


Chapter 9

The Future of AI in Talent Management

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ABSTRACT

This chapter examines the transformative role of Artificial Intelligence (AI) in talent management (TM), demonstrating how advanced algorithms optimize recruitment, workforce planning, and employee development. Drawing on a conceptual framework that integrates efficiency, equity, trust, and organizational culture, it synthesizes empirical findings on a 35% reduction in time-to-hire and a 68% increase in workforce diversity while also addressing algorithmic bias and privacy concerns. Through case studies (Unilever, Siemens, Google, Samsung) and theoretical perspectives (RBV, TAM, Equity Theory, Social Learning, STS), the chapter identifies both operational gains and ethical risks. Meta-analytic evidence and cross-case analyses reveal that robust governance mechanisms and cultural alignment are critical mediators of fair and effective AI adoption. Practical recommendations guide HR professionals and policymakers in implementing transparent audits, regionally adapted strategies, and upskilling initiatives to harness AI's strategic potential across global contexts.

INTRODUCTION

The integration of Artificial Intelligence (AI) into talent management (TM) marks a paradigm shift, redefining how organizations attract, develop, and retain human capital in a post-pandemic, skills-scarce economy. Global projections estimate AI-enabled TM tools will generate US\$1.2 trillion in productivity gains by 2030 (Deloitte, 2023), evolving from 1980s rule-based payroll systems to sophisticated

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machine-learning engines that screen resumes, predict attrition, and personalize learning pathways. As Marr (2019) asserts, “AI is no longer futuristic; it is the operational backbone of strategic HR,” a claim evidenced by Unilever’s 75% reduction in hiring time and Siemens’ 18% productivity boost .

Yet, this transformation is not without complexity. Quantitative studies confirm short-term efficiencies, such as a 35% reduction in time-to-hire and a 68% increase in diverse shortlists (LinkedIn, 2023;), but longitudinal impacts on organizational culture and employee well-being remain underexplored . Ethical challenges, including algorithmic bias (e.g., Amazon’s discontinued tool;) and privacy concerns (40% employee distrust; PwC, 2023;), underscore the need for responsible AI governance. The Technology Acceptance Model (TAM; Davis, 1989;) explains AI tool adoption but overlooks ethical dimensions like trust erosion, as Kant and Adula (2024) note: “Current frameworks miss how reinforcement learning reshapes perceptions of organizational justice” .

Practical barriers further complicate adoption. A global SHRM survey reveals 60% of HR managers distrust AI due to opaque algorithms and privacy risks (SHRM, 2023;), while developing economies face unstable digital infrastructure and cultural skepticism toward data-driven decisions, limiting the applicability of Western models . These challenges highlight two critical research gaps: (1) a lack of integrated models balancing efficiency with ethical and cultural legitimacy, and (2) insufficient comparative evidence across diverse economic contexts.

Guiding Research Questions: How, and under what conditions, can AI-driven TM processes enhance operational efficiency and employee equity/trust across global contexts?

This chapter addresses these gaps through a multi-layered conceptual framework that positions AI adoption as a driver of efficiency and equity, mediated by trust and organizational culture. Grounded in the Resource-Based View (RBV; Barney, 1991;), we argue AI becomes a strategic resource only when bundled with ethical governance, cultural alignment, and human capital development. By synthesizing theoretical foundations, empirical evidence (), and case studies, the chapter offers actionable recommendations for HR leaders and policymakers to deploy AI responsibly, ensuring it delivers both operational excellence and social equity across varied global settings.

BACKGROUND OF STUDY

Artificial Intelligence (AI) applications in talent management (TM) have evolved through three technological waves, each reshaping HR’s strategic role. The **Automation Wave** (1980s) digitized payroll and attendance, freeing HR from clerical

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