2.10 Summary of Research Findings on HRD and Employee Performance

Author (Year)	Studied Factor	Research Finding
Kareem & Hussein, 2019	Human resource development practices, employees' performance and organizational effectiveness	The result indicates that HRD practices are significantly related to employee performance in the enhancement of organizational effectiveness. Also, the results show that there is a statistically significant relationship between employee performance and organizational effectiveness. Furthermore, this study recommends that the decision-makers of universities should strive to develop HRD strategies which will enable them to improve employee competency and enhance the capability of the employees to achieve desired goals and objectives of the organization.
Lim & Ahmad, 2021	HRD, employee performance	Results based on a national sample of firms indicate that these practices have an economically and statistically significant impact on employee performance. Support for predictions that the impact of high performance work practices on firm performance is in part contingent on their interrelationships and links with competitive strategy was limited.
Radhakrishna & Raju, 2015	HRD, employee performance and industrial relations	The findings strongly support the hypothesis that HRD initiatives have an impact on the performance of employment relations system in the organization and provide limited support for the hypothesis that HRD initiatives help in reduction of unauthorized absenteeism and improve employee involvement in suggestion scheme.

Author (Year)	Studied Factor	Research Finding
Akdere & Egan, 2020	HRD, employee performance	HRD encompasses activities that develop and enhance employees' capabilities, leading to improved job performance and overall organizational effectiveness.
Tarique, 2014	HRD, employee performance, organizational goals, individual development needs	HRD has positive impact of training on employee performance, particularly when training is aligned with organizational goals and individual development needs.
Swanson, 2022	HRD, employee careers, employee performance	The role of HRD in providing employees with the necessary skills and experiences to advance their careers, ultimately benefiting employee performance.
Kareem & Hussein, 2019	HRD, employee performance and organizational effectiveness	The result indicates that HRD practices are significantly related to employee performance in the enhancement of organizational effectiveness. Also, the results show that there is a statistically significant relationship between employee performance and organizational effectiveness. Furthermore, this study recommends that the decision makers of universities should strive to develop HRD strategies which will enable them to improve employee competency and enhance the capability of the employees to achieve desired goals and objectives of the organization.
Otoo & Mishra, 2018	HRD practice, employee performance	The results indicate that some human resource development practices impact employee performance. Performance appraisal however does not impact employee performance of the firms studied.

Author (Year)	Studied Factor	Research Finding
Rodjam, Thanasrisuebwong, Suphuan & Charoenboon, 2020	HRD practice, employee performance	The findings of the study show that all the Human resource development practices have significant and positive relationship with employee performance and job satisfaction mediates the relationship among variables. According to the results all the hypotheses are accepted, provide significant and positive relationship among variables expect reward and compensation on employee performance.

(Ref: Literature Review Database)

2.6 Conceptual Framework, Operational Definition, Hypothesis and Explanation of Hypothesis

2.6.1 Conceptual Framework

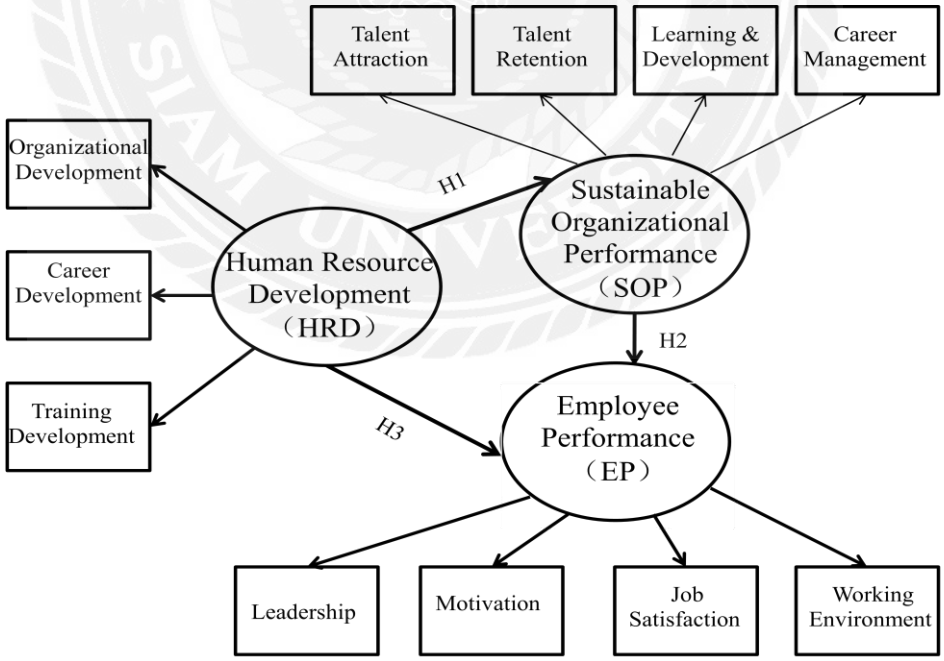

Figure 2.4 Conceptual Framework

(Source: Research, 2024)

Hypothesis 1: Human resource development has a significant direct effect on sustainable organizational performance.

Hypothesis 2: Human resource development has a significant indirect effect on employee performance through sustainable organizational performance.

Hypothesis 3: Human resource development has a significant direct effect on employee performance.

2.6.2 Operational Definition

2.6.2.1 Human Resource Development

Human Resource Development (HRD) can be assessed across three key dimensions: Organizational Development, Career Development, and Training Development. Organizational Development evaluates the effectiveness of systems and practices that foster adaptability, innovation, and alignment with strategic goals. Career Development focuses on mentoring, succession planning, and career pathways to align employee growth with organizational objectives. Training Development measures the impact of learning programs on addressing skill gaps and enhancing workforce capabilities. These dimensions provide a comprehensive framework for evaluating HRD and identifying areas for improvement.

2.6.2.1.1 Organizational Development

Organizational Development (OD) is a structured approach aimed at enhancing organizational effectiveness and adaptability. It ensures alignment with the company’s vision and mission, fosters trust in leadership, promotes equitable and professional task allocation, and cultivates a conducive work environment. Additionally, OD emphasizes achieving and exceeding organizational goals through continuous improvement and collaboration. These elements collectively position OD as a dynamic process for driving organizational success and sustainability.

2.6.2.1.2 Career Development

Career Development refers to the systematic efforts made by an organization to support and enhance employees' professional growth and advancement. It includes providing coaching to improve career prospects, offering unprejudiced career guidance, and supporting individual development strategies. Additionally, Career Development involves delivering targeted training programs to help employees build skills and achieve their career objectives. These practices collectively ensure alignment between employee aspirations and organizational goals, fostering growth and long-term engagement.

2.6.2.1.3 Training Development

Training Development refers to the structured process through which organizations enhance employee knowledge, skills, and competencies to meet individual and organizational needs. It involves delivering relevant and comprehensive training programs, providing necessary resources and tools, and addressing specific training needs through targeted sponsorship. Additionally, Training Development ensures that activities are tailored to align with employee requirements across various facets of quality, fostering continuous improvement and professional growth.

2.6.2.2 Sustainable Organizational Performance

A sustainable organizational performance can be measured across four key dimensions: Talent Attraction, Talent Retention, Learning and Development, and Career Management. Talent Attraction evaluates the organization’s ability to draw skilled candidates through competitive compensation, work-life balance, and a supportive climate. Talent Retention assesses strategies like leadership, internal recruitment, and flexible policies to maintain workforce commitment. Learning and Development focuses on training programs, coaching, and e-learning to enhance employee skills and performance. Career Management examines initiatives to align employee growth with organizational goals through career planning and clear progression paths. These

dimensions collectively ensure the organization’s long-term sustainability and adaptability.

2.6.2.2.1 Talent Attraction

Talent attraction refers to the organization’s ability to draw skilled and suitable candidates through competitive pay, fair wages, and good working conditions. It encompasses fostering work-life balance, providing social networking opportunities, and ensuring a positive organizational climate. By offering a comprehensive and appealing benefits package, organizations create a motivating environment that effectively attracts the right talent to meet their strategic goals.

2.6.2.2.2 Talent Retention

Talent retention refers to the organization's strategic efforts to maintain a committed and skilled workforce by fostering employee loyalty and satisfaction. It involves adopting effective leadership styles, offering competitive compensation systems, implementing flexible working hours, and promoting internal recruitment policies that enhance morale. By addressing employee needs and motivations, talent retention strategies contribute to improved performance, increased sales, and long-term organizational success.

2.6.2.2.3 Learning and Development

Learning and Development (L&D) refers to the organization’s structured efforts to enhance employee skills, knowledge, and competencies through targeted programs. It includes in-house development initiatives, coaching by line managers, and the integration of e-learning. L&D programs are designed to align with job roles and have a significant impact on employee performance, ensuring continuous growth and organizational effectiveness.

2.6.2.2.4 Career Management

Career management refers to the organization's strategic approach to supporting employee growth and long-term career goals. It includes career planning to facilitate organizational expansion, establishing clear career paths across departments, and implementing programs that enhance employee development. By aligning employee aspirations with organizational objectives, career management fosters progression, engagement, and sustained success for both employees and the organization.

2.6.2.3 Employee Performance

Employee performance is assessed through four key dimensions: Leadership, Motivation, Job Satisfaction, and Work Environment. Leadership evaluates the ability of leaders to inspire and guide teams effectively, while Motivation measures how recognition, rewards, and growth opportunities drive employee effort. Job Satisfaction reflects employees' sense of fulfillment and alignment with organizational goals, and Work Environment considers the conditions that support effective and collaborative work. These dimensions collectively provide a comprehensive framework to evaluate and enhance employee performance within an organization.

2.6.2.3.1 Leadership

Leadership is the ability to guide and inspire employees by fostering trust, promoting open communication, and demonstrating responsibility and reliability. It involves understanding employees professionally, encouraging creative problem-solving, and ensuring discussions around employee welfare are prioritized. Effective leadership balances the organization's interests with those of employees, creating an environment of confidence, collaboration, and mutual respect, ultimately driving organizational success.

2.6.2.3.2 Motivation

Motivation refers to the internal and external factors that drive employees to perform effectively and align their efforts with organizational goals. It encompasses fair compensation, attention to career development, and organizational support for employees' personal and family needs. Motivation is further fostered through positive interpersonal relationships, equitable treatment, and fair implementation of rewards and penalties, creating an environment where employees feel valued and driven to succeed.

2.6.2.3.3 Job Satisfaction

Job satisfaction is the positive emotional state resulting from a balance between work quality and social well-being, fostering pride and inspiration within the organization. It includes satisfaction from collaborative relationships with colleagues and teams, as well as feeling valued through the organization’s responsiveness to employee suggestions and concerns. Job satisfaction reflects the degree to which employees feel fulfilled, motivated, and engaged in their roles within the organization.

2.6.2.3.4 Work Environment

Work environment refers to the physical, social, and psychological conditions that support employees' ability to work effectively and independently. It encompasses fostering autonomy, maintaining self-esteem, upholding a positive reputation, and promoting cooperation among team members. A conducive work environment ensures employees feel empowered, respected, and motivated to contribute to organizational success while maintaining harmonious relationships.

2.6.3 Explanation of Hypothesis

From the above framework, the following hypothesis can formulated as follows:

2.6.3.1 Hypothesis 1: Human Resource Development has a Significant Direct Effect on Sustainable Organizational Performance.

Meaning of Hypothesis

This hypothesis means that Xiaomi auto-related companies with better human resource development would have better sustainable organizational performance.

Reason of Hypothesis

Ali & Anwar (2021) identified a significant positive correlation between corporate social responsibility (CSR) and employees' organizational commitment, which subsequently influences organizational performance. Similarly, Iqbal et al. (2012) argued that an organization's focus on CSR activities positively affects employees' attitudes, job satisfaction, and sense of belonging, thereby enhancing organizational productivity and performance. Maltz et al. (2003) posited that CSR-oriented human resource development (HRD) predicts individual task performance and extra-role helping behavior. When organizations integrate CSR values into work processes through CSR-HRD, support employee participation in CSR activities, and demonstrate care for social and environmental issues by providing resources and training, employees are more likely to commit to the organization's CSR practices. This commitment under effective HRD leads to improved employee performance and sustainable organizational performance.

Xiaomi's auto-related listed companies, as high-tech entities reliant on talent for innovation, benefit significantly from employee contributions to sustainable development. Technological innovation enhances product performance and quality, optimizes production processes, and strengthens core competitiveness. By fostering technological innovation, enterprises can better adapt to market changes and customer needs, maintain competitive advantages, expand market share, achieve higher profits, and promote sustainable development. Focusing on new energy enterprises, research shows that talent training and employee innovation positively impact enterprise performance, contributing to sustainable financial development.

Hypothesis's SupportingTheory or Research

Human Capital Theory posits that investments in employee skills, knowledge, and development enhance productivity and align individual capabilities with organizational objectives (Becker, 1964). HRD practices, such as training, leadership development, and continuous learning, are essential for equipping employees with the competencies needed to contribute to sustainable organizational goals, including economic efficiency, environmental stewardship, and social responsibility. By fostering a highly skilled workforce, HRD directly drives Sustainable Organizational Performance.

Stakeholder Theory emphasizes that organizations must address the needs of various stakeholders, including employees, customers, and society, to achieve long-term sustainability (Freeman, 1984). HRD practices promote sustainability by equipping employees with the skills and knowledge to balance organizational success with social and environmental considerations, ensuring a direct contribution to SOP.

Resource-Based View (RBV) underscores the importance of unique organizational resources, such as human capital, in achieving competitive advantage and long-term success (Barney, 1991). HRD enhances these resources by developing employee capabilities, fostering innovation, and promoting adaptive practices that contribute directly to organizational sustainability.

Human Resource Development (HRD) significantly impacts Sustainable Organizational Performance (SOP) by aligning employee growth with long-term goals encompassing financial, social, and environmental sustainability. Amrutha & Geetha (2020) highlighted that HRD fosters employee engagement in sustainability initiatives, enhancing environmental stewardship and social responsibility. Azizi et al. (2021) emphasized HRD's role in equipping employees with skills to implement sustainable practices, improving efficiency and outcomes. Al-Saidi & Alsaidi (2022) argued that HRD integrates sustainable values into organizational culture, aligning employee behavior with long-term goals.

Zhang-Zhang et al. (2022) demonstrated that HRD promotes innovation and adaptability, enabling effective responses to sustainability challenges. Westerman et al. (2020) underscored HRD's role in leadership development for ethical and sustainable decision-making. Shuck & ReioJr (2014) connected HRD to employee engagement, fostering a motivated workforce committed to sustainability.

Briscoe et al. (2012) emphasized cross-cultural training and global alignment with sustainability standards. Roscoe et al. (2019) linked HRD to organizational resilience, equipping workforces to navigate uncertainties. Sroufe (2017) highlighted HRD's role in embedding sustainability into supply chain practices, ensuring systemic alignment. Lastly, Thoman & Lloyd (2018) emphasized HRD's strategic role in fostering continuous learning to drive innovation and adapt to evolving sustainability goals.

2.6.3.2 Hypothesis 2: Human Resource Development has a Significant Indirect Effect on Employee Performance through Sustainable Organizational Performance.

Meaning of Hypothesis

This hypothesis means that Xiaomi auto-related companies with better HRD would have better employee performance, and sustainable organizational performance has a mediating function in this relationship.

Reason of Hypothesis

Investment in Human Resource Development (HRD) enhances employee performance and promotes organizational sustainability. This is crucial for integrating sustainability practices within organizations. Sustainable development involves employee-centered HR management, which supports internal sustainability. Organizations must fulfill social responsibilities to employees, comply with labor standards, ensure quality work-life, and retain talent ethically to gain a competitive advantage (Kim et al., 2020). HR management is vital in implementing sustainability

strategies, integrating these concepts into HR practices, and fostering employee commitment.

Xiaomi's auto-related companies, driven by innovation, aim for societal sustainable development through new energy autos. HRD in these companies unlocks creative potential. Employee work focuses on innovation, adding stakeholder value. Effective performance management should align company interests with employee development, guided by shared values and standards rather than authority or command.

Hypothesis's Supporting Theory or Research

Resource-Based View (RBV) posits that organizations achieve a sustainable competitive advantage by effectively developing and utilizing unique resources, including human capital (Barney, 1991). HRD practices enhance employee skills, knowledge, and capabilities, which serve as critical resources for driving performance. Improved employee performance, in turn, facilitates sustainable organizational practices by aligning workforce competencies with long-term economic, social, and environmental goals.

Human Capital Theory asserts that investments in training, education, and development increase the value of human resources, ultimately leading to improved productivity and innovation (Becker, 1964). When organizations prioritize HRD, they indirectly foster sustainable organizational performance by empowering employees to implement efficient and sustainable practices. Enhanced employee performance acts as a bridge between HRD and organizational sustainability, ensuring that individual contributions translate into broader systemic benefits.

Stakeholder Theory emphasizes the importance of balancing stakeholder needs for long-term sustainability (Freeman, 2010),. HRD initiatives align employees' goals with organizational and stakeholder expectations, ensuring that employee performance contributes to financial, social, and environmental outcomes. This alignment indirectly

supports sustainable organizational performance by integrating employee capabilities into the organization's sustainability strategy.

Employee performance is a critical driver of Sustainable Organizational Performance (SOP) as it aligns individual contributions with economic, social, and environmental objectives. Kusi et al. (2021) emphasized that productive employees improve operational efficiency and reduce resource wastage, directly supporting sustainability goals. Arda et al. (2019) and Kim et al. (2020) highlighted that high-performing employee's foster innovation, adaptability, and engagement in ethical and environmental initiatives, which are essential for SOP.

Loor-Zambrano et al. (2022) and Hossin et al. (2022) connected employee performance with enhanced customer satisfaction, reduced turnover, and improved environmental outcomes, reinforcing organizational sustainability. Amjad et al. (2021) demonstrated that motivated employees foster collaboration and sustainable practices, while Jiang et al. (2017) emphasized leadership's role in aligning employee efforts with sustainability objectives. Samwel (2018) highlighted that high-performing employees enhance organizational adaptability and promote ethical and environmentally conscious practices.

2.6.3.3 Hypothesis 3: Human Resource Development has a Significant Direct Effect on Employee Performance.

Meaning of Hypothesis

This hypothesis means that Xiaomi auto-related companies with better HRD would have better employee performance.

Reason of Hypothesis

Human Resource Development (HRD) involves systematic activities to enhance employees' skills and knowledge, measured by key performance indicators (KPIs) like task completion and work quality (Piwowar-Sulej, 2021). Xiaomi auto-related companies have unique HRD characteristics. Their employees, often highly educated, focus on

knowledge creation and application, aligning personal and enterprise development. These employees exhibit strong self-actualization desires, distinct personalities, diverse needs, high innovation capacity, and a need for constant knowledge updates. Their work processes are difficult to supervise and measure.

Xiaomi's value-oriented performance evaluation system incorporates work performance and organizational behavior, emphasizing personal development. This system enhances company cohesion and competitiveness and identifies employees' potential for career development. Performance evaluations motivate employees through participation, communication, understanding needs, and appropriate rewards, driving improved performance.

Hypothesis's supporting Theory or Research

Human Capital Theory posits that investments in education, training, and development enhance individuals' skills, knowledge, and abilities, thereby increasing their productivity and performance (Becker, 1964). The theory emphasizes that HRD initiatives, such as skill development programs, career training, and leadership development, are critical for improving employees' capabilities, which directly impacts their job performance. By fostering continuous learning and providing resources for professional growth, organizations can maximize their human capital and achieve higher levels of individual and organizational performance.

Social Exchange Theory (SET) suggests that employees reciprocate positive treatment from their organization, such as investment in HRD initiatives, with increased effort, commitment, and improved performance(Blau, 1964). This theory supports the idea that when employees perceive their organization as valuing their development, they are more motivated to perform at a higher level, fostering a strong employee-employer relationship.

Resource-Based View (RBV) emphasizes that organizations gain a competitive advantage through the effective development and utilization of unique resources, including human capital (Barney, 1991). HRD practices are instrumental in enhancing these human resources, directly influencing employee performance by aligning individual capabilities with organizational goals and fostering a culture of excellence.

Human Resource Development (HRD) significantly enhances employee performance by improving skills, knowledge, and engagement, aligning individual contributions with organizational goals. Lim & Ahmad (2021) and Radhakrishna & Raju (2015) highlighted training, development, and continuous learning as drivers of adaptability and motivation. Akdere & Egan (2020) and Tarique (2014) emphasized leadership training and coaching in building both technical and interpersonal competencies critical for effectiveness.

Swanson (2022) linked HRD to improve problem-solving and innovation, while Kareem & Hussein (2019) demonstrated the importance of performance appraisals and feedback in fostering accountability. Otoo & Mishra (2018) and Rodjam et al. (2020) showed that structured HRD strategies enhance engagement and commitment, driving continuous improvement and productivity.

CHAPTER 3

RESEARCH METHODOLOGY

This research aimed to study the influence of human resource development on Xiaomi auto-related listed companies' employee performance through sustainable organizational performance.

This chapter consists of 6 sections as follows:

3.1 Research Design

3.2 Population and Sample

3.3 Research Tools

3.4 Data Collection Strategy and Procedure

3.5 Data Analysis

3.6 Research Ethics

3.1 Research Design

3.1.1 Quantitative Research

The questionnaire survey is a widely used quantitative research method that primarily collects data from a large number of respondents through carefully designed questionnaires. In the context of examining the impact of human resource development on employee performance, this method was employed to capture respondents' opinions, views, and needs. The data collected were structured, making it easy to analyze using statistical software and extract valuable insights from large datasets. Moreover, the results of questionnaire surveys are replicable, providing a reference for subsequent research.

3.1.2 Qualitative Research

In-depth interviews are a common qualitative research method designed to gain a comprehensive understanding of an individual's personal views, feelings, and

experiences. These interviews are both open-ended and directed, allowing for a flexible and step-by-step collection and analysis of data. They enable researchers to observe and record interviewees' genuine feelings and experiences on specific issues, capturing the most original data. In the context of exploring the human resource development strategies directly affecting sustainable organizational performance and indirectly affecting employee performance, these interviews helped the researcher intuitively grasp the actual situation, identify the factors, and develop a causal model.

3.2 Population and Sample

3.2.1 Population

Research population and institutions: The population of this study was the listed companies of Xiaomi car assembly parts, run by investors in 16 provinces and five regions, with 69 companies in operation. Of these, 45 are in the east, 9 in the south, 2 in the west, 12 in the north, and 1 in the central regions. As shown in Table 3.1, there are 69 listed Xiaomi auto parts companies in China, with a total number of 1,312,170 employees.

From Table 3.1, these companies are in various regions of China. Chinese different regions have different developing situations, so the economic conditions are also diverse. In order to have comprehensive reflections of the HRD situations of Xiaomi auto-related listed companies, it is necessary to select target companies from different regions.

Table 3.1 Total Number of Xiaomi Auto Public Companies in China and Employees in East, South, West, North, and Central Regions in China

Area	Province	Number of Companies			Employees
East	Anhui	Jee Technology Co., Ltd.	2	45	3445
		Wuhu Sanlian Forging Co., Ltd.			1955
	Fujian	Xiamen C and D Inc.	5		49752
		Fuyao Glass Industry Group Co., Ltd.			32721
		Xiamen Xinde Co., Ltd.			4326

Area	Province	Number of Companies			Employees
		Contemporary Amperex Technology Co., Limited			116055
		Fujian Nebula Electronics Co., Ltd.			2206
	Jiangsu	Hengtong Optic-Electric Co., Ltd.	18		16230
		Jiangsu New Technology Group Co., Ltd.			1163
		Weifu High-technology Group Co., Ltd.			5759
		Jiangsu Changshu Automotive Trim Group Co., Ltd.			4763
		Jiangyin Electrical Alloy Co., Ltd.			612
		Baowu Magnesium Technology Co., Ltd.			4294
		Aotecar New Energy Technology Co., Ltd.			8117
		Nantong Chaoda Equipment Co., Ltd.			1199
		JiangnanMould and Plastic Technology Co., Ltd.			6080
		Suzhou HechangPoiymer Materials Co., Ltd.			687
		Yangzhou Yangjie Electronic Technology Co., Ltd.			6001
		Jiangsu Liance Electromechanical Technology Co., Ltd.			456
		Suzhou Chunqiu Electronic Technology Co., Ltd.			6289
		Wuxi Zhenhua Auto Parts Co., Ltd.			2724
		Nanjing Aolian AE and EA Co., Ltd.			723
		Zhongjie (Jiangsu) Technology Co., Ltd.			1135
		Nantong Tongyi Aerospace Science and Technology Co., Ltd.			251
		Nanjing Sunlord Electronics Corporation Ltd.			863
	Shandong	WeihaishiHonglin Electronic Co., Ltd.	2		2148
		Qingdao Hi-Tech Moulds and Plastics Technology Co., Ltd.			867
	Shanghai	Shanghai Huace Navigation Technology Ltd.	7		1844
		Huayu Automotive Systems Company Limited			56719
		Shanghai Yongmaotai Automotive Technology Co., Ltd.			1348
		Shanghai Baolong Automotive Corporation			6678
		Shanghai YCT Electronics Group Co., Ltd.			575
		Shanghai Feilo Acoustics Co., Ltd.			1472
		Shanghai Carthane Co., Ltd.			493
	Zhejiang	WuchanZhongda Group Co., Ltd.	10		26354
		Zhejiang Yinlun Machinery Co., Ltd.			9174
		Ningbo Joyson Electronic Corp.			43965
		Ningbo KBE Electrical Technology Co., Ltd.			1022
		Zhejiang Shibao Co., Ltd.			1940

Area	Province	Number of Companies			Employees
		Ningbo Shuanglin Auto Parts Co., Ltd.			4840
		Zhewen Interactive Group Co., Ltd.			1209
		WanxiangQianchao Co., Ltd.			8926
		Hydsoft Technology Co., Ltd.			6234
		Ningbo Tuopu Group Co., Ltd.			19528
	Hebei	Aerospace Intelligent Manufacturing Technology Co., Ltd.	1		5688
South	Guangdong	Foryou Corporation	4	9	6735
		Lucky Harvest Co., Ltd.			5896
		Huizhou Desay SV Automotive Co., Ltd.			8585
		DBG Technology Co., Ltd.			17107
	Shenzhen	BYD Company Limited	5		703504
		Shenzhen Inovance Technology Co., Ltd.			23685
		EMTEK (Shenzhen) Co., Ltd.			1532
		Shenzhen Longsys Electronics Co., Ltd.			2979
		Shenzhen WOTE Advanced Materials Co., Ltd.			1280
West	Chongqing	Chongqing Millison Technologies Inc.	1	2	5166
	Guizhou	GuizhouGuihang Automotive Components Co., Ltd.	1		3376
North	Jilin	FAWER Automotive Parts Limited Company	2	12	7978
		Changchun Faway Automobile Components Co., Ltd.			14704
	Liaoning	Dalian Haosen Intelligent Manufacturing Co., Ltd.	2		2699
		Dalian Demaishi Precision Technology Co., Ltd.			1359
	Beijing	China Machinery Huanyu Certification and Inspection Co., Ltd.	6		682
		Beijing Oriental Jicheng Co., Ltd.			1846
		Navinfo Co., Ltd.			2898
		BAIC BluePark New Energy Technology Co., Ltd.			3890
		Innovation New Material Technology Co., Ltd.			10724
		Beijing StarNeto Technology Co., Ltd.			729
	Tianjing	Tianjin Pengling Group Co., Ltd.	2		2637
		Tianjin JinrongTianyu Precision Machinery Inc.			1302
Central	Hubei	Wuhan Kotei Informatics Co., Ltd.	1	1	2047
Total		**69**			**1312170**

From Table 3.1, it is explicit that eastern region has most Xiaomi auto-related listed companies, and these are in large scale, while the central region has only one

company. More important, in order to have comprehensive reflection of these regions' companies, the largest company and the smallest company were selected as research target companies. In the central region, there is only one company, and it must be selected. The population selected result is shown in Table 3.2.

Table 3.2 The Largest and Smallest Numbers of Xiaomi Automobile Public Companies, Employees in China's East, South, West, North, and Central Regions.

Region	Number of Companies	Employees
East	Contemporary Amperex Technology Co., Limited	116055
	Nantong Tongyi Aerospace Science and Technology Co., Ltd.	251
South	BYD Company Limited	703504
	Shenzhen WOTE Advanced Materials Co., Ltd.	1280
West	Chongqing Millison Technologies Inc.	5166
	GuizhouGuihang Automotive Components Co., Ltd.	3376
North	Changchun Faway Automobile Components Co., Ltd.	14704
	China Machinery Huanyu Certification and Inspection Co., Ltd.	682
Central	Wuhan Kotei Informatics Co., Ltd.	2047
Total	**9**	**847065**

In eastern China, the companies with the largest number of employees, 116,0555, and the smallest number of employees,251, were selected. In southern China, 703,504 employees (the largest number) and 1,280 employees (the smallest number) were selected as the second sample group. In western China, the largest number of employees, 5,166, and the smallest number, 3,376, were selected as the third sample group. In northern China, a total of 14,704 employees (the largest number) and 682 employees (the smallest number) were selected as the fourth sample group. There is only one company in central China, so a total of 2,047 employees were selected as the fifth sample group. The total number of employees in the sample is 847,065.

3.2.2 Sample for Quantitative Research

The sample group used in this research was the employees of 9 Xiaomi companies in the five regions of eastern, western, south, north, central China. The sample size was determined from the overall population of 847,065 using Taro Yamane's formula, with a confidence level of 95% and an error of 5%, resulting in a sample size of 399.81 individuals.

$$n = \frac{N}{1 + Ne^2}$$

where n = sample size

N = population size

e = Probability of allowable error.

$$n = \frac{847065}{1+847065(0.05)^2} = 399.81$$

In this study, the researchers adjusted the calculated sample size to 400 to improve reliability. The total number of sample drawn from each of the 9 selected companies was determined in proportion with the total number of employees, and the simple random sampling was adopted.

Table 3.3 Population and Sample Selected from Xiaomi Auto Public Companies with the Largest and Smallest Numbers of Employees in East, South, West, North, and Central Regions of China.

Region	Number of Companies	Employees	Proportion	Sample
East	Contemporary Amperex Technology Co., Limited	116055	13.71%	53
	Nantong Tongyi Aerospace Science and Technology Co., Ltd.	251	0.03%	1
South	BYD Company Limited	703504	83.05%	323
	Shenzhen WOTE Advanced Materials Co., Ltd.	1280	0.15%	3

Region	Number of Companies	Employees	Proportion	Sample
North	Changchun Faway Automobile Components Co., Ltd.	14704	1.74%	7
	China Machinery Huanyu Certification and Inspection Co., Ltd.	682	0.08%	2
West	Chongqing Millison Technologies Inc.	5166	0.61%	5
	GuizhouGuihang Automotive Components Co., Ltd.	3376	0.40%	4
Central	Wuhan Kotei Informatics Co., Ltd.	2047	0.24%	2
Total		**847065**	**100%**	**400**

3.2.3 Sample for Qualitative research

To gather expert insights, a semi-structured in-depth interview (SSI) was conducted. This approach targeted 20 senior employees, including managers from the company's human resources management department and individuals with ten years of experience in that specific department. The interviewees were selected through purposive sampling from 9 companies in the five regions, 2 companies in four regions and 1 company from the central region.

Table 3.4 List of Interviewees

Region	Company	Employees	Position	Sample
East	Contemporary Amperex Technology Co., Limited	116055	Manager	2
	Nantong Tongyi Aerospace Science and Technology Co., Ltd.	251	HR	2
South	BYD Company Limited	703504	Department leader	2
	Shenzhen WOTE Advanced Materials Co., Ltd.	1280	Technical director	2

Region	Company	Employees	Position	Sample
North	Changchun Faway Automobile Components Co., Ltd.	14704	Engineer	2
	China Machinery Huanyu Certification and Inspection Co., Ltd.	682	Chairman	2
West	Chongqing Millison Technologies Inc.	5166	General manager	2
	Guizhou Guihang Automotive Components Co., Ltd.	3376	Middle management	2
Central	Wuhan Kotei Informatics Co., Ltd.	2047	Leadership	4
Total		**847065**		**20**

3.3 Research Tools

3.3.1 Questionnaire

A quantitative research tool of this research is questionnaire. The researcher reviewed concepts, theories, and relevant literature to determine the operational definition and structure of the research variables. Then, the questionnaire was constructed and submitted to five experts for review.

In order to establish a scientific and effective evaluation system of human resource development, employee performance and sustainable organizational performance of Xiaomi auto-related listed companies, the researcher referred to relevant measurement indicators from industry scholars and proven classic scales that conform to the characteristics of human resource development, employee performance and sustainable organizational performance in these targeted companies. In these dimensions, there are 5 items for each dimension in questionnaire. Generally speaking, too few questions in the questionnaire will affect the reliability level, while too many questions will trigger negative emotions among the respondents, and thus they will not fill in the

questions carefully. The researcher used a Likert5 five-point scale, in which the numbers 1-5 respectively represent strongly disagree, disagree, neutral, agree, and strongly agree. The questionnaire includes 60 measurement items.

Strongly agree (5): This score is indicative of a high degree of concurrence with the statement, signifying that the respondent perceives the organization's practices to be fully aligned with the principles of human resource development in Xiaomi auto-related companies, thereby contributing robustly to sustainable organizational performance and effective employee performance.

Agree (4): This score suggests that the respondent generally concurs with the statement, acknowledging the presence of human resource development in Xiaomi auto-related companies, thereby support to sustainable organizational performance and effective employee performance, albeit with minor reservations or recognized areas for improvement.

Neutral (3): This midpoint score denotes ambivalence or uncertainty regarding the statement, implying that the respondent neither agrees nor disagrees with the organization's alignment with the human resource development in Xiaomi auto-related companies, or its impact on sustainability and effective employee performance.

Disagree (2): A response in this category reflects a dissenting position, indicating that the respondent perceives a lack of integration of human resource development in Xiaomi auto-related companies, attributes within the organizational practices, which may hinder sustainable organizational performance and employee performance.

Strongly disagree (1): This score signals a strong dissonance with the statement, suggesting that the respondent believes the organization significantly diverges from the human resource development in Xiaomi auto-related companies, thereby potentially compromising sustainable organizational performance and the employee leadership.

The questionnaire is mainly divided into five parts.

Part 1: The questionnaire covers general information about the respondents. The questionnaire consists of 5 questions including gender, age, education level, position and working hours in these target companies in the study. These factors influence the respondent’s understanding of the human resource development and its effects on employee performance and sustainable organizational performance in Xiaomi auto-related listed companies.

Part 2: The designed questionnaire explores the HRD framework, with a particular emphasis on the interaction with employment performance.

Organizational Development: The items measure critical dimensions of a company's effectiveness. The first dimension evaluates the alignment and adherence to the company's vision and mission. The second dimension assesses the level of trust in leadership. The third dimension examines the fairness and professionalism in the division of work. The fourth dimension measures the conduciveness and supportiveness of the work environment. The fifth dimension evaluates the company's ability to consistently achieve or exceed its goals. Together, these dimensions provide a comprehensive assessment of organizational health and effectiveness. There are 5 items numbered Q1 to Q5.

Career Development: The career development items measure key aspects of support provided by the organization for employee career growth. The first dimension evaluates the availability and effectiveness of coaching for career enhancement. The second dimension assesses the organization's support for individual development strategies. The third dimension examines the provision of unbiased career guidance. The fourth dimension reiterates the focus on coaching for career advancement. The fifth dimension measures the training provided to aid career development. Together, these dimensions offer a comprehensive assessment of the organization's commitment to facilitating employee career progression. There are 5 items numbered Q6 to Q10.

Training Development: The items measure the effectiveness and relevance of the organization's training programs. The first dimension evaluates the adequacy and relevance of knowledge and skills acquired through training. The second dimension assesses the availability of training resources and aids. The third dimension examines the comprehensiveness of training programs across all facets of quality. The fourth dimension measures how well training activities meet employee needs. The fifth dimension evaluates the alignment of training sponsorship with relevant training needs. Together, these dimensions provide a comprehensive assessment of the organization's commitment to effective employee training and development. There are 5 items numbered Q11 to Q15.

Part 3： The questionnaire designed for this study explores in depth the employment performance.

Leadership: The leadership items measure critical aspects of leadership effectiveness and employee perception. The first dimension assesses the reliability and responsibility of the leadership direction. The second dimension evaluates the leader's openness to employee discussions, particularly regarding welfare. The third dimension examines the leader's ability to professionally understand and differentiate between personal and professional matters. The fourth dimension measures the leader's support for employee creativity within regulatory boundaries. The fifth dimension assesses the leader's consideration for both company and employee interests. Together, these dimensions provide a comprehensive assessment of leadership quality and its impact on employee well-being and organizational effectiveness. There are 5 items numbered Q16 to Q20.

Motivation: The items measure various factors influencing employee motivation within the organization. The first dimension evaluates the fairness of bonuses based on work performance. The second dimension assesses the organization's attention to employee career paths. The third dimension examines the support provided by the organization for employees' family needs. The fourth dimension measures the quality of

interpersonal relationships and professionalism within the organization. The fifth dimension evaluates the fairness of company rules in administering rewards and punishments. Together, these dimensions provide a comprehensive assessment of the factors that drive employee motivation and satisfaction. There are 5 items numbered Q21 to Q25.

Job Satisfaction: The items measure key aspects of employee contentment within the organization. The first dimension evaluates the balance between work quality and social quality of life. The second dimension assesses the sense of pride employees feel in working for the company. The third dimension examines the inspiration provided by the organization and its members. The fourth dimension measures satisfaction with working relationships among colleagues and teams. The fifth dimension evaluates how well the company listens to and considers employee suggestions and complaints. Together, these dimensions provide a comprehensive assessment of factors contributing to overall job satisfaction. There are 5 items numbered Q26 to Q30.

Work Environment: The items measure critical aspects of the work atmosphere and its influence on employees. The first dimension evaluates employees' ability to work without supervision. The second dimension assesses the ability to work independently. The third dimension examines the capability to maintain self-esteem. The fourth dimension measures the capability to maintain a good reputation. The fifth dimension evaluates the capability to maintain cooperation with others. Together, these dimensions provide a comprehensive assessment of the factors that contribute to a supportive and effective work environment. There are 5 items numbered Q31 to Q35.

Part 4：The questionnaire in this study explores the sustainable organizational performance.

Talent Attraction：The items scrutinize the various factors that influence a company's ability to attract the right talent. It evaluates how good working conditions, fair wages, and competitive pay packages contribute to making the company appealing to

potential employees. Additionally, it examines the role of work-life balance and social networking facilities in motivating employees, as well as the importance of maintaining a positive organizational climate. By analyzing these elements, this dimension provides insights into the strategies that can enhance a company's attractiveness to skilled and qualified candidates. There are 5 items numbered Q36 to Q40.

Talent Retention：The items measure the strategies and practices that contribute to retaining employees within a company. It evaluates the effectiveness of leadership styles and the handling of employee issues, as well as the impact of a competitive compensation system relative to other organizations in the industry. This dimension also examines the role of internal recruitment policies in enhancing employee loyalty and morale, the provision of flexible working hours as a motivational factor, and the overall effectiveness of the company's talent retention strategies in driving business outcomes, such as increased sales. There are 5 items numbered Q41 to Q45.

Learning and Development: The items measure the various approaches and their effectiveness in enhancing employee skills and performance within a company. It highlights the use of in-house development programs and coaching by line managers as common practices. This dimension underscores the importance of e-learning and evaluates the relevance of learning and development programs to employees' job roles. Additionally, it examines the significant impact these programs have on job performance, illustrating how structured learning initiatives contribute to employee growth and organizational success. There are 5 items numbered Q46 to Q50.

Career Management: The items measure the strategies and practices that support employee career growth and development within a company. It examines the belief that career planning facilitates organizational expansion and growth, as well as the company's commitment to employee growth and progression. This dimension evaluates efforts to establish clear career paths and job families across departments and the development of programs and initiatives aimed at enhancing employee development. Furthermore, it assesses the support provided by the company to help employees achieve their long-term

career goals, highlighting the importance of structured career management in fostering both individual and organizational success. There are 5 items numbered Q51 to Q55.

Opinion ratings from Part 2 to 4 are all in the form of a five-point Likert scale divided into five levels: (5) strongly agree, (4) agree, (3) neutral, (2) disagree, (1) strongly disagree.

The interpretation of the mean score is as follows:

4.20-5.00 means the respondent strongly agrees.

3.40-4.19 means the respondent agrees.

2.60-3.39 means the respondent is neutral.

1.80-2.59 means the respondent disagrees.

1.00-1.79 means the respondent strongly disagrees.

Validity and Reliability

For the assessment of content validity, the researcher employed the Index of Item-Objective Congruence (IOC) method. This involved a systematic evaluation process:

1) The experts specializing in IOC analysis first compared the question construction diagram with the questionnaire crafted by the researcher, ensuring alignment in their design and purpose.

2) The experts then evaluated each item alignment with the research objectives, using the following rating scale:

A score of +1 indicates a high degree of alignment with the research objectives.

A score of 0 suggests uncertainty about the alignment with the research objectives.

A score of -1 indicates complete inconsistency with the research objectives.

3) The scores provided by these experts were then utilized to calculate the IOC value for each item, using a prescribed formula. In this validation process, the researcher sought feedback from 5 specialists, employing the IOC method as a robust tool to verify the Content Validity of the research instruments.

1. Dr. Li Chunyou (China)

2. Dr. Liao Haojie (China)

3. Dr. Liao Zhigao (China)

4. Dr. Li Yingxia (China)

5. Dr. Luo Xuemei (China)

$$IOC = \frac{\Sigma R}{n}$$

where IOC = Index of item-objective congruence

R = Score from experts

ΣR = Total score from all experts

n = Number of experts

The criteria to determine the score is as follows:

+1 means "the measurement item is consistent with the objectives of the study"

0 means "the measurement item is somewhat consistent"

-1 means "the measurement item is inconsistent with the objectives of the study"

IOC needs to be between 0.5-1.00 for every question.

4) The researcher interpreted the IOC using the following criteria:

IOC value between 0.5-1.00 means the measurement item passes the evaluation.

IOC value below 0.5 means the measurement item needs revision or replacement.

IOC value less than 0 means the measurement item fails the evaluation.

5) The researcher conducted a try-out of the questionnaire with 30 respondent and check on the reliability. The formula of Cronbach's alpha coefficient is

$$\alpha = \left[\frac{n}{(n-1)}\right]\left[1 - \frac{\sum_{i=0}^{n} / S_i^2}{S_t^2}\right]$$

where α = A coefficient of reliability

n = The number of informants

$\sum_{i=0}^{n}$ = The variance of the sum of informants

S_i^2 = The ratio of the variance of each informant

S_t^2 = The ratio of inter-informants' variance

6) Using the insights gained from the lay-out, the questionnaire was moderately revised. Special attention was given to modifying any sentence deemed intelligible or potentially biased. Following these adjustments, an updated questionnaire was finalized for distribution in the actual study. In addition, the layout of the questionnaire was also adjusted. This comprehensive process of feedback incorporation and redesign ultimately led to the finalization of the questionnaire.

3.3.2 In-depth Interview

For qualitative data collection, in-depth interview serves as the primary method. An in-depth interview format was provided to the chosen participants to facilitate the gathering of detailed information. This approach was designed to elicit insights that the researcher deemed most valuable for analyzing and elucidating the phenomena under study.

3.4 Data Collection

The researcher collected 2 types of data: quantitative data (400 questionnaires) and qualitative data (20 interviews), as shown below.

1) Quantitative data

In the context of quantitative research, the researcher acquired data from a designated sample group. Adhering to the predetermined quota sample size established for each region, the researcher distributed the questionnaire to the identified target group. The data collection period spanned from June1, 2024, to Dec 1, 2024, encompassing the distribution of 400 questionnaires within the specified target areas. During the administration of the questionnaires, the researcher elucidated the research's objectives to the respondents. Following this, a comprehensive examination of the completed questionnaires was undertaken to ensure their completeness. Should any questionnaires remain incomplete or exhibit flawed responses, the researcher systematically filtered them out and subsequently continued the distribution process until the predetermined quota was met, thereby ensuring adherence to the pre-established plan prior to progressing with further data analysis.

2) Qualitative data

A semi-Structured in-depth interview approach was employed to gather expert insights from 20 senior employees, including managers and experienced employees. Depending on convenience of the interviewees, the interviews were flexible, with online interviews via email and direct conversations (face to face) with interviewees in the same group. The interviewees provided in-depth information that could be analyzed using content analysis, complimenting quantitative data to provide clear discussion in this study,

3.5 Data Analysis

The analytical procedures employed in this study encompassed descriptive statistical analysis and structural equation modeling. The analytical framework involved the utilization of various statistical techniques, including frequency analysis, mean computation, standard deviation calculation, hypothesis testing, and the application of structural equation modeling. These methods were instrumental in scrutinizing Xiaomi auto-related listed companies' human resource development, employee performance and sustainable organization performance. In assessing the model's compatibility with empirical data, model fit assessments were conducted to scrutinize the correlations between variables. The Statistical Products and Services Solutions (SPSS) tools were employed for the comprehensive analysis of the data.

(1) Descriptive Statistical Analysis

Descriptive statistical analysis was a method employed subsequent to data collection, encompassing tabulation, classification, graphical representation, and computation of summary data to elucidate the inherent characteristics of the collected data. This method involved the measurement of percentages, means, and standard deviations across 12 observable dimensions. The Z-test statistic was employed to examine whether the assumptions regarding skewness and kurtosis deviate significantly from zero. In instances where the observed variable displays a left-skewed distribution, the skewness (SK) assumes a negative value ($SK < 0$); for a normally distributed variable, SK equals zero, indicating a normal distribution curve. Conversely, a right-skewed distribution results in a positive skewness value ($SK > 0$). If the value of kurtosis (KU) is precisely 3, it signifies a peak normal distribution or frequency distribution curve of moderate intensity. A kurtosis value less than 3 implies a distribution curve that is short and flat, while a value greater than 3 suggests a distribution curve with elevated height (Sirichhai Kanchanawasi, 2002).

(2) Statistical Analysis of the Relationship between Variables

The Pearson product-moment correlation coefficient (PPMCC or PCCs) analysis was employed to scrutinize the interrelationship between variables, providing insights into the presence of a linear correlation, the direction, and the magnitude of such relationships. This analytical tool is instrumental in evaluating the factors influencing competitive advantage within the context of human resource development, employee performance and sustainable organization performance. A PPMCC value in proximity to -1 or 1 signifies a highly significant correlation, while a value close to 0 indicates a negligible or nonexistent correlation. According to Schober, Boer & Schwarte (2018), Pearson correlation coefficients can effectively reflect the correlation degree between different variables, and the degree of correlation is further contextualized through reference to a correlation coefficient table.

Table 3.5 Criteria for Correlation Coefficients

Correlation Coefficient (r)	Relationship Level
$r > 0.8$	Fairly High Correlation
$0.6 < r < 0.8$	High Correlation
$0.4 < r < 0.6$	Moderately Relevant
$0.2 < r < 0.4$	Low Correlation
$r < 0.2$	Very Low Correlation

The + and - of the correlation coefficient indicate the direction, + indicates that the variables are related in the same direction, and - indicates that the variable relationship is opposite.

(3) Statistical Model Analysis of Structural Equations

Structural Equation Model (SEM) is a statistical analysis method to explore causal relationships between observed data. Structural equation models can consider direct and indirect relationships between multiple variables simultaneously and combine observed and latent variables for analysis. In structural equation modelling, variables can be

divided into two types: observed variables and latent variables. Observed variables are directly observed data, such as responses to specific questions in a questionnaire. Latent variables cannot be directly observed but can be indirectly inferred by measuring multiple observed variables, such as personal psychological traits or organizational performance. Structural equation modeling tests the fit of a theoretical model by establishing mathematical relationships between variables. It can express the causal relationship between variables through path coefficients and consider the impact of observation errors by setting a measurement model. SEM can help researchers understand the complex relationships between variables and conduct model testing and prediction.

Hypothesis Test Guide: This dataset performs a rigorous analysis process using structural equation modeling (SEM), SEM is a statistical technique that uses path analysis to identify the direct and indirect effects of various variables on the dependent variable. The path coefficient is estimated using the maximum likelihood (ML) estimation principle. This comprehensive analysis was facilitated by the software program Amos, as he referred to (Wanitbancha, 2006). Structural relationships between the variables were carefully plotted, as shown in Figure 3.1.

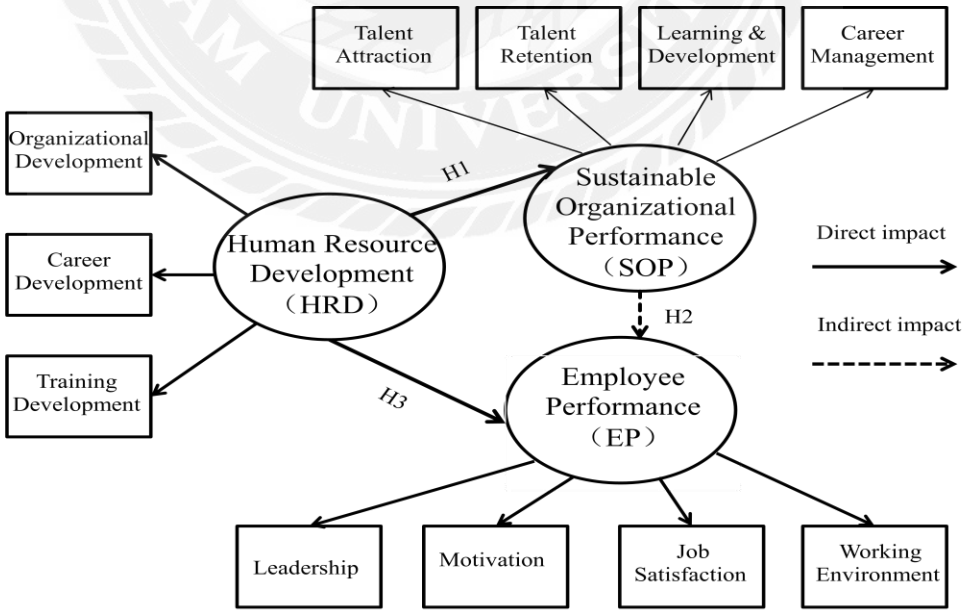

Figure 3.1 Model of Relationship Path Analysis of Variables

This analysis investigated the interrelationships between variables within the structural model, consistent with the formulated research hypothesis. The aim is to juxtapose the empirical model studied with the theoretical framework. The study strived to test each hypothesis, using statistical metrics such as standardized regression weights, t-values, and p-values. These data were supplemented with standard regression coefficients, standard errors (SE), critical ratio (CR), and squared multivariate correlation values derived from the analysis. The structural model developed from this study illustrates the influence between the variables. When evaluating model fit (evaluating data model fit), specific statistical measures are used to measure the agreement between empirical and theoretical models. A key criterion here is that the p-value should not be no significant (greater than 0.05), which indicates satisfactory alignment between the two models. The consistency evaluation included multiple statistical indicators, including chi-square probability level (CMIN-p), relative chi-square (CMIN / df), goodness of fit index (GFI), and root mean square error of Approximation (RMSEA).

3.6 Research Ethics

Research ethics provides guidelines for the responsible conduct of research. In addition, it educates and monitors scientists conducting research to ensure a high ethical standard. Most societies have legal rules that govern behavior, but ethical norms tend to be broader and more informal than laws. Although most societies use laws to enforce widely accepted moral standards and ethical and legal rules use similar concepts, ethics and law are not the same. An action may be legal but unethical or illegal but ethical.

Firstly, regarding informed consent. The researcher clearly introduced the investigation purpose and notifications of the survey to potential participants, so that they knew what was going on and decide whether to participate in this research or not. The survey was completely voluntary and free. After the participants read the invitation message, they could make a decision to not participating by not clicking the link to go through the consent stage and online questionnaire questions. Once participants passed

the consent stage, completed the questionnaire and submitted, they could not withdraw. All data collected were merged into a data pool which individual data were totally unidentifiable.

Secondly, in terms of harmfulness. The data collection procedure did not have the physical encounter with participants, so there is no physical risk to participants. In the meantime, the researcher did not use the inappropriate expressions or sensitive words in the online questionnaire that might make participants feel uncomfortable or stressful, so as to avoid any potential psychological risks.

Thirdly, regarding confidentiality. The survey was designed anonymously in website, and the researcher posted the invitation message and link on the researcher's own profile page of WeChat and QQ to recruit potential participants. The consent form was in place for ensuring formal consents were obtained before the participant could see the questionnaire questions. All the survey data were only adopted for conducting the academic research but not for other purposes and would not be transferred to any other third parties.

Besides, in terms of data security, the survey data were stored in a laptop with the protection of a pass code only available and accessible by the researcher. After the research passed the university examination and the degree was awarded, the raw data of survey were deleted within two weeks.

CHAPTER 4

RESEARCH RESULTS

This chapter mainly includes 4 sections.

4.1 Quantitative Data Analysis

4.2 Qualitative Data Analysis

4.3 Development of the Influence Model of Human Resource Development on Employee Performance in Xiaomi Auto-related Listed Companies

4.4 Conclusion

This chapter primarily investigates the influence model of sustainable organizational performance in Xiaomi auto-related listed companies. based on human resource development. It is organized into three main sections.

The first section presents a quantitative analysis, utilizing descriptive statistics and constructing a structural equation model to examine the impact of human resource development on employee performance. The model explores the relationships between Human Resource Development (HRD), Employee Performance, and Sustainable Organizational Performance. Key dimensions include Organization Development (OD), Career Development (CD), and Training Development (TD) for HRD, as well as Leadership (L), Motivation (M), Job Satisfaction (JS), and Work Environment (WE) for Employee Performance, and Talent Attraction (TA), Talent Retention (TR), Learning and Development (LD), and Career Management (CM) for Sustainable Organizational Performance.

The second section involves qualitative research, which entails conducting in-depth interviews with managers from Xiaomi auto-related listed companies. The interviews delve into how human resource development practices influence sustainable organization performance, focusing on training development, leadership practices, and

career management strategies. Content analysis was used to interpret the interview content and identify themes and patterns to support the quantitative findings.

Finally, this chapter integrates the qualitative and quantitative research results to summarize the impact of human resource development on employee performance. The combined findings provide a comprehensive understanding of how Xiaomi's human resource development strategies contribute to achieving higher employee performance and sustainable organizational performance.

The research primarily targeted employees from Xiaomi auto-related listed companies, ensuring the validity, reliability, and relevance of the data. A professional survey platform, Questionnaire Star (https://www.wjx.cn/), was used for the online survey. A total of 400 questionnaires were distributed, with all responses being collected successfully, resulting in a validity rate of 100%. This high rate enhances the reliability and effectiveness of the study. By focusing on managers, the study ensures that the insights reflect the strategic practices and real-world challenges faced in human resource development at Xiaomi auto-related Listed Companies.

4.1 Quantitative Data Analysis

4.1.1 Descriptive Statistical Analysis

Demographic analysis of the survey sample group reveals that there are 197 males, accounting for 49.25%, and 203 females, accounting for 50.75%. This indicates a relatively balanced gender distribution within the survey sample.

Regarding age distribution, the largest group comprises individuals aged 31–40, with 131 individuals accounting for 32.75%. This is followed by those aged 20–30, with 114 individuals representing 28.5%, and those aged 41–50, with 101 individuals accounting for 25.25%. The smallest group consists of individuals aged 50 and above, totaling 54, which represents 13.5%. Overall, the respondents are predominantly middle-aged.

Regarding academic qualifications, individuals holding a bachelor's degree constitute the largest group, with 172 respondents accounting for 43%. This is followed by those with a master's degree, numbering 118, and accounting for 29.5%. The next group includes undergraduates, totaling 73 respondents (18.25%), while those with a doctorate degree represent 9.25%, with 37 respondents. These results suggest that most participants have a strong academic background.

Regarding management positions, operators form the largest group, with 183 individuals accounting for 45.75%. Managers represent the second largest group, totaling 121 respondents, which constitutes 30.25%. General managers account for 12.5% of respondents (50 individuals), while those in "other" positions make up 7% (28 individuals). These findings indicate that the survey sample includes a wide range of administrative roles.

Finally, considering work experience, the largest group comprises individuals with 4–6 years of experience, totaling 130 respondents and accounting for 32.5%. This is followed by those with 1–3 years of experience, numbering 110 and accounting for 27.5%. Respondents with 7–9 years of experience total 73 individuals (18.25%), while those with more than 10 years of experience account for 10.75% (43 respondents). The smallest group includes individuals with less than 1 year of experience, totaling 44 respondents (11%). These results highlight a workforce predominantly in the mid-range of experience.

Table 4.1 Basic Information of Questionnaire Respondents

Items	Categories	N	Percent (%)	Cumulative Percent (%)
Gender	Male	197	49.25	49.25
	Female	203	50.75	100
Age	20-30	114	28.5	28.5
	31-40	131	32.75	61.25
	41-50	101	25.25	86.5
	50+	54	13.5	100

Items	Categories	N	Percent (%)	Cumulative Percent (%)
Academic Qualification	Undergraduate	73	18.25	18.25
	Bachelor	172	43	61.25
	Master	118	29.5	90.75
	Doctorate	37	9.25	100
Management Position	Executive	18	4.5	4.5
	General Manager	50	12.5	17
	Manager	121	30.25	47.25
	Operator	183	45.75	93
	Others	28	7	100
Work Experience	Within 1 year	44	11	11
	1-3 years	110	27.5	38.5
	4-6 years	130	32.5	71
	7-9 years	73	18.25	89.25
	10+ years	43	10.75	100
Total		**400**	**100**	**100**

4.1.2 Percentage Distribution of Factors

Descriptive statistics of variables refers to statistical methods that summarize and describe one or more variables. It provides information about the central tendency, degree of dispersion, distribution shape, and other relevant statistical indicators of the variable. This study included mean, standard deviation, median, kurtosis, skewness and other indicators of numerical variables.

Table 4.2 Percentage Distribution of Human Resource Development Scale

Statement	Strongly Disagree (%)	Disagree (%)	Neutrality (%)	Agree (%)	Strongly Agree (%)	Mean Value	Standard Deviation
OD1	5.5	14.75	20	35.5	24.25	3.567	0.918
OD2	4.25	13.25	28	32.5	22		
OD3	3.25	12.5	28.25	34	22		

Statement	Strongly Disagree (%)	Disagree (%)	Neutrality (%)	Agree (%)	Strongly Agree (%)	Mean Value	Standard Deviation
OD4	4	13.5	26	33.25	23.25		
OD5	4.5	14.75	26.75	31	23		
CD1	4.5	12	26.75	36.25	20.5		
CD2	3	13.25	27.25	37	19.5		
CD3	2.5	11.25	29.75	38.5	18	3.565	0.885
CD4	3	14.5	26.75	36	19.75		
CD5	3.5	13.75	26.25	36	20.5		
TD1	9.5	12	24.25	31.25	23		
TD2	6.75	12.5	26	32.75	22		
TD3	7	13.75	26.5	30.25	22.5	3.463	1.031
TD4	9	13.5	27.25	28.75	21.5		
TD5	6.75	12.75	29.25	29.25	22		

From the perspective of mean, the mean range of OD dimension was from 3.567 (OD) to 3.463 (TD), the mean range of CD dimension was similar to OD dimension, while the mean value of TD dimension was the lowest (3.463), indicating that the respondents' recognition of TD measurement item was lower than the OD and CD dimension. From the standard deviation, OD was 0.918, 0.885 for CD and 1.031 for TD, indicating the high divergence of the measurement item and the high dispersion of attitudes. In terms of specific items, the mean value of OD was 3.567 and the standard deviation was 0.918, indicating that the overall identity of the measurement item is high and the data distribution is relatively concentrated. The mean value of CD was 3.565 and the standard deviation was 0.885, indicating that the respondents were close to OD, but the data distribution was more concentrated. However, the mean value of TD was only 3.463, and the standard deviation was as high as 1.031, indicating that the attitudes of the respondents toward this measurement item were quite different, and some respondents may hold strong objections or uncertain attitude. In general, the means of OD and CD

dimensions were high, and the overall recognition of respondents was high, while the mean of TD dimension was low and the standard deviation was high, indicating that the measurement items of this dimension may have large recognition differences.

Table 4.3 Percentage Distribution of Employee Performance Scale

Statement	Strongly Disagree (%)	Disagree (%)	Neutrality (%)	Agree (%)	Strongly Agree (%)	Mean Value	Standard Deviation
L1	6.25	19.5	28	28.5	17.75	3.344	0.972
L2	6	16.75	28.75	30.75	17.75		
L3	6	17.25	31.5	27	18.25		
L4	5.25	17.25	32.75	26.5	18.25		
L5	6.25	18.25	29	29.25	17.25		
M1	6.5	12.5	28.5	29.75	22.75	3.482	0.925
M2	5.25	16.75	25	33.25	19.75		
M3	5	14.75	27.75	31.25	21.25		
M4	5.25	14.25	28.5	30	22		
M5	3.75	14.5	31.5	31	19.25		
JS1	7.75	15.5	29	25.75	22	3.38	1.013
JS2	8	17	28	28.5	18.5		
JS3	7.25	13	31.25	26.5	22		
JS4	6.25	15.25	31.25	27.5	19.75		
JS5	8.5	14	30	27.5	20		
WE1	7.25	17	27.75	30.25	17.75	3.399	0.907
WE2	6.25	15.75	28	32	18		
WE3	7	17.25	28.25	30.75	16.75		
WE4	6.5	15.5	29.75	30.75	17.5		
WE5	4	11.75	30.75	32	21.5		

From the perspective of the mean, the mean value of the M dimension was the highest, 3.482, and the standard deviation was 0.925, indicating that the respondents

generally agreed with the measurement items of the M dimension and their attitudes were relatively concentrated. The mean of the L dimension was the lowest (3.344) and the standard deviation was 0.972, indicating that there was a large divergence in the measurement among the respondents. The mean of the JS dimension was also low, 3.38, and the standard deviation was the highest 1.013, indicating that the attitudes of respondents to this measure were quite different. The mean value of WE was 3.399 and the standard deviation was 0.907, indicating that the respondents' identification with the WE measurement items was relatively consistent. From the perspective of standard deviation, the standard deviation of JS was the highest, 1.013, followed by L, 0.972, and M, 0.925, indicating that the attitudes of JS were the most scattered and there was a large divergence, while the standard deviation of the M dimension was relatively low, indicating that the evaluation of the measured items of this dimension was more concentrated and the degree of recognition among the respondents was higher. On the whole, the M dimension had the highest mean value, and the respondents had a higher degree of recognition and consistent attitudes towards this dimension. The mean value of the WE dimension was the second, indicating that the respondents had a relatively high degree of identification with this dimension. The mean values of L and JS dimensions were low, especially the standard deviation of the JS dimension was larger, and indicating that there may be a large identity difference between the measurement items of this dimension, and further analysis of the influencing factors is needed.

Table 4.4 Percentage Distribution of Sustainable Organizational Performance Scale

Statement	Strongly Disagree (%)	Disagree (%)	Neutrality (%)	Agree (%)	Strongly Agree (%)	Mean Value	Standard Deviation
TA1	5.25	8.5	26.25	34.5	25.5	3.672	0.871
TA2	3.5	6.5	28.5	38.5	23		
TA3	3.75	9	30.25	33.75	23.25		
TA4	3.25	8	31	33.75	24		
TA5	5	7.25	29	32.5	26.25		

Statement	Strongly Disagree (%)	Disagree (%)	Neutrality (%)	Agree (%)	Strongly Agree (%)	Mean Value	Standard Deviation
TR1	5.5	10.5	20.75	37	26.25	3.629	0.915
TR2	5.25	11	24.75	36.25	22.75		
TR3	3.25	13	26.25	35.5	22		
TR4	3.5	11	26.25	35.25	24		
TR5	4	14	24.75	31.5	25.75		
LD1	5.25	10.25	21.75	36.75	26	3.652	0.956
LD2	6	8.25	26.25	34.5	25		
LD3	6	10.5	24.5	35	24		
LD4	4.5	10.75	25.5	31.25	28		
LD5	6.25	8.5	24.5	34.5	26.25		
CM1	4.5	11.5	25.25	33.75	25	3.605	0.942
CM2	6.5	10.25	25.5	34.5	23.25		
CM3	4.25	10	29.5	29	27.25		
CM4	4.5	12	28	29.75	25.75		
CM5	4.75	12.75	27.25	31.75	23.5		

From the perspective of the mean, the mean value of the TA dimension was the highest 3.672, and the standard deviation was 0.871, indicating that the respondents had a high degree of agreement with the measurement item and their attitudes were relatively concentrated. The mean value of TR was slightly lower than that of TA, 3.629, and the standard deviation was 0.915, indicating that the respondents of this measure item had a high overall degree of agreement, but the degree of dispersion was relatively large. The mean value of LD dimension was 3.652, with a standard deviation of 0.956, indicating that the respondents had a high degree of agreement with the LD dimension, but there were some differences in attitudes. The mean value of CM was the lowest, 3.605, and a standard deviation of 0.942, indicating that respondents had a low degree of agreement with CM measurement items and the data distribution was scattered. From the perspective of standard deviation, the standard deviation of LD was the highest, 0.956,

followed by CM (0.942) and TR (0.915), indicating that the attitudes of LD were the most scattered and divergent, while the standard deviation of TA was the lowest (0.871), indicating that the respondents had a more consistent attitude and higher degree of agreement. On the whole, the TA dimension had the highest mean value, and the respondents' recognition of this dimension was higher and their attitudes were more consistent. The mean values of TR and LD dimensions were the second, indicating that the respondents had a high degree of recognition with these two dimensions, but there were some differences in attitudes. The mean value of the CM dimension was the lowest, and the standard deviation was high, indicating that there may be a large identity difference in the measurement items of this dimension, and the influencing factors need to be further analyzed.

4.1.3 Exploratory Factor Analysis

The data were further analyzed for validity using Exploratory Factor Analysis (EFA), beginning with the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. The KMO value assessed the suitability of the questionnaire data for factor analysis, while Bartlett's test was employed to evaluate the presence of significant correlations among the variables. Generally, KMO values greater than 0.7 are considered suitable for factor analysis, and Bartlett's test result with a significance level less than 0.05 indicates a correlation among the data.

Table 4.5 KMO and Bartlett Test

KMO		0.931
Bartlett's Test of Sphericity	**Approximate Chi-Square**	15094.512
	df	1485
	p -value	0

As shown in Table 4.5, the KMO value is 0.931, which exceeds the threshold of 0.7, thus meeting the prerequisites for factor analysis. This implies that the data are appropriate for factor analysis. Additionally, the data passed Bartlett's test of sphericity (χ^2 = 15094.512, df = 1485, $p < 0.05$), indicating that the research data is suitable for factor analysis.

Table 4.6 Principal Component Analysis (PCA)

Factor Number	Eigenvalue (%)			Variance Explained (%) Before Rotation			Variance Explained (%) After Rotation		
	Eigenvalue	Variance Explained (%)	Cumulative Variance Explained (%)	Eigenvalue	Variance Explained (%)	Cumulative Variance Explained (%)	Eigenvalue	Variance Explained (%)	Cumulative Variance Explained (%)
1	16.762	30.476	30.476	16.762	30.476	30.476	3.883	7.059	7.059
2	4.562	8.294	38.77	4.562	8.294	38.77	3.726	6.775	13.834
3	3.887	7.067	45.837	3.887	7.067	45.837	3.644	6.626	20.46
4	2.058	3.742	49.579	2.058	3.742	49.579	3.629	6.597	27.058
5	1.958	3.56	53.139	1.958	3.56	53.139	3.573	6.497	33.554
6	1.903	3.46	56.6	1.903	3.46	56.6	3.55	6.455	40.009
7	1.838	3.341	59.941	1.838	3.341	59.941	3.535	6.428	46.437
8	1.691	3.075	63.016	1.691	3.075	63.016	3.484	6.335	52.772
9	1.651	3.001	66.017	1.651	3.001	66.017	3.429	6.235	59.007
10	1.462	2.659	68.676	1.462	2.659	68.676	3.379	6.144	65.152
11	1.352	2.458	71.134	1.352	2.458	71.134	3.29	5.983	71.134
12	0.818	1.488	72.622	-	-	-	-	-	-
13	0.749	1.362	73.984	-	-	-	-	-	-
14	0.698	1.268	75.252	-	-	-	-	-	-
15	0.638	1.159	76.412	-	-	-	-	-	-
16	0.62	1.127	77.539	-	-	-	-	-	-
17	0.601	1.093	78.632	-	-	-	-	-	-
18	0.582	1.057	79.69	-	-	-	-	-	-
19	0.551	1.003	80.692	-	-	-	-	-	-
20	0.512	0.931	81.623	-	-	-	-	-	-
21	0.496	0.902	82.525	-	-	-	-	-	-
22	0.479	0.872	83.397	-	-	-	-	-	-
23	0.473	0.86	84.257	-	-	-	-	-	-
24	0.458	0.833	85.09	-	-	-	-	-	-
25	0.446	0.81	85.9	-	-	-	-	-	-
26	0.408	0.742	86.642	-	-	-	-	-	-

Factor Number	Eigenvalue (%)			Variance Explained (%) Before Rotation			Variance Explained (%) After Rotation		
	Eigenvalue	Variance Explained (%)	Cumulative Variance Explained (%)	Eigenvalue	Variance Explained (%)	Cumulative Variance Explained (%)	Eigenvalue	Variance Explained (%)	Cumulative Variance Explained (%)
27	0.398	0.724	87.366	-	-	-	-	-	-
28	0.379	0.689	88.055	-	-	-	-	-	-
29	0.363	0.66	88.715	-	-	-	-	-	-
30	0.355	0.645	89.36	-	-	-	-	-	-
31	0.346	0.63	89.989	-	-	-	-	-	-
32	0.326	0.592	90.581	-	-	-	-	-	-
33	0.321	0.583	91.164	-	-	-	-	-	-
34	0.306	0.556	91.72	-	-	-	-	-	-
35	0.294	0.534	92.255	-	-	-	-	-	-
36	0.288	0.524	92.778	-	-	-	-	-	-
37	0.284	0.516	93.295	-	-	-	-	-	-
38	0.278	0.505	93.8	-	-	-	-	-	-
39	0.257	0.467	94.266	-	-	-	-	-	-
40	0.256	0.466	94.732	-	-	-	-	-	-
41	0.238	0.434	95.166	-	-	-	-	-	-
42	0.234	0.425	95.591	-	-	-	-	-	-
43	0.228	0.415	96.006	-	-	-	-	-	-
44	0.226	0.411	96.417	-	-	-	-	-	-
45	0.215	0.391	96.808	-	-	-	-	-	-
46	0.208	0.378	97.186	-	-	-	-	-	-
47	0.202	0.366	97.552	-	-	-	-	-	-
48	0.188	0.341	97.894	-	-	-	-	-	-
49	0.183	0.333	98.227	-	-	-	-	-	-
50	0.179	0.326	98.553	-	-	-	-	-	-
51	0.173	0.314	98.867	-	-	-	-	-	-
52	0.168	0.306	99.173	-	-	-	-	-	-
53	0.16	0.292	99.465	-	-	-	-	-	-
54	0.15	0.272	99.737	-	-	-	-	-	-
55	0.145	0.263	100	-	-	-	-	-	-

In this study, a total of 11 common factors with feature root values greater than 1 were extracted by the maximum variance method, and the cumulative interpretation rate reached 71.134%, indicating that the data had a high interpretation rate for the questionnaire. Common Method Bias (CMB) refers to the measurement error that may

occur when researchers use a single data source (e.g., the same questionnaire) to collect data on explanatory and explanatory variables. This bias often occurs in surveys that use self-report questionnaires, especially when all the data is reported by respondents about perceptions or attitudes at the same point in time. The Harman one-way test was used in this study, and if the variance of the first factor explanation is greater than 50%, it indicates that there may be a significant common method bias in the data. In this study, SPSS22 was used and the unrotated exploratory factor analysis was used, and the explanation rate of the variance was 30.476%, which did not exceed the threshold of 40% of the test, so it can be considered that there is no common method bias in the survey data.

Finally, the rotated component matrix was used to test the correspondence between the items and the preset dimensions, and the absolute value of the factor loading coefficients was greater than 0.4, indicating a correspondence between the options and the factors. In summary, the scale data of this questionnaire passed the KMO test, Bartlett's test of sphericity, principal component analysis, and the rotated factor loading test. These results indicate that the correspondence between the question items and the preset dimensions of this questionnaire is valid, and the scale data of this questionnaire is reliable.

Table 4.7 Table of Rotational Load Factors

Statement	Factor Loadings										
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**	**Factor 6**	**Factor 7**	**Factor 8**	**Factor 9**	**Factor 10**	**Factor 11**
OD1									0.693		
OD2									0.786		
OD3									0.738		
OD4									0.705		
OD5									0.744		
CD1			0.756								
CD2			0.75								
CD3			0.799								
CD4			0.75								
CD5			0.755								
TD1	0.794										

Statement	Factor Loadings										
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11
TD2	0.79										
TD3	0.794										
TD4	0.79										
TD5	0.815										
L1					0.774						
L2					0.702						
L3					0.755						
L4					0.746						
L5					0.723						
M1										0.696	
M2										0.761	
M3										0.721	
M4										0.719	
M5											
JS1		0.787									
JS2		0.749									
JS3		0.751									
JS4		0.762									
JS5		0.773									
WE1											0.737
WE2											0.8
WE3											0.805
WE4											0.721
WE5											0.493
TA1							0.771				
TA2							0.736				
TA3							0.769				
TA4							0.774				
TA5							0.746				
TR1								0.759			
TR2								0.744			
TR3								0.73			
TR4								0.781			
TR5								0.724			
LD1						0.747					
LD2						0.79					
LD3						0.753					
LD4						0.731					
LD5						0.723					

Statement	Factor Loadings										
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10	Factor 11
CM1				0.793							
CM2				0.773							
CM3				0.717							
CM4				0.792							
CM5				0.783							

The data in this study were rotated using the maximum variance rotation method (varimax) in order to find the correspondence between the factors and the study items. After excluding the small coefficient (less than 0.4), it can be seen that the factor load of the corresponding dimension of the question item exceeds 0.4, and the correspondence is consistent with the preset, indicating that the data in this study have good validity.

4.1.4 Reliability, Validity, and Confirmatory Factor Analysis

This study utilized SPSS 27.0 and AMOS 23.0 to conduct reliability testing, validity testing, and confirmatory factor analysis on 400 valid questionnaires. The analysis followed a two-step process. First, the reliability and validity of the questionnaire data were evaluated. Second, structural equation modeling was performed once the reliability and validity were confirmed.

4.1.4.1 Reliability Analysis

Cronbach's alpha coefficient was used to measure the internal consistency of the data, thereby assessing its reliability. Generally, a Cronbach's alpha value greater than 0.7 indicates good reliability. Based on the analysis of the Cronbach's alpha values, the reliability coefficient for the 55 items in the questionnaire was calculated to be 0.957. This result demonstrates that the data in this study exhibit high overall reliability. For details, refer to Table 4.8.

Table 4.8 Reliability Test

Cronbach's Alpha	N of items
0.957	55

1. Human Resource Development

The reliability of the data was evaluated using Cronbach's alpha and Corrected Item Total Correlation (CITC). A Cronbach's alpha value greater than 0.7 indicates strong internal consistency, while CITC values greater than 0.5 suggest good reliability at the item level.

As shown in Table 4.9, the Cronbach's alpha values for the dimensions—OD (0.882), CD (0.878), and TD (0.916)—all exceed 0.7, confirming that the reliability of each dimension is strong. Furthermore, the CITC values for all items across the dimensions are greater than 0.4, indicating that the reliability at the item level is adequate. These results confirm that the reliability of the dimensions and the questionnaire as a whole meets the required standards. For details, refer to Table 4.9.

Table 4.9 Reliability Analysis of Human Resource Development Scale

Dimension	Item	Corrected Item Total Correlation	Cronbach's Alpha
OD	OD1	0.714	0.882
	OD2	0.727	
	OD3	0.714	
	OD4	0.728	
	OD5	0.705	
CD	CD1	0.749	0.878
	CD2	0.748	
	CD3	0.755	
	CD4	0.749	
	CD5	0.752	
TD	TD1	0.776	0.916
	TD2	0.784	
	TD3	0.78	
	TD4	0.789	
	TD5	0.796	

2. Employee Performance

The Cronbach's alpha reliability coefficients for the four indicator dimensions—L, M, JS, and WE—ranged from 0.86 to 0.909, all of which exceed the threshold of 0.7, demonstrating strong internal consistency and reliability for each dimension. Furthermore, the Corrected Item Total Correlation (CITC) values for all items are greater than 0.5, which indicates reasonable reliability at the item level. These results confirm that the data for the questionnaire meet the required reliability standards. The detailed results are presented in Table 4.10.

Table 4.10 Reliability Analysis of Employee Performance Scale

Dimension	Item	Corrected Item Total Correlation	Cronbach's Alpha
L	L1	0.782	0.907
	L2	0.769	
	L3	0.779	
	L4	0.746	
	L5	0.747	
M	M1	0.705	0.878
	M2	0.741	
	M3	0.726	
	M4	0.702	
	M5	0.701	
JS	JS1	0.797	0.909
	JS2	0.793	
	JS3	0.77	
	JS4	0.762	
	JS5	0.732	
WE	WE1	0.729	0.86
	WE2	0.752	
	WE3	0.77	
	WE4	0.689	
	WE5	0.458	

3. Sustainable Organizational Performance

The Cronbach's alpha reliability coefficients for the four indicator dimensions—TA, TR, LD, and CM—ranged from 0.882 to 0.901, all of which exceed the threshold of 0.8. These results demonstrate that the reliability of the dimensions is suitable, indicating strong internal consistency. Furthermore, the Corrected Item Total Correlation (CITC) values for all items are greater than 0.5, which confirms the reliability of each item within the dimensions. These findings indicate that the data meet the internal consistency and reliability requirements. The detailed results are summarized in Table 4.11.

Table 4.11 Reliability Analysis of Sustainable Organizational Performance Scale

Dimension	Item	Corrected Item Total Correlation	Cronbach's Alpha
TA	TA1	0.736	0.882
	TA2	0.678	
	TA3	0.728	
	TA4	0.717	
	TA5	0.728	
TR	TR1	0.759	0.887
	TR2	0.738	
	TR3	0.692	
	TR4	0.725	
	TR5	0.72	
LD	LD1	0.743	0.901
	LD2	0.772	
	LD3	0.778	
	LD4	0.737	
	LD5	0.741	
CM	CM1	0.758	0.895
	CM2	0.747	
	CM3	0.708	
	CM4	0.753	
	CM5	0.743	

4.1.4.2 Validity Analysis

Validation factor analysis was conducted in this study to examine the scale's validity. Following the standards set by prior studies, the minimum acceptable Average Variance Extracted (AVE) value is 0.5 (Hair et al., 2010), and the minimum Composite Reliability (CR) value is 0.7 (Fornell & Larcker, 1981). The results indicate good convergent validity and composite reliability.The structural equation model was utilized for this study, with AMOS and SPSS software aiding the analysis. The process included two main steps:

Fitness Test: The model's fitness was tested, and all key indexes satisfied the established criteria.

Parameter Estimation: This phase involved determining reliability and validity analysis results based on parameter estimates.

Human Resource Development

As seen in Table 4.12, all indicators meet the evaluation criteria, demonstrating that the model fits well and possesses strong structural validity. The results from the fitness test are as follows:

Table 4.12 Assessment of the Overall Fit Degree of the Model

Inspection Index	**χ2/df**	**GFI**	**AGFI**	**RMSEA**	
Evaluation	<3	>0.9	>0.9	<0.1	
Test Result	2.492	0.933	0.908	0.061	
Inspection Index	IFI	TLI	CFI	PGFI	PNFI
Evaluation	>0.9	>0.9	>0.9	>0.5	>0.5
Test Result	0.966	0.959	0.966	0.677	0.783

The CMIN/DF value of the initial model is 2.492, meeting the standard of being less than 3.The GFI (Goodness of Fit Index) value is 0.933, and the AGFI (Adjusted

Goodness of Fit Index) is 0.908, both exceeding the minimum threshold of 0.9.The RMSEA (Root Mean Square Error of Approximation) value is 0.061, which is within the acceptable range of less than 0.1.Other indexes, such as IFI, TLI, and CFI, yielded values of 0.966, 0.959, and 0.966, respectively, all surpassing the minimum acceptable value of 0.9.Additionally, the PGFI and PNFI values are 0.677 and 0.783, both meeting the >0.5 criterion.

Aggregate Validity

In order to evaluate the measurement model, the reliability and validity of all latent variables in the model were tested. First, the reliability and consistency of the model were checked. The CR value of the combined reliability is greater than 0.6 (Wu Minglong, 2010), indicating that the model has good consistency and reliability. Secondly, the validity of the model was judged by testing the aggregate validity, and the Loading coefficient and AVE value were usually used to evaluate the convergence validity of the model, Loading represents the degree of explanation of the factors by each item, which is usually required to be greater than 0.6, and AVE is the ratio of the latent variable that can explain the variation of the item, and the general judgment index is >0.5. (Wu Minglong, 2010). The loading coefficients in the model are greater than 0.6, and the AVE value is greater than 0.5, indicating that the convergence effect of the research model is good, as shown in Table 4.13, Figure 4.1.

Table 4.13 Validity Analysis of Human Resource Development Scale

Dimension	Item	Standard Load Factor	AVE	CR
OD	OD5	0.784	0.601	0.883
	OD4	0.776		
	OD3	0.763		
	OD2	0.797		
	OD1	0.753		
CD	CD5	0.802	0.642	0.9
	CD4	0.797		
	CD3	0.8		

Dimension	Item	Standard Load Factor	AVE	CR
	CD2	0.801		
	CD1	0.806		
TD	TD5	0.819	0.687	0.916
	TD4	0.831		
	TD3	0.821		
	TD2	0.834		
	TD1	0.838		

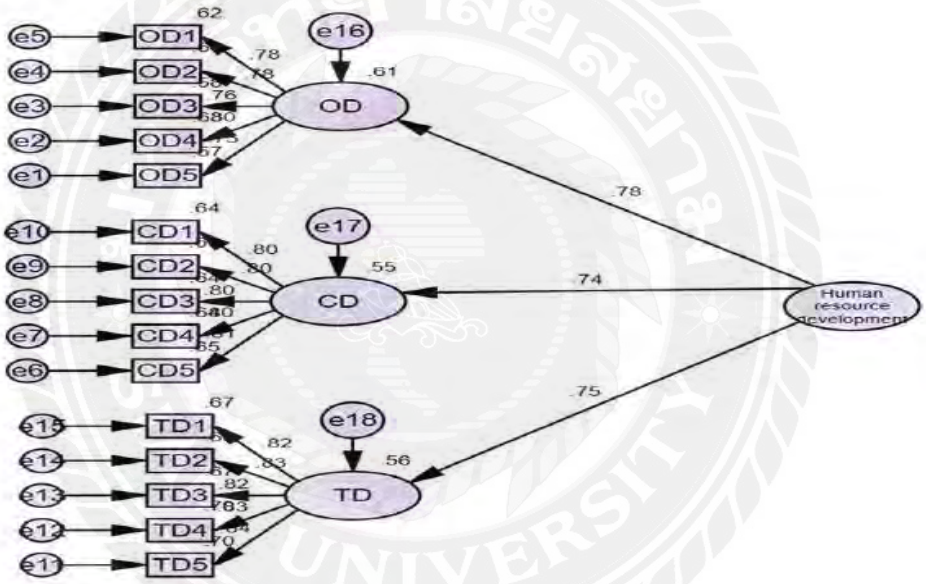

Figure 4.1 Dynamic Confirmatory Factor Analysis Model of Human Resource Development

As shown in Table 4.14, the correlation coefficients between each factor are lower than the square root of that factor's AVE, indicating that all constructs in the research model exhibit discriminant validity. Additionally, the Pearson correlation coefficients are below 0.9, and no covariance issues are present, fulfilling the requirements for analyzing and interpreting structural equation modeling.

Table 4.14 Distinguishing Validity Analysis

Dimension	OD	CD	TD
OD	0.775		
CD	0.516	0.801	
TD	0.526	0.504	0.829

2. Employee Performance

As shown in Table 4.15, all indicators meet the evaluation criteria, demonstrating that the model fits well and possesses structural validity. The CMIN/DF value of the model is 1.938, which is within the acceptable range of less than 3. Additionally, the GFI (Goodness of Fit Index) value is 0.925, and the AGFI (Adjusted Goodness of Fit Index) is 0.905, both exceeding the minimum threshold of 0.9. The RMSEA (Root Mean Square Error of Approximation) value is 0.048, which is less than 0.1, indicating a good model fit.

For incremental fit indices, the IFI (Incremental Fit Index) value is 0.967, the TLI (Tucker-Lewis Index) value is 0.964, and the CFI (Comparative Fit Index) value is 0.969, all surpassing the required minimum of 0.9. Additionally, the PGFI (Parsimony Goodness of Fit Index) value is 0.722, and the PNFI (Parsimony Normed Fit Index) value is 0.81, both exceeding the standard value of 0.5. These results confirm that the path relationship model has strong fit coefficients and is suitable for further analysis.

Table 4.15 Employee Performance Indicators Fit Results Measurement Model

Inspection Index	χ2/df	GFI	AGFI	RMSEA	
Evaluation	<3	>0.9	>0.9	<0.1	
Test Result	1.967	0.925	0.904	0.049	
Inspection Index	IFI	TLI	CFI	PGFI	PNFI
Evaluation	>0.9	>0.9	>0.9	>0.5	>0.5
Test Result	0.969	0.964	0.969	0.722	0.81

The common used model fit indicators include: chi-square / degree of freedom ratio (CMIN / df): usually required between 1 and 3, the smaller the value, the better the model fit. Goodness of fit index (Goodness of Fit Index, GFI) and adjusted goodness of fit index (AGFI): generally require GFI and AGFI values greater than 0.9. Compative fit index (Comparative Fit Index, CFI): usually requires CFI values greater than 0.9. Root mean square error approximation (Root Mean Square Error of Approximation, RMSEA): usually requires that RMSEA is less than 0.08, the lower the better.

Table 4.16 Validity Analysis of Employee Performance Scale

Dimension	Item	Standard Load Factor	AVE	CR
L	L5	0.828	0.66	0.907
	L4	0.825	0.592	0.879
	L3	0.826	0.669	0.91
	L2	0.789	0.572	0.867
	L1	0.794	0.66	0.907
M	M5	0.769	0.592	0.879
	M4	0.792	0.669	0.91
	M3	0.794	0.572	0.867
	M2	0.731	0.66	0.907
	M1	0.759	0.592	0.879
JS	JS5	0.843	0.669	0.91
	JS4	0.848	0.572	0.867
	JS3	0.818	0.66	0.907
	JS2	0.806	0.592	0.879
	JS1	0.771	0.669	0.91
WE	WE5	0.806	0.572	0.867
	WE4	0.814	0.66	0.907
	WE3	0.836	0.592	0.879
	WE2	0.768	0.669	0.91
	WE1	0.605	0.572	0.867

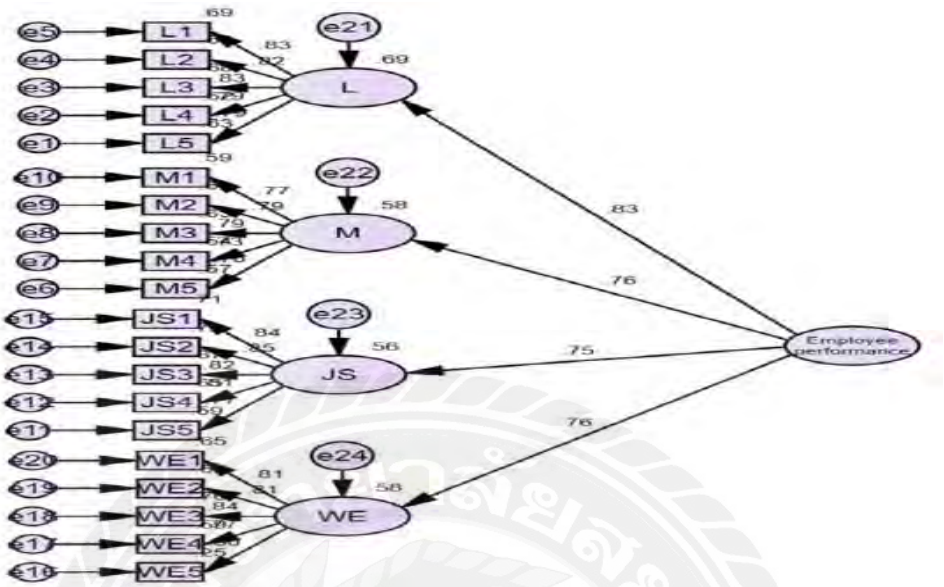

Figure 4.2 Dynamic Confirmatory Factor Analysis Model of Employee Performance

As observed in Table 4.17, the correlation coefficients between any given factor and the other factors are consistently lower than the square root of that factor's AVE. This indicates that all constructs within the research model demonstrate discriminant validity. Furthermore, the Pearson correlation coefficients do not exceed 0.9, confirming the absence of covariance issues. These findings meet the necessary criteria for conducting structural equation modeling analysis.

Table 4.17 Distinguishing Validity Analysis

Dimension	L	M	JS	WE
L	0.813			
M	0.574	0.769		
JS	0.567	0.501	0.818	
WE	0.571	0.521	0.536	0.756

Differentiating validity is used to measure the independence between different concepts or measures. In this study, the Fornell-Larcke method was used to evaluate the discriminatory validity. According to the Fornell-Larcker ratio of the correlation, it can be seen from Table 4.17 that the correlation coefficient between one factor and another

factor is less than the square root of the AVE of that factor (Fornell & Larcker, 1981). It shows that all constructs of the study model have certain discriminative validity.

2. Sustainable Organizational Performance

As seen in Table 4.18, all the indicators meet the criteria, confirming that the model fits well and possesses structural validity. After analyzing the fit indices of the variables, the results show that the χ^2/df value is 1.716, which is below the acceptable threshold of 3, indicating a good model fit. The GFI (Goodness of Fit Index) value is 0.935, and the AGFI (Adjusted Goodness of Fit Index) value is 0.917, both exceeding the recommended threshold of 0.9, indicating a satisfactory fit. Furthermore, the RMSEA (Root Mean Square Error of Approximation) value is 0.042, which is less than 0.1, confirming a strong model fit. The IFI (Incremental Fit Index) value is 0.975, the TLI (Tucker-Lewis Index) value is 0.972, and the CFI (Comparative Fit Index) value is 0.975, all of which are above the threshold of 0.9, indicating excellent incremental and comparative fit. Lastly, the PGFI (Parsimony Goodness of Fit Index) value is 0.73, and the PNFI (Parsimony Normed Fit Index) value is 0.814, both exceeding the minimum threshold of 0.5, demonstrating acceptable levels of parsimony in the model. In conclusion, all the indicators confirm that the path relationship model fits well and exhibits strong structural validity, validating the robustness of the model.

Table 4.18 Sustainable Organizational Performance Indicators Fit Results Measurement Model

Inspection Index	**χ2/df**	**GFI**	**AGFI**	**RMSEA**	
Evaluation	<3	>0.9	>0.9	<0.1	
Test Result	1.716	0.935	0.917	0.042	
Inspection Index	IFI	TLI	CFI	PGFI	PNFI
Evaluation	>0.9	>0.9	>0.9	>0.5	>0.5
Test Result	0.976	0.972	0.975	0.73	0.814

This study utilized the CR (Composite Reliability) and AVE (Average Variance Extracted) values to assess convergent validity. All CR values were above 0.8, while the

AVE values for each construct exceeded the threshold of 0.5, confirming that each factor accounted for at least 50% of the variance in its items. Additionally, all factor loadings were greater than 0.6 and statistically significant. These results demonstrate that the data used in this analysis exhibit strong convergent validity. This is further illustrated in Table 4.19 and Figure 4.3.

Table 4.19 Validity Analysis of Sustainable Organizational Performance Scale

Dimension	Item	Standard Load Factor	AVE	CR
TA	TA5	0.796	0.601	0.883
	TA4	0.729		
	TA3	0.788		
	TA2	0.769		
	TA1	0.79		
TR	TR5	0.825	0.612	0.888
	TR4	0.792		
	TR3	0.747		
	TR2	0.772		
	TR1	0.776		
LD	LD5	0.793	0.647	0.902
	LD4	0.817		
	LD3	0.832		
	LD2	0.786		
	LD1	0.793		
CM	CM5	0.811	0.631	0.895
	CM4	0.802		
	CM3	0.763		
	CM2	0.806		
	CM1	0.79		

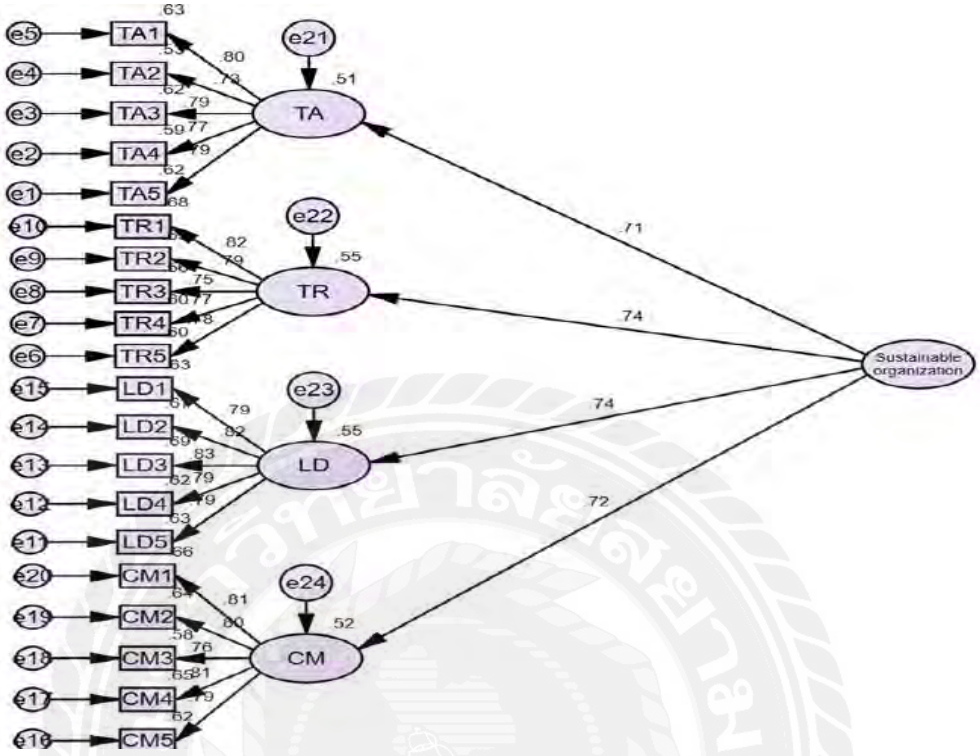

Figure 4.3 Dynamic Confirmatory Factor Analysis Model of Sustainable Organizational Performance

As shown in Table 4.20, the correlation coefficients between each factor and other factors are lower than the square root of that factor's AVE. This confirms that all constructs in the research model demonstrate discriminant validity. Furthermore, none of the Pearson correlation coefficients exceed 0.9, indicating the absence of covariance issues. These findings satisfy the criteria required for conducting structural equation modeling analysis.

Table 4.20 Distinguishing Validity Analysis

Dimension	TA	TR	LD	CM
TA	0.775			
TR	0.448	0.783		
LD	0.5	0.488	0.804	
CM	0.453	0.503	0.468	0.795

Differentiating validity is used to measure the independence between different concepts or measures. In this study, the Fornell-Larcke method was used to evaluate the discriminatory validity. According to the Fornell-Larcker ratio of the correlation, it can be seen from Table 4.20 that the correlation coefficient between one factor and another factor is less than the square root of the AVE of that factor (Fornell & Larcker, 1981). It shows that all constructs of the study model have certain discriminative validity.

4.1.4.3 Confirmatory Factor Analysis

In this study, correlation analysis was conducted to examine the relationships between the dimensions of the variables. Validity and reliability methods were applied to determine the structure of each dimension and the corresponding questions. The average score for each dimension was calculated and used as the representative score for that dimension, which was then used in the correlation analysis. Correlation analysis measures the strength and direction of the relationship between variables, with the correlation coefficient ranging from -1 to 1:

$-1 < r < 0$ indicates a negative correlation between two variables.

$r = 0$ signifies no relationship between the two variables.

$0 < r < 1$ indicates a positive correlation between two variables.

As shown in Table 4.21, the correlation coefficients between the variables range from 0.038 to 0.554, all of which are greater than 0. This demonstrates a positive correlation between the variables.

Table 4.21 Results of Pearson's Correlation Analysis for Each Dimension

	OD	CD	TD	L	M	JS	WE	TA	TR	LD	CM
OD	1										
CD	0.516***	1									
TD	0.526***	0.504***	1								
L	0.313***	0.353***	0.315***	1							
M	0.415***	0.391***	0.308***	0.574***	1						
JS	0.359***	0.376***	0.313***	0.567***	0.501***	1					

	OD	CD	TD	L	M	JS	WE	TA	TR	LD	CM
WE	0.324***	0.311***	0.306***	0.571***	0.521***	0.536***	1				
TA	0.321***	0.292***	0.258***	0.266***	0.330***	0.302***	0.254***	1			
TR	0.378***	0.376***	0.328***	0.338***	0.321***	0.312***	0.235***	0.448***	1		
LD	0.396***	0.363***	0.346***	0.393***	0.390***	0.366***	0.330***	0.500***	0.488***	1	
CM	0.332***	0.273***	0.254***	0.295***	0.314***	0.298***	0.266***	0.453***	0.503***	0.468***	1

Significant positive correlations were common across dimensions ($p < 0.01$). Specifically, there was a strong positive correlation between organizational development (OD) and career development (CD) and training development (TD), with correlation coefficients of 0.516 and 0.526, respectively, indicating the mutual promotion between organizational development and employee career and training development. Leadership (L) was less associated with other dimensions, but still showed a positive correlation, where the correlation coefficient with motivation (M) was 0.574, indicating that leadership promoted employee motivation to some extent. In terms of employee performance, there was a significant positive correlation between job satisfaction (JS) and leadership (L) and motivation (M), with correlation coefficients of 0.567 and 0.501, respectively, indicating that employee job satisfaction was significantly influenced by leadership and incentive measures. There are also strong positive associations between work environment (WE) and motivation (M) and job satisfaction (JS), with correlation coefficients of 0.521 and 0.536, respectively, indicating that a good work environment promotes employee motivation and job satisfaction. In terms of sustainable organizational performance, the correlation coefficient between talent attraction (TA) and talent retention (TR) and learning and development (LD) is high, with 0.448 and 0.500, respectively, indicating that the attraction of excellent talents is closely related to the talent retention and learning development of the company. Career management (CM) is significantly positive associated with all other dimensions, especially with talent attraction (TA) and learning and development (LD), which are 0.453 and 0.468 respectively, indicating that effective career management plays an important role in promoting the talent attraction and development of the company. In general, the positive correlation between the variables indicates that the measures of organizational

development, career development, training development, employee performance and sustainable organization promote each other to a certain extent and have a significant influence on each other, reflecting the synergistic effect of all aspects of the company in management practice.

Table 4.22 demonstrates that the VIF values for the variables range from 1.537 to 1.998, all of which are below the critical threshold of 3. This indicates that there is no significant issue of multicollinearity between the variables. Furthermore, the corresponding tolerance values are all above 0.5, further confirming the absence of multicollinearity concerns. These results suggest that the variables in the model are independent and suitable for further analysis.

Table 4.22 Analysis of the Covariance Test

Item	VIF	Tolerance
OD	1.741	0.574
CD	1.651	0.606
TD	1.588	0.63
L	1.998	0.5
M	1.84	0.543
JS	1.775	0.563
WE	1.762	0.568
TA	1.537	0.651
TR	1.663	0.601
LD	1.737	0.576
CM	1.561	0.641

Covariance test was used to assess the strength of the linear relationship between independent variables in the multiple regression model by calculating the variance inflation factor (VIF) and tolerance (Tolerance) between variables. Ideally, to ensure that collinearity does not seriously affect the regression analysis results, the VIF value should be less than 10 and the tolerance should be greater than 0.1. According to the analysis

results, the VIF values for all variables were below 10, indicating that there is no strong collinearity problem.

4.1.4.4 Structural Equation Models and Hypothesis Testing

To test the fit of the model, structural equation modeling was conducted, and the relevant indicators are as follows: The P-value is 0.385, which is greater than 0.05, indicating that the difference between the modified model and the actual data is not significant. This result demonstrates that the model fits well. The CMIN/df value is 1.032, which is less than the threshold of 5, further confirming that the overall fit of the model is excellent. The GFI (Goodness of Fit Index) value is 0.982, exceeding the threshold of 0.90. This value is very close to 1, signifying that the modified model exhibits a strong fit. The RMSEA (Root Mean Square Error of Approximation) value is 0.009, which is less than the required threshold of 0.08. This minimal RMSEA value indicates that the model's fitting error is extremely low, reflecting an excellent fit. This confirms that the modified model predicts the data exceptionally well. In conclusion, all fit indices meet the required standards, indicating that the modified model fits the data accurately and effectively represents the actual situation, as shown in Table 4.23.

Table 4.23 Model Fit Intercept

Compliance	Criterion	Statistics	Results
GFI	>0.9	0.982	Passed
AGFI	>0.9	0.971	Passed
RMSEA	<0.06	0.009	Passed
NFI	>0.9	0.974	Passed
IFI	>0.9	0.999	Passed
CFI	>0.9	0.999	Passed
RFI	>0.9	0.965	Passed
CMIN/df	<3	1.032	Passed
PGFI	>0.5	0.61	Passed

1. Direct Effect Validation

Based on the AMOS output (Table 4.24), the analysis reveals that Human Resource Development (HRD) has a significant positive effect on both Employee Performance and Sustainable Organizational Performance:

Human Resource Development → Sustainable Organizational Performance:

Estimate = 0.537, Standardized Estimate = 0.668, C.R. =8.476, and $p < 0.001$.

This indicates that HRD significantly improves sustainable organizational performance.

Sustainable Organizational Performance→ Employee Performance:

Estimate = 0.459, Standardized Estimate = 0.347, C.R. = 4.107, and $p < 0.001$.

This shows that higher Sustainable Organizational Performance significantly contributes to the improvement of Employee Performance.

Human Resource Development → Employee Performance:

Estimate = 0.433, Standardized Estimate = 0.408, C.R. = 4.723, and $p < 0.001$.

This result demonstrates that HRD has a meaningful and positive influence on Employee Performance.

The results indicate that enhancing Human Resource Development not only improves Employee Performance, but also directly and indirectly contributes to better Sustainable Organizational Performance. These findings highlight the critical role of HRD in fostering employee effectiveness and supporting organizational success.

These relationships are statistically significant, as evidenced by the p-values (all < 0.001) and high C.R. values, indicating strong confidence in the model's outcomes.

Table 4.24 Results of Structural Equation Modeling

Path			Estimate	S.E.	C.R.	P	Std.Estimate
Human Resource Development	→	Sustainable Organizational Performance	0.537	0.063	8.476	***	0.668
Sustainable Organizational Performance	→	Employee Performance	0.459	0.112	4.107	***	0.347

Path			Estimate	S.E.	C.R.	P	Std.Estimate
Human Resource Development	→	Employee Performance	0.433	0.092	4.723	***	0.408

The results show that the causal relationship between human resource development, employee performance, and sustainable organizational performance is apparent. As can be seen from Figure 4.4, the coefficient path directly responds to the relationship between the variables. The research results show that human resource development improves sustainable organizational performance (H1) and employee performance (H3), and human resource development affects employee performance through sustainable organizational performance (H2).

2. Validation of the Mediating Effect

To verify the mediating effect in the structural equation modeling, the process plugin in SPSS was utilized, and the Bootstrap mediating effect test was employed to determine the significance of the mediating effect. The Bootstrap ML method, with 5000 repetitions of the sampling process, was used to analyze the mediating effects, as detailed in Table 4.25.

Indirect Effect: The estimated value for the indirect effect is 0.246, with a 95% confidence interval of [0.134, 0.432] and a p-value of 0.001. The indirect effect is statistically significant, suggesting that there is a meaningful mediation effect between the variables.

Direct Effect: The estimated value for the direct effect is 0.433, with a 95% confidence interval of [0.242, 0.587] and a p-value of 0.001. This indicates that the direct effect is statistically significant, confirming a positive influence of the independent variable on the dependent variable.

Total Effect: The total effect, combining both direct and indirect effects, is estimated at 0.679, with a 95% confidence interval of [0.557, 0.811] and a p-value of 0.001. This demonstrates that the overall effect (direct + indirect) is statistically significant and contributes positively to the relationship.

Effect Share: The effect share is estimated at 0.362, with a 95% confidence interval of [0.195, 0.626] and a p-value of 0.001. This result indicates that the effect share is statistically significant, showing that a significant proportion of the total effect is due to the influence of the direct and indirect effects.

The findings suggest that both direct and indirect effects are statistically significant, with a positive influence from each. The total effect is significant, highlighting the combined impact of both pathways. These results underscore the importance of both the direct and indirect relationships in explaining the overall effect, with the effect share showing the meaningful contribution of both components.

Table 4.25 Test Results of the Mediating Effect of Employee Performance

Paths	Parameter	Estimate	Lower	Upper	P
Human Resource Development→ Sustainable Organizational Performance→ Employee Performance	Indirect Effect	0.246	0.134	0.432	0.001
	Direct Effect	0.433	0.242	0.587	0.001
	Total Effect	0.679	0.557	0.811	0.001
	Effect Share	0.362	0.195	0.626	0.001

3. Research Hypotheses Testing Results

The causal relationship between each variable is shown in Figure 4.4.

OD means Organizational Development.

CD means Career Development.

TD means Training Development.

L means Leadership.

M means Motivation.

JS means Job Sanctification.

WE means Work Environment.

TA means Talent Attraction.

TR means Talent Retention.

LD means Learning and Development.

CM means Career Management.

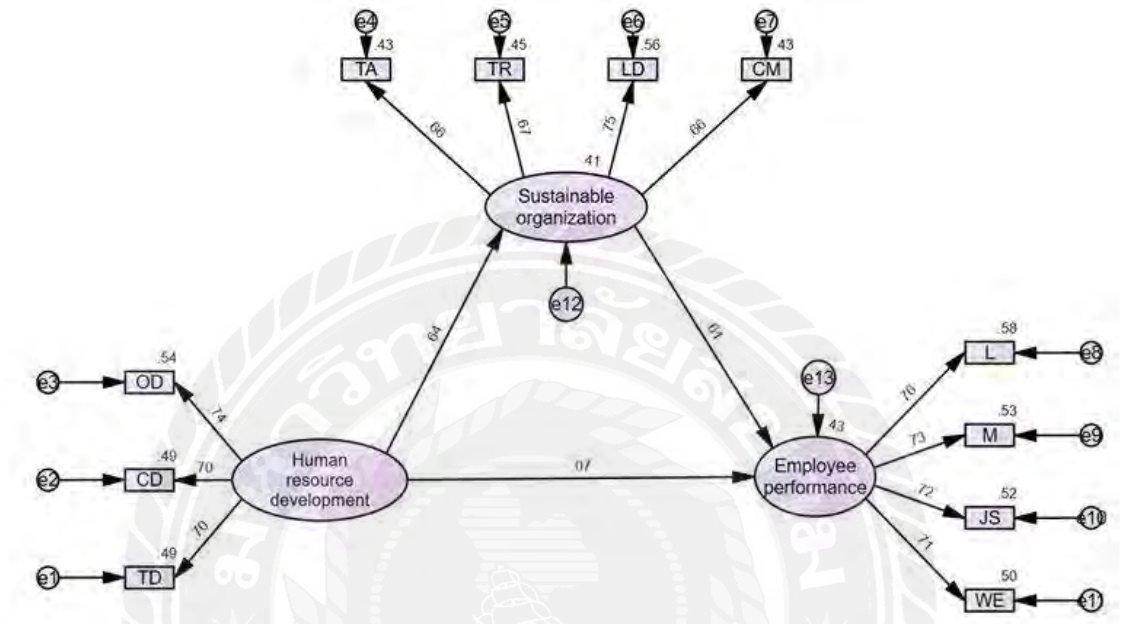

Figure 4.4 The Modified Structural Equation Model

Based on the structural equation modeling analysis (Figure 4.4), the relationships between Human Resource Developments (HRD), Sustainable Organizational Performance, and Employee Performance are highlighted. The latent variables and their respective observed variables are as follows:

Human Resource Development (HRD)

Comprised of the dimensions Organization Development (OD), Career Development (CD), and Training Development (TD).The highest loading is seen for Organizational Development (OD) (0.74), which indicates that development is the most significant contributor to HRD. Training Development (TD) and Career Development (CD) both also contribute to HRD with loadings of 0.70respectively.

Sustainable Organizational Performance

Comprised of Talent Attraction (TA), Talent Retention (TR), Learning and Development (LD), and Career Management (CM).Learning and Development (LD) has

the highest loading (0.75), indicating its critical importance in achieving sustainable performance. Career Management (CM) (0.66), Talent Retention (TR) (0.67), and Talent Attraction (TA) (0.66) also contribute meaningfully.

Path Analysis:

Employee Performance

Dependent on the observed variables Leadership (L), Motivation (M), Job Satisfaction (JS), and Work Environment (WE).The highest contribution comes from Leadership (L) with a loading of 0.76, emphasizing the role of strong leadership in improving employee performance. Other contributors include Motivation (M) (0.73), Job Satisfaction (JS) (0.72), and Work Environment (WE) (0.71), all of which show significant and balanced contributions.

H1: Human Resource Development has a Significant Direct Effect on Sustainable Organizational Performance (Accepted):

The direct path estimate for HRD on sustainable organizational performance is 0.64, with a standard error of 0.064, a critical ratio (C.R.) of 8.476, and a p-value of ***($P < 0.001$). This result indicates that Human Resource Development has a significant and positive effect on sustainable organizational performance, with a strong and statistically significant relationship.

H2: Human Resource Development has a Significant Indirect Effect on Employee Performance through Sustainable Organizational Performance (Accepted):

The path estimate for HRD on sustainable organizational performance is 0.64 ($P < 0.001$), and the path estimate for sustainable organizational performance on employee performance is 0.61 ($P < 0.001$). Both pathways are statistically significant, indicating a meaningful indirect effect. a critical ratio (C.R.) of 4.107. The combined indirect effect of HRD on employee performance through sustainable organizational performance is estimated at 0.39 ($P = 0.001$), confirming the significance of this mediation pathway. This suggests that HRD enhances employee performance indirectly by improving sustainable organizational performance.

H3: Human Resource Development has a Significant Direct Effect on Employee Performance (Accepted):

The direct path estimate from HRD to Employee Performance is 0.07, with a standard error of 0.07, a critical ratio (C.R.) of 4.723, and a p-value of *($P < 0.001$). The standardized path coefficient is 0.408. This indicates that Human Resource Development has a significant direct impact on Employee Performance, although the effect is relatively smaller in magnitude compared to other pathways.

The analysis confirms the central role of Human Resource Development in enhancing Employee Performance, demonstrating that HRD practices including Organizational Development (OD), Career Development (CD), and Training Development (TD) play key roles in driving employee outcomes. Among these HRD dimensions, Organizational Development (OD) is particularly significant in improving employee performance. Furthermore, Employee Performance, influenced by factors like Leadership (L), Motivation (M), Job Satisfaction (JS), and Work Environment (WE), directly contributes to achieving sustainable organizational outcomes.

The model highlights the importance of strategic HRD initiatives in fostering a motivated, skilled, and effective workforce, which ultimately drives organizational success. By focusing on HRD practices, organizations can ensure continuous improvement in both individual employee performance and overall organizational performance.

4.2 Qualitative Data Analysis

The interview process of this study aims to gain an in-depth understanding of Xiaomi auto-related listed companies' human resource development, employee performance, and sustainable organizational performance.

4.2.1 Development of Human Resource Development in Xiaomi Auto-related Listed Companies

Organizational Development:

In the context of Xiaomi's automobile venture and other public companies in China, organization development (OD) practices are centered around fostering innovation, improving internal processes, and creating a supportive environment for rapid growth in the highly competitive electric vehicle (EV) market. The following three main activities can be identified:

1. Cross-functional Collaboration and Agile Teamwork

Practice: In Xiaomi's automobile division and other public companies in China, fostering cross-functional collaboration is a priority. Teams composed of individuals from diverse functions—such as engineering, design, R&D, and marketing—work together in an agile environment to rapidly iterate and improve product development, particularly for electric vehicles (EVs).

Specific Activity: Xiaomi encourages the use of scrum methodology and Kanban boards for task management to promote efficient collaboration and decision-making. These tools help streamline communication and ensure that tasks are completed swiftly. Teams often work closely with Xiaomi's broader ecosystem, such as AI and smart home departments, to integrate advanced technologies, like AI-driven vehicle features or smart connectivity, into their EV models. This collaborative and flexible approach accelerates development timelines and enhances innovation.

Interview Result: Out of 20 interviewees, 16 (80%) agreed that cross-functional collaboration and agile teamwork are key practices that support rapid development and foster innovation in Xiaomi's automobile division.

2. Leadership Development and Talent Attraction

Practice: As Xiaomi expands into the competitive EV market, leadership development becomes a cornerstone of its organizational strategy. The company invests

in building leadership capabilities to manage high-tech operations and the complexities of the evolving automotive industry.

Specific Activity: Xiaomi provides extensive leadership development programs, including executive coaching, specifically designed for managers in the automobile division. These programs are tailored to help leaders navigate both technological advancements in EVs and strategic challenges in the automotive market. Xiaomi also recruits senior talent from global leaders like Tesla to infuse the organization with expertise in EV manufacturing, autonomous driving, and other emerging technologies, ensuring the company remains at the forefront of innovation.

Interview Result: Out of 20 interviewees, 16 (80%) agreed that leadership development programs and talent attraction from top-tier companies are crucial for Xiaomi's successful expansion into the EV market.

3. Cultural Integration and Organizational Alignment

Practice: As Xiaomi ventures into the electric vehicle space, aligning its company culture with its evolving business goals is crucial. The company's focus remains on building a culture of innovation and customer-centricity, ensuring that all teams are aligned with the overarching mission of the company.

Specific Activity: Xiaomi promotes a culture of innovation through regular internal communications, such as town halls, team-building events, and internal hackathons. These activities foster a sense of belonging and ensure that employees understand the company's strategic vision. Xiaomi also incorporates values alignment into the recruitment process, ensuring that new hires resonate with the company's core values of technology-driven customer solutions. Performance evaluations are aligned with these values to reinforce organizational culture and employee commitment.

Interview Result: Out of 20 interviewees, 18 (90%) agreed that cultural integration and organizational alignment are vital to ensuring that all teams in Xiaomi's automobile division share a unified vision.

Career Development:

1. Structured Career Pathways and Internal Mobility

Practice: Xiaomi believes in offering clear career development pathways to employees within its automobile division. The company provides internal mobility opportunities that allow employees to move between departments, gaining diverse experience and honing skills that support both their career growth and organizational needs.

Specific Activity: Xiaomi establishes career ladders that outline clear progressions from entry-level positions to senior leadership roles. Employees are encouraged to explore various departments—such as engineering, marketing, R&D, and manufacturing—to broaden their skillsets. Regular internal job postings are shared to encourage employees to apply for roles in different areas of the business. By offering these opportunities, Xiaomi ensures that employees can grow in line with their career aspirations while contributing to the company's broader goals.

Interview Result: Out of 20 interviewees, 16 (80%) agreed that structured career pathways and internal mobility are integral to employee retention and career development within Xiaomi's automobile division.

2. Continuous Learning and Skill Development

Practice: Xiaomi places a strong emphasis on continuous learning to ensure its employees stay competitive in a rapidly evolving industry like electric vehicles. The company offers diverse learning resources to support employees' development, from technical skills to industry-specific knowledge.

Specific Activity: Xiaomi provides access to training programs, online courses, and workshops in fields such as AI, EV technology, autonomous driving, and vehicle connectivity. The company also sponsors participation in industry conferences and seminars, offering employees time off or financial support to attend these events.

Additionally, Xiaomi fosters mentorship programs, where junior employees are paired with senior leaders to guide their career progression and provide valuable insights into the industry.

Interview Result: Out of 20 interviewees, 18 (90%) agreed that continuous learning and skill development initiatives are essential to keep employees ahead of the curve in the fast-changing EV industry.

3. Performance Management and Recognition

Practice: Xiaomi implements a robust performance management system designed to align individual goals with organizational objectives. This system provides regular feedback, sets clear targets, and ensures recognition for high-performing employees.

Specific Activity: Xiaomi conducts quarterly performance reviews to evaluate employees' progress towards both personal and company goals. These reviews are complemented by constructive feedback to help employees identify areas for improvement and opportunities for growth. High performers are recognized through promotion opportunities, special projects, and bonus structures. Furthermore, the company celebrates top talent through annual awards and recognition events, motivating employees to continue excelling in their careers.

Interview Result: Out of 20 interviewees, 20 (100%) agreed that Xiaomi's performance management and recognition practices effectively drive employee motivation and support career growth.

Training Development:

1. Targeted Technical and Industry-Specific Training

Practice: Xiaomi recognizes the need to equip employees with specialized knowledge and technical skills to thrive in the electric vehicle market. This is especially critical in areas like autonomous driving and smart vehicle technologies, which require a high level of expertise.

Specific Activity: Xiaomi offers technical training programs on key EV topics such as battery management systems, vehicle manufacturing processes, and autonomous vehicle algorithms. These training sessions are conducted through workshops, e-learning modules, and partnerships with industry experts. Xiaomi also collaborates with educational institutions to provide certification programs, ensuring employees remain updated on the latest advancements in the EV industry.

Interview Result: Out of 20 interviewees, 18 (90%) agreed that targeted technical training is essential for ensuring employees are equipped with the latest skills in the rapidly evolving EV industry.

2. Leadership and Management Development

Practice: Developing strong leadership capabilities is vital as Xiaomi's automobile division scales. The company focuses on nurturing future leaders who can manage cross-functional teams and navigate the dynamic automotive industry.

Specific Activity: Xiaomi runs leadership development programs for middle and senior managers, covering areas such as strategic thinking, decision-making, and team management. These programs include role-playing exercises, leadership simulations, and case studies from the automotive and tech sectors. High-potential leaders receive executive coaching to guide their personal development and prepare them for senior roles within the company.

Interview Result: Out of 20 interviewees, 16 (80%) agreed that leadership development initiatives are critical for preparing the next generation of leaders at Xiaomi.

3. Online Learning and Continuous Learning Initiatives

Practice: Xiaomi emphasizes the importance of structured online learning for new employees and offers continuous learning initiatives to support career development throughout an employee's tenure with the company.

Specific Activity: For new hires, Xiaomi provides a comprehensive on boarding program that introduces them to the company's culture, mission, and values, along with specific training tailored to their roles. To promote continuous learning, Xiaomi grants employees access to online learning platforms where they can take courses in topics like software development, digital marketing, and emerging EV technologies. The company also organizes knowledge-sharing sessions, where internal experts share insights on the latest industry trends, technological innovations, and project outcomes.

Interview Result: Out of 20 interviewees, 20 (100%) agreed that online learning and continuous learning initiatives are key to ensuring employees stay engaged and contribute to Xiaomi's ongoing success.

Table 4.26 Analysis of Interview Results of Human Resource Development

Independent Variable	Dimension of Variable	Number of Consents/ Total	Keyword	Consent (%)
Human Resource Development	Organizational Development	16/20	1. Cross-functional Collaboration 2. Agile Teamwork	80%
		16/20	1. Leadership Development 2.Talent Attraction	80%
		18/20	1. Cultural Integration 2. Organizational Alignment	90%
	Career Development	16/20	1. Structured Career Pathways 2. Internal Mobility	80%
		18/20	1. Continuous Learning 2. Skill Development	90%
		20/20	1. Performance Management 2. Recognition	100%
	Training Development	18/20	1. Targeted Technical 2. Industry-Specific Training	90%
		16/20	1. Leadership 2. Management Development	80%
		20/20	1. Online learning 2. Continuous Learning Initiatives	100%

These activities demonstrate Xiaomi's commitment to building a robust, innovative workforce capable of driving the company's success in the highly competitive electric vehicle market. The company's practices, backed by a high level of agreement from participants, show that strategic alignment in talent development is crucial for long-term organizational growth.

4.2.2 Development of Sustainable Organizational Performance in Xiaomi Auto-related Listed Companies

Talent Attraction:

In Xiaomi's automobile division and other public companies in China, talent attraction is crucial for maintaining a skilled and motivated workforce, particularly in the rapidly growing electric vehicle (EV) and technology sectors. Xiaomi employs a combination of strategic practices to attract top talent and ensure the company remains competitive in the job market. Here are three main activities related to talent attraction:

1. Employer Branding and Industry Reputation

Practice: Xiaomi actively works on building a strong employer brand that appeals to top talent in the technology and automobile sectors. By positioning itself as a leading innovator in the EV and tech industries, Xiaomi aims to attract highly skilled professionals who are looking for dynamic and impactful career opportunities.

Specific Activity: Xiaomi engages in employer branding campaigns that showcase its cutting-edge technology, sustainability efforts, and commitment to diversity and inclusion. The company frequently participates in industry conferences, university career fairs, and global innovation competitions, positioning itself as a thought leader in the EV space. Xiaomi also leverages social media platforms to share employee success stories and highlight its achievements in research and development, further enhancing its reputation as an employer of choice. These initiatives are designed to appeal to job seekers who value innovation, career growth, and the opportunity to work on impactful projects.

All the 20 interviewees (100%) agreed that Xiaomi's strong employer branding and industry reputation are key factors in attracting top talent. Xiaomi's active presence in industry events, its commitment to sustainability, and its focus on innovation make it an appealing workplace for professionals seeking meaningful, high-impact careers in the EV and technology sectors.

2. Recruitment Strategies and Talent Pool Expansion

Practice: Xiaomi employs a comprehensive recruitment strategy to attract the right talent for its automobile division and technology teams. By utilizing a mix of traditional and modern recruitment methods, Xiaomi ensures it reaches a wide pool of qualified candidates.

Specific Activity: Xiaomi collaborates with leading universities, technical institutes, and research organizations to build strong relationships and attract early-career talent. The company also participates in internship programs and co-op placements, offering students hands-on experience in areas such as electric vehicle development and autonomous driving technologies. In addition to targeting early-career professionals, Xiaomi also recruits experienced leaders from other top tech companies through headhunting and industry networking. To make the hiring process more efficient, Xiaomi uses AI-powered recruitment tools to screen candidates and identify the best fits for various roles.

All the 20 interviewees (100%) agreed that Xiaomi's proactive recruitment strategies, including partnerships with universities and the use of AI-powered tools, play a significant role in attracting a diverse and highly qualified talent pool. The company's ability to tap into both early-career professionals and experienced leaders allows it to build a strong and well-rounded workforce capable of driving innovation.

3. Collaborative and Innovative Work Environment

Practice: Xiaomi promotes a collaborative and innovative work environment that attracts talent looking for a dynamic, creative, and forward-thinking workplace. By

fostering a culture where employees can contribute to groundbreaking projects, Xiaomi appeals to professionals who are eager to make a difference in the tech and EV industries.

Specific Activity: Xiaomi encourages cross-departmental collaboration and hosts regular hackathons, innovation challenges, and brainstorming sessions to foster creativity and problem-solving. The company provides employees with state-of-the-art tools and technologies to explore new ideas and push the boundaries of innovation in electric vehicle development. Xiaomi also supports work-life balance through flexible work hours, remote work options, and wellness programs, making it an attractive choice for candidates seeking a healthy and supportive work environment.

All the 20 interviewees (100%) agreed that Xiaomi's collaborative culture and focus on innovation are key drivers in attracting talent. The company's emphasis on creativity, coupled with its supportive work environment, appeals to candidates who are looking for a place where they can contribute to impactful projects and continuously evolve their skill sets.

By focusing on employer branding, targeted recruitment strategies, and creating a collaborative and innovative work environment, Xiaomi successfully attracts top talent to its automobile division and technology teams. These practices help the company stand out in the competitive EV and tech job market, ensuring that it continues to bring in skilled professionals who are motivated to contribute to the company's long-term success. Through its strategic efforts, Xiaomi has positioned itself as a leading employer in the rapidly evolving industries of electric vehicles and smart technologies, making it an attractive choice for job seekers looking for career growth, innovation, and impact.

Talent Retention:

In Xiaomi's automobile division and other public companies in China, talent retention is a key priority for maintaining a skilled, motivated workforce, particularly in the competitive and rapidly evolving electric vehicle (EV) and technology sectors.

Xiaomi uses a combination of strategic practices to ensure that top talent stays with the company for the long term. Here are three main activities related to talent retention:

1. Career Development and Advancement Opportunities

Practice: Xiaomi emphasizes providing clear and rewarding career advancement pathways to motivate employees and help them grow within the company. Offering opportunities for personal and professional growth is a critical component of talent retention.

Specific Activity: Xiaomi offers structured career development programs, including mentorship from senior leaders, training programs, and internal mobility to encourage employees to explore different roles within the company. Employees are also encouraged to set long-term career goals, and Xiaomi provides support through leadership development programs and personalized learning tracks to prepare them for future promotions. By offering clear pathways for growth, Xiaomi helps employees see the potential for long-term career advancement within the organization, motivating them to stay.

18 interviewees (90%) agreed that providing clear and rewarding career advancement opportunities at Xiaomi plays a crucial role in enhancing employee motivation and retention. Xiaomi's emphasis on structured career development programs, including mentorship from senior leaders and training initiatives, fosters a culture where employees feel supported in their professional growth. This creates a sense of ownership over their career progression, motivating them to stay and grow within the company. The opportunity for internal mobility and personalized learning tracks helps employees envision long-term career advancement, ensuring their continued commitment to the organization.

2. Competitive Compensation and Benefits

Practice: Xiaomi ensures that its employees are well-compensated and receive comprehensive benefits that align with industry standards, helping the company retain top talent in a competitive market.

Specific Activity: Xiaomi offers competitive salaries and performance-based bonuses that reward employees for their contributions. In the automobile division, employees involved in key projects such as electric vehicle development and autonomous driving technologies may receive stock options or equity-based incentives to further align their interests with the company's long-term success. Xiaomi also provides comprehensive benefits packages, including healthcare, retirement plans, and paid time off. Additional perks such as employee discounts on Xiaomi products, gym memberships, and wellness programs further enhance the overall value proposition for employees, making it more likely they will stay with the company.

18 interviewees (90%) agreed that offering competitive compensation and comprehensive benefits plays a key role in retaining top talent at Xiaomi. Xiaomi's competitive salaries, performance-based bonuses, and equity-based incentives for employees in key projects such as electric vehicle development and autonomous driving technologies align employee interests with the company's long-term success. Additionally, the provision of healthcare, retirement plans, paid time off, and perks like product discounts and wellness programs enhances the overall employee value proposition, making it more likely for employees to stay and contribute to the company's growth.

3. Recognition and Reward Systems

Practice: Recognizing and celebrating employees' contributions is a key part of Xiaomi's talent retention strategy. When employees feel their hard work is valued and rewarded, they are more likely to stay motivated and committed to the organization.

Specific Activity: Xiaomi implements a recognition program that highlights achievements in areas such as innovation, teamwork, and leadership. Employees who contribute to significant milestones, such as launching new electric vehicles or driving technological breakthroughs, are publicly recognized through awards or company-wide announcements. Xiaomi also holds annual recognition events where employees can be celebrated for their exceptional contributions. In addition to formal recognition, the company encourages leaders to provide regular, personalized feedback, fostering a culture where employees feel appreciated for their work on a day-to-day basis. This consistent acknowledgment boosts employee morale and strengthens their loyalty to the company.

All the 20 interviewees (100%) agreed that implementing recognition and reward systems is essential in motivating employees and enhancing their commitment to Xiaomi. Xiaomi's recognition program, which celebrates achievements in innovation, teamwork, and leadership, ensures that employees feel valued for their contributions. Public recognition, such as awards or company-wide announcements for milestones like launching new electric vehicles or technological breakthroughs, reinforces this sentiment. Furthermore, annual recognition events and regular, personalized feedback from leaders help foster a culture of appreciation, boosting employee morale and loyalty, which ultimately contributes to talent retention.

By focusing on career development, competitive compensation, and employee recognition, Xiaomi creates a strong foundation for retaining top talent in the competitive EV and tech sectors. These practices help ensure that employees feel valued, supported, and motivated to continue their career journey with Xiaomi.

Learning and Development:

In Xiaomi's automobile division and other public companies in China, learning and development (L&D) are central to ensuring that employees stay ahead of industry trends, continuously improve their skills, and contribute to the company's long-term success, especially in the highly dynamic electric vehicle (EV) sector. Xiaomi adopts

several strategies and activities to foster a culture of continuous learning and growth. Here are three main activities related to learning and development practices:

1. Industry-Specific Technical Training Programs

Practice: Xiaomi places a strong emphasis on providing employees with specialized technical training to keep them up-to-date with the latest advancements in electric vehicle technology, software systems, and automotive design.

Specific Activity: Employees working in the automobile division undergo targeted technical training focused on key areas such as electric power train systems, autonomous driving technologies, vehicle connectivity, and battery management. Xiaomi collaborates with external experts, universities, and training institutions to offer specialized courses and workshops. These programs might include hands-on experience with the latest technologies and simulations to enhance practical skills. For example, engineers might participate in training sessions on autonomous vehicle programming or EV manufacturing techniques to keep up with industry standards and technological breakthroughs.

19 interviewees (95%) agreed that Xiaomi's focus on industry-specific technical training programs plays a crucial role in ensuring that employees stay current with the latest developments in EV technology and are equipped with the practical skills necessary for innovation. The specialized courses, workshops, and hands-on experiences offered through external collaborations help employees enhance their expertise and contribute to cutting-edge projects in Xiaomi's automobile division.

2. Leadership Development and Management Training

Practice: Xiaomi understands that nurturing future leaders is crucial for sustained growth, particularly as its automobile division scales. The company offers leadership and management training programs to develop a pipeline of skilled managers who can effectively lead teams, handle complex projects, and drive strategic goals.

Specific Activity: Xiaomi offers leadership development programs for employees identified as high-potential leaders. These programs include training on strategic thinking, team management, conflict resolution, and decision-making. Senior leaders and managers may also attend executive training sessions focused on change management, organizational growth, and innovative thinking, equipping them to lead in an increasingly competitive and evolving sector like EVs. Additionally, emerging leaders are paired with mentors for one-on-one guidance, helping them to grow their leadership capabilities and prepare for future roles within the company.

18 interviewees (90%) agreed that Xiaomi's leadership development and management training programs are essential in developing the skills required for effective leadership, especially in the fast-paced and competitive EV sector. The mentorship opportunities and strategic training provided ensure that high-potential employees are equipped to lead teams and contribute to the long-term success of Xiaomi's automobile division.

3. Continuous Learning Platforms and Knowledge Sharing

Practice: Xiaomi promotes a culture of continuous learning by providing employees with access to a wide range of learning resources and knowledge-sharing opportunities. The company encourages self-paced learning and peer-to-peer knowledge exchange to foster innovation and personal development.

Specific Activity: Xiaomi has implemented online learning platforms that offer a variety of courses in fields such as machine learning, sustainability in automotive engineering, product development, and digital transformation. Employees are encouraged to take part in online certifications or webinars that align with both their current roles and career aspirations. Additionally, Xiaomi organizes internal knowledge-sharing sessions where experts from different departments, such as R&D, design, or marketing, present on emerging trends or recent innovations. This helps employees broaden their knowledge beyond their specific roles and encourages cross-functional collaboration.

17 interviewees (85%) agreed that Xiaomi’s focus on continuous learning platforms and knowledge-sharing initiatives is pivotal in fostering a culture of innovation and personal development. The accessibility of online courses and internal knowledge-sharing sessions allows employees to stay ahead of emerging trends and collaborate across departments, driving the company’s growth and technological advancements.

These learning and development activities ensure that Xiaomi's workforce remains highly skilled, innovative, and aligned with the company’s strategic objectives, particularly in the fast-moving EV market. By investing in technical expertise, leadership growth, and continuous learning opportunities, Xiaomi helps its employees stay at the forefront of industry trends while fostering a culture of collaboration and knowledge sharing.

Career Management:

In Xiaomi's automobile division and other public companies in China, career management is a key focus to ensure that employees have clear growth pathways, opportunities for advancement, and the support needed to reach their career goals. Xiaomi adopts specific practices to guide employees’ career development, align their aspirations with organizational needs, and retain top talent in a competitive industry like electric vehicles (EVs). Here are three main activities related to career management practices:

1. Individualized Career Pathing and Development Plans

Practice: Xiaomi offers personalized career pathing, ensuring that employees have clear, structured, and achievable goals for career growth. Employees receive tailored development plans based on their strengths, aspirations, and the company’s long-term objectives.

Specific Activity: Xiaomi works with employees to create Individual Development Plans (IDPs), which outline their career goals, skills development needs, and potential next steps within the organization. Employees in the automobile division,

for example, might create career paths that align with specific areas of growth like EV design, autonomous vehicle technology, or vehicle production management. Regular career review meetings with managers help track progress on these plans, identify development needs, and adjust goals to ensure that employees stay on track for advancement. This personalized approach helps employees feel valued and motivated as they progress in their careers.

17 interviewees (85%) agreed that Xiaomi's individualized career pathing and development plans play a significant role in motivating employees and helping them achieve their career goals. These personalized development plans not only allow employees to align their personal aspirations with the company's objectives but also offer them structured pathways for growth. By providing tailored support, Xiaomi ensures that employees remain engaged and committed to their career progression within the organization, particularly in areas such as electric vehicle design, autonomous vehicle technology, and production management.

2. Job Rotation and Cross-Departmental Mobility

Practice: Xiaomi supports job rotation and cross-departmental mobility to help employees broaden their experience, increase their skill sets, and stay engaged in diverse and challenging work. This is particularly beneficial in the automobile sector, where employees need to understand both the technical and business aspects of product development.

Specific Activity: Xiaomi offers internal mobility programs, where employees have the opportunity to move between different roles within the organization. For example, an employee working in R&D might rotate into a product management or marketing role to gain a holistic understanding of the business. Employees in the automobile division may also switch between departments like engineering, design, and production to gain broader expertise in EV development, manufacturing, or customer experience. This practice helps employees diversify their skills, discover new areas of interest, and build a well-rounded career within Xiaomi.

18 interviewees (90%) agreed that Xiaomi's focus on job rotation and cross-departmental mobility is a key strategy in broadening employees' skill sets and fostering a more holistic understanding of the business. Employees in the automobile division, for instance, benefit from the opportunity to rotate across departments such as R&D, product management, and production, which not only enhances their professional experience but also contributes to their career satisfaction and engagement.

3. Leadership and Succession Planning

Practice: Xiaomi focuses on leadership development and succession planning to ensure that top talent is prepared for future leadership roles. The company identifies high-potential employees early in their careers and provides them with the necessary resources and opportunities to advance into leadership positions.

Specific Activity: Xiaomi has a leadership pipeline program where high-potential employees are identified for fast-tracked development. These employees receive tailored training, mentorship, and exposure to senior leadership to prepare them for leadership roles in the future. Additionally, Xiaomi uses succession planning to ensure that critical roles in the automobile division have a ready pool of candidates who are prepared to step into those positions when needed. This includes the identification of emerging leaders in areas such as product development, R&D, or business strategy, who are then given opportunities to lead important projects or cross-functional teams. This helps ensure a smooth transition in leadership and keeps employees engaged by providing them with clear paths to leadership opportunities.

19 interviewees (95%) recognized the importance of Xiaomi's leadership and succession planning practices in ensuring that top talent is prepared for future leadership roles. The leadership pipeline program and the emphasis on mentorship and tailored training for high-potential employees' help to identify and develop future leaders, ensuring the company's continued growth and success. This proactive approach to leadership development ensures that employees are motivated by clear paths to advancement and are prepared to take on critical roles within the company.

By offering individualized career paths, job rotation opportunities, and leadership development programs, Xiaomi effectively manages the careers of its employees, helping them grow and progress within the organization. These practices not only retain top talent but also align employees' goals with the company's strategic vision, ensuring that Xiaomi continues to develop a strong and capable workforce, particularly in the fast-evolving automobile and EV sectors.

Table 4.27 Analysis of Interview Results of Sustainable Organizational Performance

Independent Variable	Dimension of Variable	Number of Consents/ Total	Keyword	Consent (%)
Sustainable Organizational Performance	Talent Attraction	20/20	Employer Branding and Industry Reputation. 1. Employer branding campaigns. 2. Industry conferences, university career fairs, and global innovation competitions. 3. Leverages social media platforms.	100%
		20/20	Recruitment Strategies and Talent Pool Expansion. 1. Collaborates with leading universities, technical institutes, and research organizations. 2. Participates in internship programs and co-op placements. 3. Headhunting and industry networking.	100%
		20/20	Collaborative and Innovative Work Environment. 1. Cross-departmental collaboration and hosts regular hackathons, innovation challenges, and brainstorming sessions. 2. Provides tools and technologies. 3. Flexible work hours, remote work options, and wellness programs.	100%

Independent Variable	Dimension of Variable	Number of Consents/ Total	Keyword	Consent (%)
	Talent Retention	18/20	Career Development and Advancement Opportunities. 1. Structured career development programs. 2. Mentorship. 3. Training programs, and internal mobility. 4. Leadership development programs. 5. Personalized learning tracks.	90%
		18/20	Competitive Compensation and Benefits. 1. Competitive salaries and performance-based bonuses. 2. Stock options or equity-based incentives. 3. comprehensive benefits packages, including healthcare, retirement plans, and paid time off. 4. Employee discounts, gym memberships, and wellness programs.	90%
		20/20	Recognition and Reward Systems. 1. Recognition program through awards or company-wide announcements. 2. Annual recognition events. 3. Provide regular, personalized feedback.	100%

Independent Variable	Dimension of Variable	Number of Consents/ Total	Keyword	Consent (%)
	Learning and Development	19/20	Industry-Specific Technical Training Programs. 1. Electric power train systems, autonomous driving technologies, vehicle connectivity, and battery management. 2. Collaborates with external experts, universities, and training institutions. 3. Autonomous vehicle programming or EV manufacturing techniques.	95%
		18/20	Leadership Development and Management Training. 1. Strategic thinking, team management, conflict resolution, and decision-making. 2. Attend executive training sessions focused on change management, organizational growth, and innovative thinking. 3. Mentors for one-on-one guidance.	90%
		17/20	Continuous Learning Platforms and Knowledge Sharing. 1. Online learning platforms. 2. Online certifications or webinars. 3. Internal knowledge-sharing sessions.	85%
	Career Management	17/20	Individualized Career Pathing and Development Plans. 1. Individual Development Plans (IDPs). 2. EV design, autonomous vehicle technology, or vehicle production management. 3. Career review meetings.	85%

Independent Variable	Dimension of Variable	Number of Consents/ Total	Keyword	Consent (%)
		18/20	Job Rotation and Cross-Departmental Mobility. 1. Internal mobility programs. 2. Employees switch between departments like engineering, design, and production.	90%
		19/20	Leadership and Succession Planning. 1. Leadership pipeline program. 2. Succession planning. 3. Lead important projects or cross-functional teams.	95%

4.2.3 Development of Employee Performance in Xiaomi Auto-related Listed Companies

Leadership:

In Xiaomi's automobile division and other public companies in China, leadership practices are essential for guiding teams through the complex, rapidly evolving landscape of the electric vehicle (EV) and tech industries. Xiaomi's leadership development strategies focus on fostering a strong, innovative, and adaptable leadership culture. Here are three main activities related to leadership practices:

1. Data-Driven Decision-Making and Strategic Vision

Practice: Xiaomi prioritizes leadership that can make informed, data-driven decisions to guide the company's growth in the highly competitive EV market. Leaders are expected to use data analytics, market trends, and internal performance metrics to shape strategic initiatives and guide the company's long-term vision.

Specific Activity: Xiaomi's leadership regularly participates in data analytics training and strategic forecasting workshops, learning how to leverage data for decision-making. Senior leaders, especially in the automobile division, engage in regular strategy

review meetings where they analyze performance data, evaluate market shifts, and refine the company's goals for the future. The focus is on creating actionable insights that can inform product development, marketing strategies, and operational efficiency in the EV space.

Interview Result: Out of 20 interviewees, 19 (95%) agreed that data-driven decision-making is a key leadership practice in Xiaomi's automobile division.

2. Mentorship and Talent Development

Practice: Xiaomi's leadership understands the importance of nurturing future leaders within the organization. Senior leaders play an active role in mentoring junior managers and identifying high-potential talent that can contribute to the company's growth.

Specific Activity: Senior executives in Xiaomi's automobile division participate in formal mentorship programs, where they provide guidance to middle managers or emerging leaders. Leaders meet regularly with their mentees to discuss career development, performance goals, and personal growth. Additionally, Xiaomi's leadership team ensures that top performers are promoted to leadership roles, offering them opportunities to lead important projects or teams. This helps foster a pipeline of leadership talent that can adapt to changing market demands and technological innovations.

Interview Result: Out of 20 interviewees, 17 (85%) agreed that mentorship and talent development are critical for leadership success at Xiaomi.

3. Cultivating a Culture of Innovation and Cross-Department Collaboration

Practice: Xiaomi's leadership fosters a culture of innovation by encouraging leaders to promote cross-department collaboration and think outside the box, particularly in a tech-driven, fast-evolving field like electric vehicles. Leaders are expected to cultivate a work environment that encourages open communication, idea-sharing, and risk-taking.

Specific Activity: Xiaomi's leadership practices cross-functional collaboration through inter-departmental project teams. Leaders from different areas (such as R&D, manufacturing, marketing, and software) collaborate closely on new initiatives, ensuring that diverse perspectives are incorporated into product development. Innovation challenges and hackathons are also organized, where leaders encourage employees to propose disruptive ideas or solutions that can drive innovation in the EV sector. This reinforces Xiaomi's focus on creating a forward-thinking environment, where leadership is aligned with the company's overarching goals of technological advancement and market disruption.

Interview Result: Out of 20 interviewees, 16 (80%) agreed that fostering a culture of innovation and collaboration is a fundamental leadership practice at Xiaomi.

Motivation Practices in Xiaomi's Automobile Division

In Xiaomi's automobile division and other public companies in China, motivation practices are key to driving employee engagement, satisfaction, and performance, especially in a fast-paced and highly competitive industry like electric vehicles (EVs). Xiaomi utilizes a range of strategies to motivate employees, align them with company goals, and foster a high-performance culture. Here are three main activities related to motivation practices at Xiaomi:

1. Performance-Based Incentives and Rewards

Practice: Xiaomi recognizes and rewards employees for their individual and team achievements, creating strong motivation through performance-based incentives. These incentives are designed to align employees' goals with the company's strategic objectives and drive continuous improvement in product development, sales, and innovation.

Specific Activity: Xiaomi offers bonuses and stock options to top performers in the automobile division, especially for employees who contribute significantly to achieving key milestones, such as product launches, technological breakthroughs, or sales targets. The company may also implement quarterly recognition programs that celebrate

achievements through awards, public acknowledgment, or special events, giving employees a sense of accomplishment and motivating them to continue excelling.

Interview Result: Out of 20 interviewees, 17 (85%) agreed that performance-based incentives and rewards are effective motivation practices at Xiaomi.

2. Opportunities for Career Advancement and Personal Growth

Practice: Xiaomi motivates employees by offering clear opportunities for career advancement and continuous personal development. Employees are encouraged to enhance their skills, take on new challenges, and grow within the company.

Specific Activity: Xiaomi implements career development programs, where employees can take on new responsibilities, participate in leadership training, or apply for internal promotions. Employees are supported in setting personal growth goals, with mentorship and coaching provided to help them achieve their aspirations. For instance, employees in the automobile division may be offered opportunities to manage new projects or lead teams, fostering a sense of ownership and motivation to take on more significant roles.

Interview Result: Out of 20 interviewees, 18 (90%) agreed that opportunities for career advancement and personal growth are essential motivation practices at Xiaomi.

3. Creating a Purpose-Driven, Innovative Culture

Practice: Xiaomi motivates employees by creating a work environment that fosters innovation and aligns employees' personal values with the company's mission and vision. Employees are encouraged to be part of something bigger than just their day-to-day tasks, contributing to a purpose-driven company culture.

Specific Activity: Xiaomi integrates employee involvement in strategic initiatives and innovative projects. For example, employees in the automobile division might participate in innovation workshops, hackathons, or brainstorming sessions, where they can contribute ideas to shape the future of the EVs. Leaders encourage employees to

think creatively and challenge the status quo, giving them the autonomy to experiment with new technologies and solutions. This involvement not only drives intrinsic motivation but also fosters a strong sense of ownership and engagement with the company's mission to revolutionize the automotive and technology sectors.

Interview Result: Out of 20 interviewees, 20 (100%) agreed that fostering a purpose-driven, innovative culture is a key motivation strategy at Xiaomi.

Job Satisfaction Practices in Xiaomi's Automobile Division

In Xiaomi's automobile division and other public companies in China, job satisfaction is a key factor in retaining talent and maintaining a motivated workforce. Xiaomi implements several specific practices to ensure employees feel valued, supported, and engaged in their work. Here are three main activities related to enhancing job satisfaction:

1. Work-Life Balance and Flexible Work Arrangements

Practice: Xiaomi places a strong emphasis on creating a healthy work-life balance for its employees, offering flexibility in working hours and remote work options. This is especially important in high-pressure industries like technology and automobile manufacturing, where employees may experience stress due to tight deadlines or complex projects.

Specific Activity: Xiaomi offers flexible work hours and the possibility for remote work for roles that allow it, particularly in the research, design, and software development departments of the automobile division. Employees can adjust their schedules to accommodate personal commitments, which helps reduce burnout and increase overall job satisfaction. Additionally, Xiaomi promotes mental health initiatives, including access to counseling services, stress management workshops, and regular wellness activities to ensure employees are well-supported.

Interview Result: Out of 20 interviewees, 18 (90%) agreed that work-life balance and flexible work arrangements contribute significantly to job satisfaction at Xiaomi.

2. Employee Involvement and Empowerment

Practice: Xiaomi encourages employees to take ownership of their roles and contribute to company decisions. By involving employees in decision-making processes, the company fosters a sense of empowerment and job satisfaction, making them feel like integral parts of the organization.

Specific Activity: Xiaomi regularly conducts employee feedback surveys to gauge job satisfaction levels, understand concerns, and identify areas for improvement. The company also has open-door policies where employees can directly communicate with leadership and share ideas or challenges. Additionally, employees in the automobile division may participate in cross-functional teams or innovation projects, giving them the opportunity to shape the development of new products or solutions. This autonomy and involvement help employees feel more engaged and satisfied in their roles.

Interview Result: Out of 20 interviewees, 16 (80%) agreed that employee involvement and empowerment are critical to job satisfaction at Xiaomi.

3. Competitive Compensation and Benefits Packages

Practice: Xiaomi ensures that its employees are well-compensated and rewarded for their contributions. This includes competitive salaries, performance-based bonuses, and a wide range of benefits that contribute to overall job satisfaction.

Specific Activity: Xiaomi offers competitive salary packages with the potential for performance-based bonuses for employees in the automobile division, particularly those who meet or exceed targets related to product development, innovation, or sales. The company also provides comprehensive benefit packages, including health insurance, retirement plans, and paid leave. Xiaomi further supports its employees by offering employee discounts on Xiaomi products and additional perks like gym memberships or wellness programs. These tangible benefits contribute to a positive work environment and enhance job satisfaction.

Interview Result: Out of 20 interviewees, 17 (85%) agreed that competitive compensation and benefits packages play a crucial role in job satisfaction at Xiaomi.

By focusing on work-life balance, employee involvement, and competitive compensation, Xiaomi creates a workplace where employees in the automobile division can thrive, feel motivated, and experience high levels of job satisfaction.

Work Environment in Xiaomi's Automobile Division

In Xiaomi's automobile division and other public companies in China, creating a positive work environment is essential to support innovation, productivity, and employee well-being, especially in the fast-moving electric vehicle (EV) and technology sectors. Xiaomi invests in fostering a work culture and physical environment that encourages creativity, collaboration, and comfort. Here are three main activities related to the work environment:

1. Collaborative and Open Office Spaces

Practice Overview: Xiaomi's commitment to collaborative office environments is central to fostering teamwork and creative problem-solving, essential in a sector like automotive innovation. The company has designed its workspaces to encourage communication, idea-sharing, and cross-functional collaboration.

Specific Activity: Office Layouts and Design: Xiaomi implements open-plan layouts with designated breakout areas, encouraging spontaneous discussions and team collaboration. This arrangement allows employees to easily collaborate with others across different departments, which is especially important in the context of R&D work in the automobile division.

Advanced Meeting Rooms: The company also incorporates state-of-the-art meeting rooms, equipped with advanced communication tools to support both in-person and remote work. These facilities are essential for global collaboration, where cross-functional teams can engage in real-time discussions and decision-making.

Flexible Workspaces: Flexible seating arrangements and informal spaces are integrated into the office design. These spaces allow employees to move between collaborative workstations or find quiet spots to focus, promoting a dynamic and adaptable work environment.

Interview Result: Out of 20 interviewees, 17 (85%) agreed that collaborative and open office spaces contribute significantly to fostering teamwork and innovation at Xiaomi. The layout encourages fluid communication between teams working on complex automotive technologies. Employees can easily share insights, engage in brainstorming sessions, and develop innovative solutions, particularly for EVs and smart driving technologies.

2. State-of-the-Art Facilities and Tools

Practice Overview: In a highly technical field like automobile development, Xiaomi ensures that its employees are equipped with the best tools and technology to boost productivity, job satisfaction, and innovation. In the automobile division, which focuses on technologies like electric vehicles and AI systems, access to high-quality equipment is paramount.

Specific Activity: High-Tech Labs and Prototyping Tools: Xiaomi provides its engineers and designers with access to cutting-edge laboratories and prototyping facilities. For instance, employees working on EV projects use advanced simulation software and automotive engineering systems to test and optimize designs. These tools accelerate product development cycles and help refine designs faster.

AI and Cloud Technologies: The company integrates AI-driven design tools and cloud-based systems, enabling teams to work collaboratively in real-time and across different geographies. These tools are pivotal for developing smart driving systems and autonomous vehicle technologies.

Ergonomic and Recreational Facilities: To enhance employee well-being, Xiaomi includes ergonomic furniture, quiet zones, and recreational areas within its office designs.

This combination of functional workspaces and relaxation areas promotes a balanced, productive, and healthy work environment, fostering long-term innovation.

Interview Result: Out of 20 interviewees, 19 (95%) agreed that state-of-the-art facilities and tools are essential for maximizing productivity and supporting technological advancements in Xiaomi's automobile division. By providing modern tools and creating a comfortable working environment, Xiaomi ensures that employees can perform at their best, ultimately boosting creativity and efficiency in the development of new products like electric vehicles.

3. Inclusive and Supportive Organizational Culture

Practice Overview: Xiaomi places great emphasis on fostering an inclusive and supportive organizational culture. A positive work environment leads to higher employee morale, increased productivity, and improved overall job satisfaction.

Specific Activity: Diversity and Inclusion Initiatives: Xiaomi actively promotes diversity through employee resource groups, diversity training, and inclusive hiring practices. This enables individuals from varied backgrounds to contribute their unique perspectives, which enriches the company’s creative processes, particularly in product development.

Psychological Safety: Xiaomi ensures that employees feel psychologically safe, meaning they can express their ideas, ask questions, and raise concerns without fear of judgment. This culture of openness is crucial in a high-stakes industry where innovation and risk-taking are necessary.

Team-Building and Camaraderie: Regular team-building activities, such as company outings, hackathons, and workshops, strengthen interpersonal relationships among employees. These activities promote collaboration and a sense of belonging, which is particularly important in a company that relies on cross-functional teamwork.

Interview Result: Out of 20 interviewees, 17 (85%) agreed that an inclusive and supportive organizational culture plays a pivotal role in enhancing employee satisfaction and creativity at Xiaomi. An inclusive culture helps employees feel valued, improving their sense of ownership over their work and increasing their contributions to product development. This atmosphere is vital in fostering the kind of creativity required for breakthrough innovations in the automotive sector, particularly in the realm of smart vehicles and electric transportation systems.

Table 4.28 Analysis of Interview Results of Employee Performance

Independent Variable	Dimension of Variable	Number of Consents/Total	Keyword	Consent (%)
Employee Performance	Leadership	19/20	1. Data-Driven Decision-Making. 2. Strategic Vision.	95%
		17/20	1. Mentorship. 2. Talent Development.	85%
		16/20	1. Cultivating A Culture of Innovation. 2. Cross-Department Collaboration.	80%
	Motivation	17/20	1. Performance-Based Incentives. 2. Rewards.	85%
		18/20	1. Opportunities for Career Advancement. 2. Personal Growth.	90%
		20/20	1. Creating a Purpose-Driven. 2. Innovative Culture.	100%
	Job Satisfaction	18/20	1. Work-Life Balance. 2. Flexible Work Arrangements.	90%
		16/20	1. Employee Involvement. 2. Empowerment.	80%
		17/20	1. Competitive Compensation. 2. Benefits Packages.	85%

Independent Variable	Dimension of Variable	Number of Consents/Total	Keyword	Consent (%)
	Work Environment	17/20	Collaborative and Open Office Spaces. 1. Office Layouts and Design. 2. Advanced Meeting Rooms. 3. Flexible Workspaces.	85%
		19/20	State-of-the-Art Facilities and Tools. 1. High-Tech Labs and Prototyping Tools. 2. AI and Cloud Technologies. 3. Ergonomic and Recreational Facilities.	95%
		17/20	Inclusive and Supportive Organizational Culture. 1. Diversity and Inclusion Initiatives. 2. Psychological Safety. 3. Team-Building and Camaraderie.	85%

Xiaomi’s approach to designing collaborative workspaces, investing in state-of-the-art facilities, and fostering an inclusive organizational culture plays a crucial role in supporting its innovation-driven goals, particularly in its automobile division. These practices are aligned with Xiaomi's overarching strategy to promote cross-functional collaboration, enhance creativity, and provide employees with the tools they need to succeed. Through these efforts, Xiaomi has created an environment that empowers its workforce to collaborate more effectively and innovate in high-stakes areas like electric vehicles and smart driving technologies. These efforts are not just about technology; they also reflect a strong commitment to nurturing a healthy, supportive work culture that drives both individual and organizational success.

4.3 Development of the Influence Model of Human Resource Development on Employee Performance in Xiaomi Auto-related Listed Companies

The analysis results show that human resource development directly affects employment performance through sustainable organizational performance. First, HR development has a positive impact on employment performance, believing in the four dimensions of human resource development, they are organizational development, career development and training development, all of which have positive effects on employment performance. Each dimension presents a significant effect. In Xiaomi auto-related listed companies, the impact degree is ranked from high to low by organizational development, career development and training development.

Second, employee performance within the organization is achieved through sustainable organizational performance to the following extent: leadership, motivation, job satisfaction, and work environment. It is worth mentioning that in the specific practice of Xiaomi automatic car enterprises, each sub-dimension has its own characteristics.

Third, human resource development has a direct impact on the sustainable performance of the organization, which is reflected in the four sub-dimensions of human resource development. Its influence degree is as follows: learning and development, talent retention, talent attraction, and career management. These four sub-dimensions are well reflected in the management of Xiaomi automatic public companies. As shown in Tables 4.27, 4.28, Xiaomi automatic public companies should improve sustainable organizational performance in learning and development, talent retention, talent attraction and career management, and improve sustainable organizational performance through human resource development. Based on the research results, this study suggests some improvements for Xiaomi auto-related listed companies, as shown in Figure 4.5

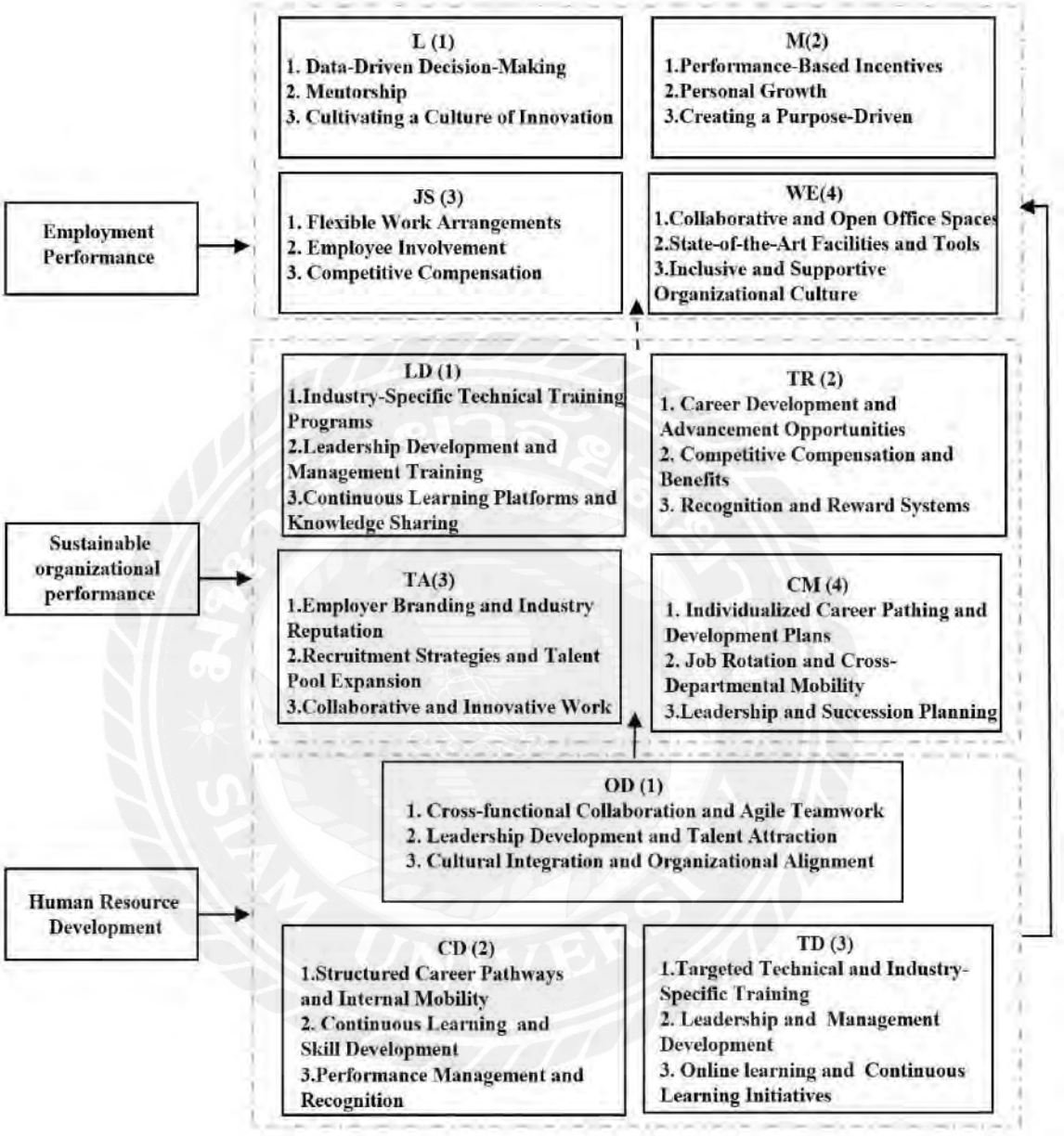

Figure 4.5 Model of the Influence of Human Resource Development on Employee Performance in Xiaomi Automatic Public Companies

This figure highlights the dimensions contributing to Sustainable Organizational Performance, Employment Performance, and Human Resource Development in Xiaomi auto-related list companies, emphasizing practical measures aligned with each dimension.

Below is an analysis of the figure and an explanation of how these practices can be applied.

1. Human Resource Development

Human resource development (HRD) focuses on optimizing employee potential and organizational growth through the following dimensions:

Organizational Development (OD):

Key Practices:

Cross-Functional Collaboration and Agile Teamwork: Encouraging collaboration across departments to improve efficiency and innovation.

Leadership Development and Talent Attraction: Developing leaders and attracting top talent to strengthen organizational capabilities.

Cultural Integration and Organizational Alignment: Aligning organizational culture with strategic goals to improve overall effectiveness.

Career Development (CD):

Key Practices:

Structured Career Pathways and Internal Mobility: Offering clear career progression opportunities and facilitating internal transfers to retain employees.

Continuous Learning and Skill Development: Providing employees with learning opportunities to enhance their skills and knowledge.

Performance Management and Recognition: Implementing systems to monitor performance and recognize achievements.

Training Development (TD):

Key Practices:

Targeted Technical and Industry-Specific Training: Offering training tailored to the organization's needs.

Leadership and Management Development: Preparing employees for leadership roles through structured programs.

Online Learning and Continuous Learning Initiatives: Using online platforms to facilitate ongoing learning and development.

The figure highlights the interconnected nature of sustainable organizational performance, employment performance, and Human resource development. Each dimension is critical for driving organizational success.

2. Sustainable Organizational Performance

Sustainable organizational performance is driven by the following dimensions.

Learning and Development (LD):

Key Practices:

Industry-Specific Technical Training Programs: Training programs that are tailored to their industry to enhance employee technical capabilities.

Leadership Development and Management Training: Programs that equip employees with leadership and managerial skills to foster organizational resilience.

Continuous Learning Platforms and Knowledge Sharing: Platforms that encourage employees to share knowledge and access resources for ongoing development.

Talent Retention (TR):

Key Practices:

Career Development and Advancement Opportunities: Offering clear career paths and growth opportunities to retain employees.

Competitive Compensation and Benefits: Ensuring salaries and benefits are competitive to attract and retain top talent.

Recognition and Reward Systems: Regularly recognizing and rewarding employee contributions to build loyalty and motivation.

Talent Attraction (TA):

Key Practices:

Employer branding and Industry Reputation: Establishing a strong brand and reputation to attract skilled professionals.

Recruitment Strategies and Talent Pool Expansion: Developing innovative recruitment strategies to expand the talent pool.

Collaborative and Innovative Work: Promoting a culture that encourages collaboration and innovation to attract high-potential employees.

Career Management (CM):

Key Practices:

Individualized Career Pathing and Development Plans: Tailoring career paths to individual employee goals and strengths.

Job Rotation and Cross-Departmental Mobility: Providing opportunities for employees to gain diverse experiences within the organization.

Leadership and Succession Planning: Preparing employees for leadership roles through structured development plans.

3. Employment Performance

Employment performance is influenced by the following dimensions:

Leadership (L):

Key Practices:

Data-Driven Decision-Making: Encouraging leaders to make decisions based on data to improve organizational effectiveness.

Mentorship: Providing mentorship opportunities to foster growth and skill development.

Cultivating a Culture of Innovation: Encouraging leaders to promote innovative thinking and adaptability within teams.

Motivation (M):

Key Practices:

Performance-Based Incentives: Offering rewards linked to performance to drive motivation.

Personal Growth: Supporting individual growth through learning opportunities and personal development plans.

Creating a Purpose-Driven Culture: Building a workplace where employees are inspired by the organization's mission and vision.

Job Satisfaction (JS):

Key Practices:

Flexible Work Arrangements: Providing options like remote work or flexible hours to enhance job satisfaction.

Employee Involvement: Involving employees in decision-making processes to increase engagement and satisfaction.

Competitive Compensation: Offering fair and competitive salaries and benefits to meet employee expectations.

Work Environment (WE):

Key Practices:

Collaborative and Open Office Spaces: Designing workspaces that encourage collaboration and communication.

State-of-the-Art Facilities and Tools: Providing advanced tools and resources for employees to perform their roles effectively.

Inclusive and Supportive Organizational Culture: Building a culture that values diversity and supports employee well-being.

Summary

Sustainable Organizational Performance:

Learning and Development is the most critical factor, followed by Talent Retention and Career Management.

Xiaomi companies must focus on leadership training, career planning, and competitive compensation to retain and develop talent sustainably.

Employee Performance:

Leadership and Motivation are key drivers, emphasizing the role of strong leaders and personal growth opportunities.

Flexible work arrangements, performance-based incentives, and collaborative workspaces improve job satisfaction and overall performance.

Human Resource Development:

Training Development plays the most significant role, with a focus on technical training and leadership preparation.

Organizational culture alignment, skill development, and performance management are essential for HRD success.

By integrating these practices into their strategies, Xiaomi auto-related listed companies can enhance employee performance, retain talent, and drive sustainable

organizational growth. This comprehensive approach ensures that HR, employment, and organizational performance align seamlessly with business objectives.

4.4 Conclusion

The study concludes that HRD significantly enhances both sustainable organizational performance and employee performance, directly and indirectly. Structural equation modeling and interviews reveal that organizational development (OD), career development (CD), and training development (TD) under HRD play a central role in boosting leadership, motivation, job satisfaction, and work environment, which in turn lead to improved talent attraction, retention, learning, and career management. The mediating role of sustainable organizational performance in the HRD and employee performance relationship further confirms the importance of HRD strategies in driving long-term organizational success. Qualitative insights from Xiaomi's managers reinforce these findings, emphasizing leadership development, continuous learning, and a culture of innovation as key enablers.

CHAPTER 5

RESEARCH CONCLUSION, DISCUSSION AND RECOMMENDATION

This chapter presents a summary, draws key conclusions, and proposes strategies aimed at enhancing Xiaomi's employee performance. The following sections aim to explain the relationship between the identified study variables, reflect on the implementation of the survey results, and provide actionable recommendations for improvements in Xiaomi Auto-Related Listed Companies' operational efficiency and strategic direction. This chapter is organized into the following sections:

5.1 Research Conclusion

5.2 Discussion of Findings

5.3 Recommendation

5.4 Research Limitations and Contributions of the Study

5.1 Research Conclusion

Firstly, the questionnaire for this study was designed according to dimensions, with each dimension consisting of 5 items, totaling 55 items. Using the Yamane formula (Lamola & Yamane, 1967) with a 95% confidence level and a margin of error not exceeding 5%, the sample size was determined by the formula $n = n / (1 + Ne^2)$, where e = 0.05. Based on this formula, the minimum sample size for the survey participants was calculated to be 396.55, which was rounded up to 399.81. Therefore, the sample size for this study was 400, ensuring that the error rate does not exceed 5% at a 95% confidence level. This study employed Structural Equation Modeling (SEM). The sample size was typically recommended to be 10-20 times the number of test items, but the total sample size should not exceed 500 (Anderson & Gerbing, 1988; Bentler & Yuan, 1999). Since

this study included 55 measurement items, a sample size of 400 participants was deemed appropriate.

Secondly, a semi-structured in-depth interview (SSI) method was used. Chih-Pei & Chang (2017) suggested that for qualitative research, particularly in phenomenological or theory-generating studies, the recommended sample size typically ranges between 20 and 30. This recommendation has been widely cited and applied in practice. Therefore, expert opinions were collected from 20 senior employees, including company managers and individuals with prior experience working in publicly listed companies in the Xiaomi automotive sector.Finally, SPSS and AMOS were utilized for data collection and analysis, while interviews were conducted for further research.

This research investigated Xiaomi Auto-related listed companies, proposing three hypothesis equations structured around an independent variable (human resource development), a dependent variable (employee performance), and a mediating variable (sustainable organizational performance), encompassing 11 dimensions. The study explored the relationships between these variables, providing insights that may guide improvements in employee performance and sustainability within Xiaomi's automotive sector. Data analysis employed statistical methods, including descriptive statistics and SEM.

This study effectively addressed three main research objectives, providing comprehensive insights into human resource development, sustainable organizational performance, and employee performance of Xiaomi-related listed companies.

1. To Determine the Factors of Human Resource Development that Significantly Impact the Sustainable Organizational Performance of Xiaomi Auto-related Listed Companies in China:

The research findings clarify the critical factors within human resource development that significantly influence the sustainable organizational performance of Xiaomi auto-related listed companies. Results from the structural equation model indicate

that several key components substantially enhance organizational performance by fostering a culture of growth and development. Notably, Organizational Development (OD) yields the highest standardized estimate (0.78), emphasizing the importance of a strong organizational foundation that supports long-term sustainability. Similarly, Career Development (CD) (0.74) highlights the role of providing employees with career growth opportunities, which enhances their engagement and overall contribution to the company's objectives.In addition, Training and Development (TD) (0.75) plays a pivotal role, underlining the importance of continuous employee training programs that align with the dynamic needs of the automotive industry. These factors together contribute to a more competent and innovative workforce, essential for organizational success.

In summary, fostering human resource development through organizational development, career development, and robust training initiatives is crucial for driving sustainable organizational performance for Xiaomi auto-related listed companies. By focusing on these areas, Xiaomi can build a resilient and adaptable organization capable of maintaining a competitive edge in the fast-evolving automotive market.

2. To Determine How Sustainable Organizational Performance as a Mediator Significantly Impacts the Employee Performance of Xiaomi Auto-related Listed Companies in China:

The research findings reveal that sustainable organizational performance plays a significant mediating role in enhancing employee performance at Xiaomi auto-related listed companies. Results from the model indicate that human resource development influences employee performance both directly and indirectly, with the indirect effect of 0.246 ($p = 0.001$) through sustainable organizational performance. This suggests that while the direct effect of human resource development on employee performance is significant (0.433, $p = 0.001$), the indirect effect through sustainable organizational performance further strengthens the outcome, highlighting the pivotal role of organizational sustainability in boosting employee performance.

The total effect of human resource development on employee performance is 0.679 (p = 0.001), indicating a considerable combined influence of both direct and indirect pathways. The effect share of 0.362 (p = 0.001) demonstrates the proportion of the total effect attributable to the mediating role of sustainable organizational performance. This emphasizes the importance of fostering a sustainable organization as a mechanism for improving employee performance.

In summary, these findings underscore the essential role of sustainable organizational performance as a mediator in the relationship between human resource development and employee performance in Xiaomi auto-related listed companies. This mediating effect amplifies the influence of human resource practices on employee success, demonstrating the critical importance of a sustainable organizational environment in achieving higher employee performance.

3. To Develop a Model of Human Resource Development Influencing the Employee Performance of Xiaomi Auto-related Listed Companies in China

(1) Key Factors of Human Resource Development Affecting Sustainable Organizational Performance in China's Xiaomi Auto-related Listed Companies.

This study examines the key HRD factors that influence the sustainable organizational performance of Xiaomi auto-related listed companies. The findings reveal that Organizational Development (OD) is the most critical HRD practice, as it facilitates cross-functional collaboration, enhances leadership capabilities, attracts top talent, and ensures alignment between organizational culture and strategic goals. These practices foster a cohesive, adaptable workforce that is essential for navigating the rapidly evolving automotive market. Following OD, Career Development (CD) emerges as the second most impactful factor, as it provides employees with structured career paths, internal mobility opportunities, and continuous learning, which significantly enhance employee satisfaction and performance. Lastly, Training Development (TD) plays a pivotal role by offering targeted technical training and leadership development, ensuring employees possess the skills necessary to meet both current and future organizational demands.

Together, these HRD dimensions form a robust framework that not only optimizes employee performance but also drives long-term sustainable success for Xiaomi in the highly competitive auto industry. By strategically integrating these practices into HRD frameworks, Xiaomi can ensure that its workforce remains competitive, motivated, and aligned with its business objectives, thus contributing to the company's enduring success and growth in the global market.

(2) Key Factors of Sustainable Organizational Performance Affecting Employee performance in China's Xiaomi Auto-related Listed Companies.

To foster sustainable organizational performance at Xiaomi auto-related listed companies, it is crucial to focus on four key HRD practices: Learning and Development (LD), Talent Retention (TR), Talent Attraction (TA), and Career Management (CM). Learning and Development ensures that employees stay ahead of industry advancements through industry-specific training, leadership development, and continuous learning platforms. This continuous development builds an adaptable, highly skilled workforce capable of tackling new challenges. Talent Retention plays a significant role by offering clear career development paths, competitive compensation, and recognition systems, which not only help in retaining top talent but also foster loyalty and motivation. Talent Attraction is vital in drawing skilled professionals by enhancing Xiaomi's employer brand, recruitment strategies, and fostering a collaborative and innovative work culture. Lastly, Career Management supports long-term growth through individualized career development plans, job rotation, and succession planning, ensuring that employees are prepared for future leadership roles. By integrating these HRD practices, Xiaomi can build a robust, high-performance workforce that contributes to the company's ongoing success and sustainable organizational growth.

(3) Key Factors of Human Resource Development Affecting Employee Performance in China's Xiaomi Auto-related Listed Companies.

To enhance employee performance at Xiaomi auto-related listed companies, key human resource development practices play a significant role. Leadership development is

crucial, as leaders who make data-driven decisions, provide mentorship, and cultivate a culture of innovation inspire their teams to perform at their best. Motivation is also vital; offering performance-based incentives, supporting personal growth, and fostering a purpose-driven culture ensured that employees are not only motivated by rewards but are also aligned with the company's values. Job satisfaction further contributes to high performance by providing flexible work arrangements, promoting employee involvement in decision-making, and offering competitive compensation. Finally, creating a positive work environment, with collaborative office spaces, state-of-the-art facilities, and an inclusive culture, empowers employees to collaborate effectively and feel valued. By integrating these practices, Xiaomi can enhance employee performance, fostering a motivated, engaged, and high-performing workforce capable of driving the company's success.

5.2 Discussion of Findings

5.2.1 Discussion on Human Resource Development and Sustainable Organizational Performance

The covariance relationship between Human Resource Development (HRD) and Sustainable Organizational Performance (SOP) reveals a significant positive association, as evidenced by the indirect effect of 0.246, the direct effect of 0.433, and a total effect of 0.679. These estimates indicate that HRD contributes both directly and indirectly to Employee Performance (EP) through SOP. The statistical significance of these relationships is confirmed at the 0.001 level ($p < 0.001$), reinforcing the strong impact of HRD on both sustainable organizational growth and workforce effectiveness. Additionally, the effect share of 0.362 highlights that a substantial portion of the influence of HRD on EP occurs through SOP as a mediator. These findings suggest that organizations investing in HRD strategies not only enhance sustainable organizational capabilities but also drive improved employee performance through structured talent development and sustainability-focused HR practices.

Human Resource Development (HRD) plays a pivotal role in enhancing Sustainable Organizational Performance (SOP) by aligning employee growth with financial, social, and environmental sustainability goals. Research highlights that HRD fosters employee engagement in sustainability initiatives (Amrutha & Geetha, 2020) and equips employees with the skills necessary for sustainable practices (Azizi et al., 2021). HRD further integrates sustainable values into organizational culture (AL-SAIDI & ALSAIDI, 2022) and enhances adaptability to sustainability challenges (Zhang-Zhang, Rohlfer, & Varma, 2022). Additionally, HRD strengthens leadership capabilities for ethical decision-making (Westerman et al., 2020) and enhances employee commitment to sustainability objectives (Shuck & Reio, 2014). From a global perspective, HRD supports cross-cultural training and leadership development, ensuring alignment with international sustainability standards (Briscoe, Schuler & Tarique, 2012). It also contributes to organizational resilience (Roscoe et al., 2019), integrates sustainability into supply chain management (Sroufe, 2017), and fosters a culture of continuous learning and innovation (Thoman & Lloyd, 2018). Collectively, these insights underscore HRD's strategic role in driving sustainable performance and long-term organizational resilience.

Quantitative and Qualitative Analysis of Human Resource Development and Sustainable Organizational Performance

The quantitative analysis reveals a strong and statistically significant direct effect of Human Resource Development (HRD) on Sustainable Organizational Performance (SOP) ($\beta = 0.64$, $p < 0.001$), confirming that HRD initiatives substantially enhance SOP. The qualitative data corroborate these findings, with interviewees frequently citing structured HRD practices, such as leadership development, cross-functional collaboration, and career management, as key contributors to long-term sustainability and organizational resilience.

For instance, Interviewee No. 6 (OD) stated, "Encouraging cross-functional collaboration and agile teamwork has strengthened our ability to adapt to sustainability challenges." This aligns with most interviewees, who identified Organizational Development (OD)—including leadership attraction, cultural integration, and

teamwork—as critical for embedding sustainability within Xiaomi's auto-related listed companies.

Similarly, Interviewee No. 10 (CD) emphasized, "Career development pathways and continuous learning programs ensure that employees are equipped with the skills to support sustainable business practices." This perspective is widely supported by most interviewees, who acknowledged that Career Development (CD)—with a focus on structured mobility, performance recognition, and lifelong learning—is essential for integrating sustainability values into employee growth strategies.

Additionally, Interviewee No. 8 (TD) highlighted that "Industry-specific training and continuous learning initiatives directly improve our capacity to implement sustainable operational practices." This was echoed by most participants, who noted that Training Development (TD)—including technical upskilling, leadership training, and digital learning platforms—plays a key role in ensuring sustainability-aligned workforce capabilities.

Beyond internal HRD factors, external sustainability drivers such as Talent Attraction (TA), Talent Retention (TR), Learning & Development (LD), and Career Management (CM) were frequently cited as vital enablers of organizational sustainability. Interviewee No. 5 (TA) observed, "Employer branding and a strong talent acquisition strategy improve our ability to attract sustainability-focused professionals." This was supported by 16 interviewees, who emphasized that a strong HRD framework not only enhances employee skills but also drives sustainable performance across financial, social, and environmental dimensions.

Both quantitative and qualitative findings confirm that HRD is a fundamental driver of SOP, with a strong direct and indirect impact on sustainability outcomes. By integrating structured HRD initiatives—including career pathways, leadership development, and continuous learning programs—Xiaomi auto-related listed companies can enhance their organizational sustainability, workforce resilience, and long-term business success.

5.2.2 Discussion on the Impact of Human Resource Development on Employee Performance through Sustainable Organizational Performance

The findings from the structural equation modeling analysis confirm that Human Resource Development (HRD) significantly impacts Employee Performance (EP), both directly and indirectly, through Sustainable Organizational Performance (SOP). The total effect of HRD on EP is 0.679, comprising a direct effect of 0.433 and an indirect effect of 0.246, mediated by SOP. These results highlight the critical role HRD plays in enhancing workforce capabilities and fostering a sustainable corporate environment that ultimately drives superior employee outcomes.

Employee performance is a key driver of Sustainable Organizational Performance (SOP) by aligning individual contributions with economic, social, and environmental objectives. Efficient and productive employees enhance operational excellence and minimize resource wastage (Kusi et al., 2021), while high performers drive innovation and adaptability, ensuring competitive advantage (Arda et al., 2019). Employee involvement in environmental and ethical initiatives fosters sustainable practices and process improvements (Kim et al., 2020; Loor-Zambrano et al., 2022). Strong performance also leads to higher customer satisfaction, lower turnover, and improved environmental outcomes (Hossin et al., 2022). Additionally, engaged employees contribute to collaboration, creativity, and efficiency, reinforcing sustainability efforts (Amjad et al., 2021). Leadership plays a crucial role in channeling employee efforts toward sustainability goals (Jiang et al., 2017), while adaptable, high-performing employees enhance organizational resilience and ethical practices (Samwel, 2018). Thus, employee performance is fundamental to achieving long-term sustainability.

Quantitative and Qualitative Analysis of the Impact of Sustainable Organizational Performance on Employee Performance.

The quantitative analysis reveals a strong and statistically significant direct effect of Sustainable Organizational Performance (SOP) on Employee Performance (EP) ($\beta = 0.61$, $p < 0.001$), confirming that sustainable organizational strategies significantly

contribute to enhancing workforce productivity and engagement. Additionally, SOP serves as a key mediator between Human Resource Development (HRD) and EP, reinforcing the importance of integrating sustainability-focused HR practices to optimize employee outcomes. Additionally, SOP acts as a mediator between HRD and Employee Performance (EP), with an indirect effect of 0.246 ($p < 0.001$), reinforcing the role of sustainable organizational strategies in improving overall workforce performance.

The qualitative data corroborate this finding, with interviewees frequently citing career development, leadership training, talent retention programs, and organizational learning initiatives as pivotal drivers of employee performance.

For instance, Interviewee No. 7 (LD) stated, *"Continuous learning platforms and leadership development programs have significantly improved employee performance by fostering adaptability and skill enhancement."* This aligns with most of interviewees, who identified Learning & Development (LD)—including technical training, leadership training, and knowledge-sharing systems—as essential for sustaining high employee performance levels.

Similarly, Interviewee No. 13 (TR) emphasized, *"Career development opportunities and competitive compensation are key factors in retaining high-performing employees and sustaining organizational success."* This perspective is widely supported by most of interviewees, who acknowledged that Talent Retention (TR)—with a focus on advancement opportunities, reward systems, and employee recognition—is essential for maintaining a committed and motivated workforce.

Additionally, Interviewee No. 19 (CM) noted, "Leadership and succession planning ensure that employees have long-term career paths, which positively impacts engagement and overall performance." This was echoed by 18 participants, who highlighted that Career Management (CM)—including job rotation, leadership succession planning, and individualized career pathing—plays a critical role in enhancing employee commitment and job satisfaction.

Moreover, talent attraction strategies (TA) were frequently mentioned as essential for sustaining a high-performing workforce. Interviewee No. 5 (TA) observed that "Strong employer branding and a reputation for innovation attract top talent, ensuring long-term sustainability." This was supported by most of interviewees, who emphasized that a strong SOP framework not only enhances internal employee development but also attracts high-caliber professionals who contribute to sustained organizational success.

Both quantitative and qualitative findings confirm that SOP is a key determinant of EP, with a strong direct impact ($\beta = 0.61$) and an essential mediating role in HRD's effect on employee performance. By integrating structured sustainability initiatives, including career development, leadership training, talent management, and continuous learning, Xiaomi auto-related listed companies can enhance workforce productivity, motivation, and long-term business sustainability.

5.2.3 Discussion on Human Resource Development and Employee Performance

The findings from the structural equation modeling analysis confirm that Human Resource Development (HRD) has a significant impact on Employee Performance (EP), with a direct effect of 0.433 ($p < 0.001$) and a total effect of 0.679 when accounting for Sustainable Organizational Performance (SOP) as a mediator. These results emphasize the critical role of HRD in shaping workforce capabilities, motivation, and overall job performance.

Human Resource Development (HRD) plays a crucial role in enhancing employee performance by developing skills, knowledge, and engagement, aligning individual contributions with organizational objectives. Targeted training programs equip employees with competencies to adapt to dynamic environments, improving productivity (Lim & Ahmad, 2021). Continuous learning and career development foster motivation and performance excellence (Radhakrishna & Raju, 2015). HRD initiatives, including leadership training and coaching, strengthen both technical and interpersonal skills, enhancing employee effectiveness (Akdere & Egan, 2020; Tarique, 2014). Additionally, HRD improves problem-solving and decision-making, driving innovation and efficiency

(Swanson, 2022). Performance appraisals and development feedback promote accountability and continuous improvement (Kareem & Hussein, 2019). Aligning HRD strategies with organizational goals enhances employee engagement and performance (Otoo & Mishra, 2018), while fostering a culture of continuous improvement and higher commitment levels (Rodjam et al., 2020).

Quantitative and Qualitative Analysis of the Impact of Human Resource Development on Employee Performance.

The quantitative analysis indicates a weak but statistically significant direct effect of Human Resource Development (HRD) on Employee Performance (EP) ($\beta = 0.07$, $p < 0.001$). This suggests that while HRD alone has a minor direct impact on EP, its indirect effects through Sustainable Organizational Performance (SOP) are more substantial. This finding emphasizes the mediating role of SOP in transforming HRD investments into meaningful employee outcomes. The qualitative data further confirm that leadership development, motivation strategies, job satisfaction policies, and workplace environment enhancements serve as critical factors shaping employee performance in Xiaomi auto-related listed companies.

For instance, Interviewee No. 8 (L) stated, "Data-driven decision-making and mentorship programs significantly enhance employee engagement and adaptability, leading to better overall performance." This aligns with most of interviewees, who identified Leadership (L)—including mentorship, data-driven decision-making, and fostering a culture of innovation—as essential for enhancing employee effectiveness and workplace motivation.

Similarly, Interviewee No. 2 (M) emphasized, "Performance-based incentives and personal growth programs drive motivation, directly impacting productivity and employee commitment." This perspective was supported by most of interviewees, who acknowledged that Motivation (M)—including financial rewards, career development opportunities, and a purpose-driven culture—plays a pivotal role in enhancing employee engagement and job performance.

Moreover, Interviewee No. 3 (JS) noted, "Flexible work arrangements and competitive compensation structures improve job satisfaction, reducing turnover and enhancing employee loyalty." This sentiment was echoed by most of participants, who highlighted that Job Satisfaction (JS)—with a focus on employee involvement, work-life balance, and fair compensation—is a fundamental driver of higher employee productivity and long-term retention.

Additionally, Interviewee No. 10 (WE) observed, "A collaborative and inclusive workplace environment fosters teamwork, creativity, and overall performance improvements." This view was shared by most of interviewees, who identified Work Environment (WE)—including state-of-the-art facilities, open office spaces, and inclusive corporate culture—as critical for sustaining high levels of employee engagement and job satisfaction.

Although HRD has a weak direct impact on EP ($\beta = 0.07$), its indirect effects through SOP are much more substantial. The integration of leadership training, motivation strategies, job satisfaction policies, and workplace environment improvements significantly enhances employee performance. Xiaomi auto-related listed companies can optimize HRD investments by strengthening SOP mechanisms, ensuring a sustainable and high-performing workforce.

5.3 Recommendation

5.3.1 Policy Recommendation

Based on the findings of this study, it is evident that Human Resource Development (HRD) plays a crucial role in enhancing both Sustainable Organizational Performance (SOP) and Employee Performance (EP). However, the direct effect of HRD on EP remains relatively weak, reinforcing the importance of strategic HR policies that integrate sustainability-driven HR practices. The following recommendations aim to strengthen HRD policies and strategies for Xiaomi auto-related listed companies,

ensuring long-term employee engagement, organizational resilience, and sustainable growth.

1. Integrate Sustainability into HRD Policies

Develop HR training programs that align with sustainable business practices, ensuring employees understand the company's long-term sustainability objectives. Establish a green HRD policy that includes environmental awareness training, energy-efficient workplace practices, and sustainability-driven employee incentives. Encourage cross-departmental sustainability collaborations, fostering a culture of environmental and social responsibility within Xiaomi auto-related companies.

2. Enhance Employee Learning & Development Strategies

Expand leadership training programs focused on data-driven decision-making, mentorship, and innovation, ensuring a resilient workforce capable of adapting to market shifts. Implement personalized career development pathways, offering employees structured career progression aligned with Xiaomi's long-term strategic goals.

Strengthen knowledge-sharing platforms and digital learning initiatives, ensuring that employees have continuous access to upskilling opportunities.

3. Strengthen Employee Performance Through Incentive-Based Policies

Establish performance-based incentive models, linking employee rewards to sustainable productivity, innovation, and cross-functional collaboration. Develop employee engagement programs focused on motivation, work-life balance, and well-being, ensuring improved job satisfaction and lower turnover rates. Enhance workplace flexibility policies, integrating hybrid work models, flexible scheduling, and family-friendly initiatives to support employee retention.

4. Foster a Collaborative and Inclusive Work Environment

Promote an inclusive corporate culture, ensuring diverse hiring practices and equal opportunities for all employees. Invest in state-of-the-art office facilities and ergonomic workspaces, fostering collaboration, innovation, and employee well-being.

Strengthen team-building initiatives to enhance communication and productivity within cross-functional teams.

5. Develop a Data-Driven HRD Evaluation System

Implement an AI-driven HR analytics system to track employee development, performance trends, and training effectiveness in real-time. Use predictive analytics to identify potential HR risks and develop strategic workforce planning models aligned with organizational sustainability goals. Establish a feedback-driven HR system, incorporating 360-degree performance reviews, peer assessments, and continuous improvement strategies.

These policy recommendations emphasize a strategic HRD framework that integrates sustainability principles, advanced learning initiatives, performance-driven incentives, and inclusive workplace policies. By adopting these strategies, Xiaomi auto-related listed companies can enhance their HRD impact.

5.3.2 Management Recommendation

To enhance Human Resource Development (HRD) and its impact on Sustainable Organizational Performance (SOP) and Employee Performance (EP) in Xiaomi auto-related listed companies, management must implement strategic HRD initiatives that foster employee engagement, leadership development, and long-term sustainability. The following recommendations provide actionable strategies for improving HRD practices within the organization:

1. Develop Leadership and Talent Management Programs

Establish data-driven leadership training programs focused on decision-making, mentorship, and innovation-driven culture to enhance employee capabilities.

Create succession planning frameworks, ensuring high-potential employees are identified and developed for future leadership roles. Strengthen cross-functional leadership

development initiatives, promoting internal mobility and fostering collaboration across departments.

2. Enhance Learning and Development (L&D) Strategies

Implement continuous learning programs tailored to the automotive industry, including technical training, digital transformation skills, and sustainability education.

Expand e-learning platforms and knowledge-sharing networks, enabling employees to access skill enhancement opportunities at any time. Encourage mentorship programs, pairing experienced employees with junior staff to facilitate career growth and knowledge transfer.

3. Improve Employee Performance Through Motivation and Engagement

Introduce performance-based reward systems, ensuring employee contributions are recognized through financial and non-financial incentives. Promote employee well-being initiatives, including flexible work arrangements, mental health support, and work-life balance programs. Enhance employee involvement in decision-making, fostering an inclusive and transparent workplace where employees feel valued.

4. Strengthen Organizational Culture and Work Environment

Develop collaborative workspaces that promote innovation, teamwork, and open communication. Foster an inclusive and diverse workplace culture, ensuring equal opportunities and professional growth for all employees. Invest in state-of-the-art office facilities and technology-driven tools that optimize employee productivity and efficiency.

5. Utilize Data-Driven HR Decision-Making

Implement AI-powered HR analytics to track employee engagement, performance trends, and training effectiveness. Leverage predictive analytics to identify workforce trends and proactively address talent gaps. Develop feedback-driven performance evaluation systems, incorporating real-time assessments and continuous improvement mechanisms.

By integrating these management recommendations, Xiaomi auto-related companies can enhance HRD effectiveness, strengthen sustainable organizational performance, and optimize employee engagement and retention. A strategic focus on leadership, continuous learning, employee motivation, and data-driven decision-making will drive long-term organizational resilience and competitive advantage in the evolving automotive industry.

5.3.3 Future Study

Future research on Human Resource Development (HRD) and its impact on Sustainable Organizational Performance (SOP) and Employee Performance (EP) in Xiaomi auto-related listed companies should explore several key areas to deepen understanding and improve strategic HRD implementation.

1. Longitudinal Impact of HRD on Organizational Sustainability

Future studies should adopt longitudinal research designs to track the long-term effects of HRD strategies on employee performance and organizational sustainability. Investigate how continuous learning and career development programs contribute to the evolving skillset of employees and their adaptability to industry changes.

2. Integration of Emerging Technologies in HRD

Examine the role of artificial intelligence (AI), machine learning, and predictive analytics in optimizing HRD practices, such as talent acquisition, training, and performance evaluations. Analyze the effectiveness of virtual learning platforms and digital coaching tools in enhancing employee skill development and engagement.

3. Cross-Industry Comparative Analysis

Future research should compare HRD models in the automotive sector with those in technology, finance, and manufacturing industries to identify best practices and adaptable strategies. Evaluate how HRD frameworks in other leading auto companies influence employee retention, job satisfaction, and sustainable performance.

4. Impact of Organizational Culture on HRD Effectiveness

Investigate how different leadership styles and corporate cultures impact the success of HRD initiatives in Xiaomi auto-related companies. Assess the role of employee engagement, motivation, and team collaboration in shaping HRD effectiveness.

5. Sustainable HRD and Green HR Practices

Explore the integration of green HR practices in Xiaomi's HRD framework, focusing on environmentally sustainable workforce training and corporate social responsibility (CSR) initiatives. Assess the impact of eco-friendly workplace policies on employee engagement and corporate sustainability goals.

6. HRD and Employee Performance in a Post-Pandemic Era

Examine how remote work, hybrid work models, and digital transformation have influenced HRD effectiveness in the automotive industry. Evaluate the adaptability of employees to new workplace trends and the role of HRD in ensuring workforce agility and resilience.

Future studies should incorporate advanced data analytics, cross-industry comparisons, and sustainability-driven HRD models to provide actionable insights for HRD policy and practice. By exploring emerging technologies, green HR practices, and long-term impacts, researchers can refine HRD strategies that drive sustainable growth, employee engagement, and competitive advantage for Xiaomi auto-related companies in the rapidly evolving global automotive market.

5.4 Research Limitations and Contributions of the Study

5.4.1 Research Limitations

Despite the valuable insights provided by this study on the impact of Human Resource Development (HRD) on Sustainable Organizational Performance (SOP) and Employee Performance (EP) in Xiaomi auto-related listed companies, several limitations must be acknowledged:

1. Sample Size and Generalizability

The study primarily focused on Xiaomi auto-related listed companies, which may limit the generalizability of the findings to other industries or regions. A larger and more diverse sample covering multiple automotive manufacturers and geographical regions would enhance external validity.

2. Cross-Sectional Design

The study employed a cross-sectional research design, capturing data at a single point in time rather than over an extended period. A longitudinal study would provide deeper insights into the evolution of HRD strategies and their long-term effects on employee performance and sustainability.

3. Reliance on Self-Reported Data

Data collection relied on survey responses and interviews, which may be subject to response bias due to social desirability or subjective perceptions. Future studies should integrate objective performance metrics, such as productivity indicators, financial performance, and sustainability reports, to complement self-reported data.

4. Limited Consideration of External Factors

The study primarily examined internal HRD practices, overlooking external factors such as economic fluctuations, industry competition, regulatory changes, and technological advancements, which may significantly impact organizational performance.

Future research should adopt a broader analytical framework, incorporating macro-environmental influences on HRD effectiveness.

5. Technology and Digital Transformation in HRD

While the study acknowledged HRD's role in employee skill enhancement and career development, it did not extensively explore the impact of digital transformation, AI-driven HR practices, and remote workforce management. Future research should examine how emerging HR technologies influence employee training, engagement, and retention in smart automotive manufacturing environments.

6. Cultural and Organizational Differences

Organizational culture and leadership styles vary across different subsidiaries and regions, affecting the consistency and effectiveness of HRD practices. Future research should explore cross-cultural differences in HRD implementation within multinational automotive corporations.

Although this study provides significant insights into the HRD-SOP-EP relationship, its findings should be interpreted within the constraints of sample scope, research design, and external influences. Addressing these limitations in future research will enhance theoretical development, practical application, and strategic decision-making in HRD for sustainable performance in the automotive sector.

5.4.2 Contributions of the Study

This study provides significant theoretical and practical contributions to the field of Human Resource Development (HRD), Sustainable Organizational Performance (SOP), and Employee Performance (EP), particularly in the context of Xiaomi auto-related listed companies. The key contributions of this study are outlined as follows:

Theoretical Contributions

1. Advancing HRD and SOP Theories

This study expands the understanding of how HRD strategies influence sustainable organizational performance, bridging the gap between human capital development and corporate sustainability research. By integrating HRD with talent attraction, career management, and leadership development, this research highlights the strategic role of HRD in fostering sustainability in the automotive industry.

2. Mediating Role of SOP in the HRD-EP Relationship

The study empirically validates SOP as a mediating factor between HRD and EP, demonstrating that sustainability-focused HR practices indirectly enhance employee performance through organizational sustainability initiatives. It contributes to human

capital theory and resource-based view (RBV) by showing how firms can leverage HRD to achieve both financial and non-financial performance outcomes.

3. Empirical Validation of the Conceptual Model

Through structural equation modeling (SEM), this study provides empirical evidence on the direct and indirect effects of HRD on employee performance and organizational sustainability. The study confirms that leadership development, career planning, and continuous learning initiatives are critical HRD dimensions influencing both SOP and EP.

Practical Contributions

1. Strategic HRD Practices for Xiaomi Auto-Related Companies

The study offers practical insights for HR managers and policymakers in Xiaomi auto-related companies, emphasizing the importance of structured HRD programs to enhance sustainable growth and workforce productivity. It highlights best HRD practices, such as leadership training, talent retention strategies, and knowledge-sharing platforms, to drive long-term organizational success.

2. Enhancing Employee Engagement and Retention

The findings demonstrate how HRD initiatives, including mentorship programs, competitive compensation, and career development opportunities, contribute to employee satisfaction, retention, and overall engagement. By emphasizing work environment improvements and leadership development, this study provides a framework for fostering a culture of innovation, collaboration, and job satisfaction.

3. Sustainable Business Strategies in the Automotive Sector

The study aligns with corporate social responsibility (CSR) and sustainability frameworks, showcasing how HRD strategies can enhance environmental, social, and governance (ESG) performance in the automotive manufacturing industry. It provides recommendations for integrating sustainable HR practices, such as green training

programs, ethical leadership, and cross-functional collaboration, into corporate sustainability agendas.

Contribution to Future Research

1. Bridging HRD and Sustainability Research

The study opens new avenues for future research by encouraging scholars to explore the intersection of HRD and sustainability, particularly in the automotive and high-tech manufacturing industries. It suggests that future studies should examine digital HR transformation, AI-driven workforce management, and the impact of Industry 4.0 on HRD effectiveness.

2. Cross-Cultural and Industry Comparisons

While this study focuses on Xiaomi auto-related listed companies, its framework can be applied to other multinational corporations and industries. Future research can compare HRD effectiveness across different cultural and regulatory contexts, providing a global perspective on sustainable HRD practices.

This study makes meaningful contributions by integrating HRD, SOP, and EP into a comprehensive conceptual framework and empirically validating their relationships. It provides theoretical advancements, managerial implications, and future research directions, serving as a valuable reference for academia, industry professionals, and policymakers aiming to enhance human capital development and sustainability in the corporate sector.

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Appendix

Questionnaire for Dissertation

A CAUSAL MODEL OF HUMAN RESOURCE DEVELOPMENT ON EMPLOYEE PERFORMENCE: AN EMPIRICAL STUDY OF XIAOMI AUTO-RELATED LISTED COMPANIES

Study Conducted by Mr. Guo Zhuang

PhD student, Doctor of Philosophy Program in Management, Siam University

Notice: We would like to cooperate with you to complete the questionnaire. The information will be analysis and done in an overall manner. The information will be kept confidential and will not be disclosed for business gain. It will only be used for educational purposes.

Part 1: General Information

1. Your Gender

   ☐ Male ☐ Female

2. Your Age

   ☐ Under 18 ☐ 18-35 ☐ 36-55 ☐ Over 55

3. Your Education Level

   ☐ Junior College ☐ Undergraduate ☐ Master

   ☐ Ph.D. ☐ Others

4. Your Position in the Company

☐ Marketing Operations ☐ Programmer ☐ Product Manager

☐ Graphic Designer ☐ Human Resources Manager

5. Work Experience After Graduation

☐ Less than 2 Years ☐ ≥2 Years - ≤5 Years

☐ >5 Years - <7 Years ☐ 7 Years or More

Part 2 : Human Resource Development (Total 3 Dimensions)

Explanation: The adaptability of question items is used to measure seven aspects of the Organizational development, Career development, and Training development. Please review your organization's Human resource development in light of the following statements that are consistent with behavior over the identified 1-year period (January 2024 to December 2024), based on the levels in the right box.

Question	Levels of Human Resource Development				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Dimension 1 : Organizational Development Paais, M., & Pattiruhu, J. R. (2020)					
1. Vision and mission of the company are always carried out well by the organization and obeyed by all company elements of the company					
2. There is trust in the leadership					
3. There is a fair, equitable and professional division of work					

Question	Levels of Human Resource Development				
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
4. A conducive and homely work environment					
5. The goal given by the company is always achieved or even exceeds					
Dimension 2 : Career Development Otoo, F. N. K., & Mishra, M. (2018),Sturges, J., Guest, D., Conway, N., & Davey, K. M. (2002)					
6.Organization provides coaching to enhance my career					
7. Organization supports my individual development strategy					
8.Organization provides unprejudiced career guidance whenever required					
9.Organization provides coaching to enhance my career					
10. I have been given training to help develop my career					
Dimension 3 : Training Development Otoo, F. N. K., & Mishra, M. (2018)					
11. Adequate and relevant knowledge and skills are acquired through training program					
12. The knowledge and skills associated aids used in the training programs are available for use					

Question	Levels of Human Resource Development				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
13. Training programs are conducted for employees in all facets of quality					
14. The activities of the training programs meet the needs of employees					
15. Employees are sponsored to training programs on the basis of relevant training needs					

Part 3 : Employment Performance (Total 4 Dimensions)

Explanation: Using adaptation of question items of questions to measure Knowledge management in four areas: Leadership, Motivation, Job satisfaction, Work environment.

Please review your Employment performance according to the statements below that are consistent with the behavior for 1 year period (January to December 2024) identified, based on the level in the right box.

Question Paais, M., & Pattiruhu, J. R. (2020)	Level of Employment Performance				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Dimension 1 : Leadership					
16.I feel that the direction of the place where I work has the responsibility and is reliable					
17. My leader is always inviting employee discussions, especially matters relating to the level of employee welfare					

Question Paais, M., & Pattiruhu, J. R. (2020)	Level of Employment Performance				
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
18. Our leader understands employees professionally; he can distinguish personal and professional matters					
19. Our leaders give us confidence in doing work processes creatively as long as they do not violate company regulations					
20. Our leaders always think about the company and the interests of employees					
Dimension 2 : Motivation					
21.I receive a fair bonus for every work measurement					
22.I believe there is attention to the career path of employees					
23. I think the care given by the organization to family needs can be met					
24. I receive proper treatment in an organizational environment (friendship and relationship) between people in the organization is very good and professionally turned out					
25. Fair company rules in providing rewards and punishment					
Dimension 3 : Job Satisfaction					
26.There is a balance between work quality and social quality of life					

Question Paais, M., & Pattiruhu, J. R. (2020)	Level of Employment Performance				
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
27. There is a feeling of pride working in this company					
28. Organization and elements of the organization inspire me and those around me					
29. There is satisfaction in working with colleagues and teams in this organization					
30. All of our suggestions and complaints as employees are listened to and considered by the company					
Dimension 4 : Work Environment					
31.The ability to work without supervision the ability to work independently					
32. The ability to work independently					
33. Capability to maintain self-esteem					
34.Capability to maintain good reputation					
35.Capability to maintain cooperation					

<u>Part 4 : Sustainable Organization</u> (Total 4 Dimensions)

Explanation: The adaptability of question items is used to measure four aspects of the Talent Attraction, Talent retention, Learning and Development, Career Management,

Please review your organization's Sustainable organization in light of the following statements that are consistent with behavior over the identified 1-year period (January 2024 to December 2024), based on the levels in the right box

Question Al Aina, R., & Atan, T. (2020)	**Level of Sustainable Organization**				
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Dimension 1 : Talent Attraction Schlechter, A., Hung, A., &Bussin, M. (2014)					
36. This company's good working conditions and fair wages have enabled it to attract the right talent					
37. This company's good working conditions and fair wages have enabled it to attract the right talent					
38. Work-life balance, as well as social networking facilities, in this company are motivating factors for our employees					
39.We ensure a good organizational climate, in order to attract the right talent					
40.The provision of a competitive pay package (i.e. basic salary plus benefits, allowances or variable pay).					
Dimension 2 : Talent Retention Lyria, R. K., Namusonge, G. S., & Karanja, K. (2017)					
41.We use an effective leadership style and are careful with how we handle employee issues					

Question Al Aina, R., & Atan, T. (2020)	Level of Sustainable Organization				
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
42.My company has a competitive compensation system, in comparison to other organizations in the same industry, which is a motivating factor for our employees					
43.We have an internal recruitment policy that helps to raise the loyalty and morale of our employees					
44. My company has flexible working hours as a motivating factor for our employees					
45.My company's talent retention strategy has led to increase of sales					
Dimension 3 : Learning and Development					
46. In our company, an in-house development program is commonly used					
47. Coaching by the line managers is carried out in this company					
48. We believe E-learning is of great importance in our company					
49.The learning and development programs offered by our company are highly relevant to my job role.					
50. The learning and development programs have a significant impact on my job performance					

Question Al Aina, R., & Atan, T. (2020)	Level of Sustainable Organization				
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Dimension 4 : Career Management					
51. This company believes career planning facilitates the expansion and growth of this company					
52. My company plans on employee growth and progression					
53. My company strives to establish career paths and families of jobs in every department					
54. In my company, we develop programs and initiatives that enhance employee development					
55. My company supports employees in achieving their long-term career goals.					

Section 5 : Other Suggestions (If any)

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Thank you so much for completing the questionnaire

Ph.D. Student: Guo Zhuang

In-depth Interview for Dissertation

A CAUSAL MODEL OF HUMAN RESOURCE DEVELOPMENT ON EMPLOYEE PERFORMENCE: AN EMPIRICAL STUDY OF XIAOMI AUTO-RELATED LISTED COMPANIES

Study Conducted by Mr. Guo Zhuang

PhD student, Doctor of Philosophy Program in Management, Siam University

Explanation: This interview part use to related Key-informants selected only.

1. The interviewees are employees working in Xiaomi auto-related listed companies of China.

2. This interview mainly discusses the impact of Human resource development on the sustainable organization performance of Xiaomi auto-related listed companies in China. The investigators hope that the interview officer will fully answer these questions. Please take some time to fill it in.

3. The researcher will only use this information for research purposes and will keep your interview confidential. It will not affect you, but it will be very important and conducive to in-depth academic research and discussion and innovation in the field of competitiveness.

Interview Date:.....

<u>Part 1</u> General Information

1. General Information

1.1 Name of the interviewer .....

1.2 No .....

Street .....

District .....

Province .....

PostalCode .....

1.3 Number of employees .....

2. Personal Information

2.1 Gender ☐ Male ☐ Female

2.2 Years Old ☐ 20-30 ☐ 31-40

☐ 41-50 ☐ 50 years or more

2.3 Study Level ☐ Undergraduate ☐ Bachelor

☐ Master ☐ Doctorate

2.4 Level of Position in General Administration ☐ Executive

☐ General ☐ Manager

☐ Manager ☐ Operator

2.5 Working Time ☐ Within 1 Year ☐ 1-3 Years

☐ 4-6 Years ☐ 7-9 Years

☐ 10 Years or More

Part 2 A Description of the Influence Factors of Human Resource Development on Sustainable Organization in Xiaomi Auto-Related Listed Companies of China.

1. **Human resource development**

   Organizational Development:

   1.1 How does your company align its HRD initiatives with its overall organizational development goals?

   Career Development:

   1.2 What career development opportunities does your company offer to its employees?

   Training Development:

   1.3 How do you identify the training needs of your employees, and what methods do you use to address these needs?

2. **Employee performance**

   Leadership:

   2.1 How do you believe leadership style impacts employee performance in your organization?

   Motivation:

   2.2 What strategies do you use to motivate employees and maintain high levels of performance?

   Job Satisfaction:

   2.3 How do you measure job satisfaction among your employees, and how does it impact their performance?

   Work Environment:

   2.4 How do you create a positive work environment that fosters high employee performance?

3. Sustainable organization:

Talent Attraction:

3.1 How does your company attract top talent in a competitive market?

Talent Retention:

3.2 What measures does your company take to retain its top talent?

3.3 How do you identify and address the factors that may lead to employee turnover?

Learning and Development:

3.4 How does your company prioritize learning and development to support a sustainable organization?

Career Management:

3.5 What career management strategies do you implement to help employees grow within the organization?

Thank you so much for your kindness of time giving for completing theinterviewed

Ph.D. Student: Guo Zhuang

AUTHOR'S BIOGRAPHY

Name and Surname	:	Mr. Guo Zhuang
Date of Birth	:	1 October 1984
Nationality	:	Chinese
Birth of Place	:	Beijing, China
E-Mail	:	guozhuang@live.cn
Work Position	:	Marketing Consultant
Workplace	:	Beijing, China

Education

Bachelor's Degree	:	B.A.
Major	:	Business Administration
Institution	:	Beihang Universit
Country	:	China
Year	:	2015-2017
Master's Degree	:	M.B.A.
Major	:	Business Administration
Institution	:	Lanzhou University of Technology
Country	:	China
Year	:	2016-2019

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